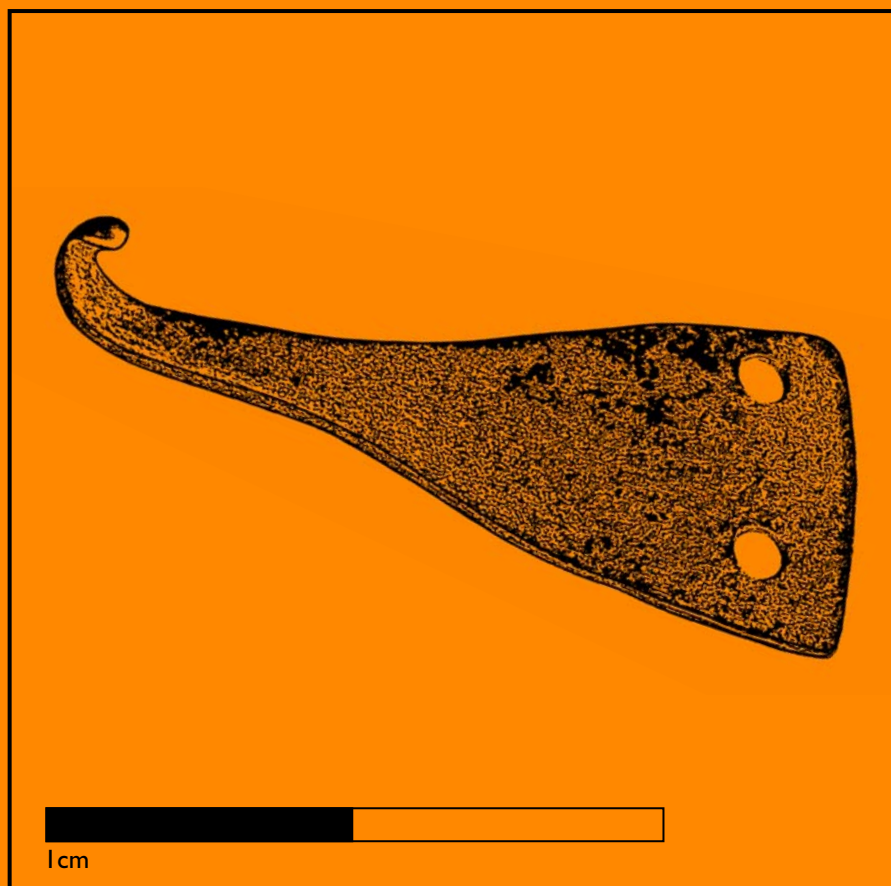


SOAG Bulletin



SOAG Bulletin No. 63





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Articles, accompanied by illustrations if appropriate, and book reviews are invited for publication in the next issue of the *SOAG Bulletin*. Authors are referred to the *Notes for Contributors* inside the back cover.

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Cover illustration: *Hooked tag excavated at Chapel Cottages, Bix. This copper alloy tag has a triangular plate with two attachment holes and may have been used to fasten either clothing or a purse, c.10th- to 11th-century. See article on page 23.*

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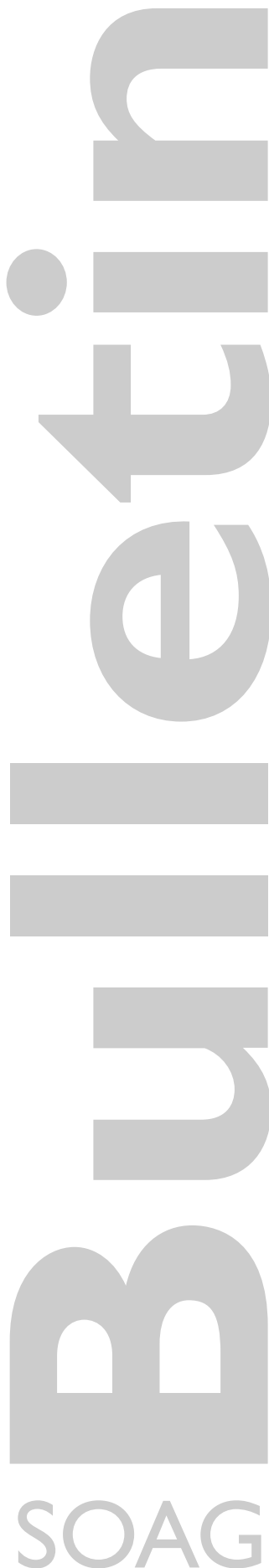
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Cynthia Graham Kerr

Founder, First President and President Emeritus of the South Oxfordshire Archaeological Group

Ian Clarke

[This is a revised version of the citation delivered at SOAG's 40th Annual General Meeting.]

After 40 years at the head of SOAG, our Founder and President, Cynthia Graham Kerr – known to all, both inside and outside SOAG, simply as Cyn – has elected to take emeritus status.

'Emeritus' comes from the Latin meaning 'to earn by service'. It was used to refer to a 'time served' Roman soldier who received an honourable discharge after his years of active service, but is, and always will be, a member of the Roman Army. Its use nowadays, as here, is to confer prestige to someone in high office who has served actively for a good number of years and no longer wishes to do so. All will agree I am sure that our most esteemed President has more than earned the right to this most prestigious title. In making first use of the new Constitution the Committee has much pleasure in granting Cyn's request and so from the 29 March 2009, the date of the 40th AGM, Cynthia Graham Kerr will hold the title of 'President Emeritus' of the South Oxfordshire Archaeological Group.

The granting of emeritus status does not mean that Cyn is retiring from all Presidential duties. Equally she will no longer be undertaking the full role of the President and in time the Committee will appoint a new President. But the award of President Emeritus ensures that Cyn retains her former title for life. She will *ex officio* be a non-executive officer of the Committee.

Cyn feels that the new title will more accurately reflect her senior status and advisory role in the Group – a role she has naturally grown into over the last five years as others have taken up the executive challenges in SOAG. She is particularly pleased to be continuing a family tradition: in 1935 her father-in-law, the highly esteemed Sir John Graham Kerr, became Emeritus Professor of Zoology at the University of Glasgow when he resigned the Chair that he had held



Cyn at SOAG's 40th Annual General Meeting

Photo: Bernard Clucas

since 1902 on becoming a Member of Parliament. I do not think Cyn has any intention of becoming a Member of Parliament, but she may care to reflect that Sir John held his Chair for 33 years, so she has outlasted him in office by seven years!

SOAG was founded on 22 May 1969 by Cyn and a small group of her enthusiastic friends in Whitchurch Hill and Cyn was early appointed President for Life. For 35 years she ran the Group, taking a close, personal interest in all areas of activity, building a loyal core of members and ensuring that SOAG remained active in field archaeology. In 2004 Cyn formally handed over the day-to-day administration of SOAG to the Committee and now, after a further five years in office, she is taking the well-earned emeritus status.

Cyn's most enduring legacy as President is without question the welcoming, relaxed and friendly atmosphere for which SOAG is so well known. It is a legacy that encourages active and enthusiastic participation and is one we will guard jealously for the future.

Chairman's Report 2008

Ian Clarke

SOAG continued its principal activities of evening lectures from September to March and occasional events in the summer, together with an enhanced programme of fieldwork throughout the year.

A high quality lecture programme was once again put together by David Nicholls, this time assisted by Nancy Nichols. The six lectures were all well supported, which says much for the choice of lecturers and subject matter, but also for the improved advertising through the *SOAG Messenger* under its new editor, Mike Green. Some of the success must also be attributed to our excellent venue: the Goring Heath Parish Hall is beautifully maintained and continues to attract favourable comment from new members and visiting lecturers alike. I am pleased to say that tea, coffee and biscuits are often back on the agenda.

There was only one summer visit arranged this year when a small group visited the Hook Norton Brewery. However, without the addition of two guests, this visit would have been cancelled due to lack of support. Poor support for summer events has been a developing pattern in recent years and our larger field archaeology programme means it is also difficult to find organisers. The Committee will need to consider whether a new approach is needed, or whether summer visits should be discontinued. The 'wine and mince pies' after the November lecture has proved a success and more such 'extended social gatherings' may be the way forward.

The Annual Review of SOAG Archaeology in April presented no less than four active field projects. Indeed, we ran out of time to present them properly in one evening and the Committee will consider next year whether to allocate more time to these, perhaps with a daytime event.

The year opened with continued uncertainty about the future of the Gatehampton Roman Villa site and the team worked hard over the winter to complete evaluation of the trenches and essential recording. Happily the new owners of the land have proved enthusiastic supporters of the project. They are encouraging SOAG to continue and have generously allocated space for storage on site. The extended digging season and the impetus given to the work has

resulted in more rapid progress and fascinating new discoveries. A digital survey of the whole site was completed using a total station on loan from Archaeology in Marlow, with John Laker generously providing training and assistance. We are pleased to be able to work an exchange scheme with AIM for this with the loan of our Geoscan resistance meter; both sets of equipment were Lottery funded and such co-operation is strongly encouraged. The season closed in November with the traditional end-of-dig lunch at which the guests of honour were the site owners, old and new: Robin Cloke; and Roger and Sarah Edmunds. I record our grateful thanks for their support without which this important project could not continue.

The Brightwell Baldwin Community History and Archaeology Project (BBCHAP) continued to be supported by the award from the National Lottery Fund 'Awards for All' scheme, the residue of the fund being used to finance a summer training dig at Cadwell Farm. This was on the supposed site of the medieval manor, where the moat was successfully sectioned and an area of medieval, paved trackway exposed. A further trench sectioned the Roman road that crosses the site. The dig provided valuable training in working sections. The Geoscan resistance meter (purchased in 2007 with the National Lottery grant) was again put to good use, this time in the central area of Brightwell Park where an area of just over 4.6ha was surveyed. The results have revealed what appears to be a large complex of rectilinear buildings and formal gardens that are probably the remains of the earlier manor house. This is a spectacular result that we hope will be followed up by excavation. The geophysical survey will be extended across the southern area of the Park in 2009. I have pleasure in thanking landowners, Richard and Kellie Davey at Cadwell Farm, and Nigel and Tessa Mogg at Brightwell Park, for their enthusiastic support.

The team led by David Nicholls carried out further geophysical survey work at the mound near Rotherfield Greys. In June Gerard Latham, of Wallingford Museum, supervised pseudo-sectioning of the mound and ditch using new software with his TR/CIA resistance meter. The results appeared to support earlier theories about the main features of

the mound but were difficult to interpret. Nancy Nichols discussed the results at the University of Reading which sparked immediate interest from colleagues in the Archaeological Science Research Group, with an offer to carry out a Ground Penetrating Radar (GPR) survey of the mound. This was completed by Tim Astin and the team in September and the results revealed that the mound has an internal structure. The tentative conclusion is that the monument may date from the Neolithic rather than the Bronze Age. This is a most exciting result, as is the continued cooperation with the University of Reading planned for 2009.

The search for the site of the 'lost' church of Bix Gibwyn, in support of Stephen Miles of the *Victoria County History: Oxfordshire*, at last produced a positive result when trial trenching in November revealed three adult skeletons on a roughly west-east alignment, together with significant areas of mortar. The skeletons have been carbon dated to the late 12th/early 13th century and the provisional conclusion is that this is the site of the 'lost' church. The dig was completed in very poor weather conditions and the team are to be congratulated on a very fine job. Our grateful thanks are due to the owner, Lord Alvingham, and the occupants of Chapel Cottages for allowing this work.

SOAG Bulletin No. 62 was produced by the Publications Team, led by Hon. Editor Sue Sandford and Graphics Designer Janet Eastment. The new look introduced last year continues to be well received and the content again presented our now wide-ranging fieldwork. On the advice of the team, the journal numbering has been unlinked from the year so that more up-to-date reporting can be included. The BBCHAP project was also reported in *South Midlands Archaeology*.

Improvements have been made to the SOAG website, courtesy of Webmaster Steve Gibson, Hazel Willams and Mike Green, with a revamped home page and a new 'members only' area. More content will be added to the members' area in 2009.

We have been fortunate to have a full and very active committee throughout the year. Although Dave Oliver has been constrained by his other commitments from taking on full Honorary Secretary duties, others have compensated and proved willing to share the responsibilities. I am delighted that at long last the SOAG Messenger is in the new, safe hands of Mike Green; Nancy Nichols is ably assisting David Nicholls with the arduous task of programme organisation; and co-opted member Mike Vincent has taken on the new role of Membership Secretary. This has shared out duties formerly undertaken by myself as Honorary Secretary and latterly also as Chairman, bringing much needed relief. My grateful thanks to them all for their support.

I must give special thanks to Elizabeth Lawrance who has worked hard this year to bring the draft new Constitution to completion. I am delighted to say that this was approved by the members at the AGM and marked a significant step in the development of the Group. Elizabeth has also completed an important Child Protection Policy document that will be published soon.

I thank the many others who have contributed to another successful year for SOAG, not least the members of the field teams whose work is the very reason for our existence, and those who attend our lectures and liven up the dark winter evenings with their questions and enthusiasm. At the close of 2008 SOAG had a healthy 130 memberships representing over 164 members. Whether or not you attend lectures or take part in field activities, your support is valued and vital to keeping SOAG at the forefront of archaeology in South Oxfordshire.

As the 40th AGM and celebration approached, our esteemed 'First President' decided that this would be an appropriate time for her to take President Emeritus status. The Committee had great pleasure in granting her request and this took effect at the AGM. It brought a fitting closure to a period of great change in SOAG.



SOAG's 40th anniversary celebration cake

Photo: Bernard Clucas

Meetings and Visits

Lectures 2008 – 2009

2008

24 January

R H Bennet MBE (The Lime Centre)
'Examining an Historic Mortar'

28 February

Dr Gill Hey (Oxford Archaeology)
'Neolithic/Bronze Age Settlement in the Thames Valley'

30 March

SOAG 39th Annual General Meeting
Guest speaker: Mr Edward Sutton
'The Mary Rose Project'

24 April

Review of SOAG Archaeology 2007-8

25 September

Dr Anna Williams (Cranfield University)
'Forensic Environmental Evidence'

23 October

Dr Fiona Macalister
(Bristol Museums Galleries and Archives)
'An Archaeological Conservator Abroad – the Middle East'

27 November

Professor Steve Mithen (Reading University)
'Water, Life and Civilisation'

2009

22 January

Dr Jill Greenaway (Museum of Reading)
'The Thames Water Collection'

22 February

Cyril McCombe MBE
'Small Town Foundries – Boom or Bust'

29 March

SOAG 40th Annual General Meeting and Anniversary Celebration

Review of SOAG Archaeology 2008-2009

Hook Norton Brewery SOAG Visit 9 August 2008

Mike Green and Nancy Nichols



SOAG members wondering where the beer has gone!

Photo: Mike Green

On Saturday 9 August eight SOAG members and two guests toured the Hook Norton Brewery, located in the eponymous village on the edge of the Cotswolds near Chipping Norton. Archaeology of 19th-century sites is not uncommon, but here none is needed. The six-storey brewery, built between 1872 and 1898, remains almost unaltered and most of the original brewing equipment is still in operation including, wonderfully, the 25hp steam engine which powers pulleys and belts on all levels. It is believed to be the last steam engine in the country still in daily use for its original purpose. The tour completed with an opportunity to try all six beers currently being brewed.

As we retired in rain typical of this August to lunch in the village, we speculated that perhaps Hook Norton should switch early to its special autumn brew!

Oxfordshire Past 2008

Janet Sharpe

The 14th annual Oxpast conference was held in Blewbury Village Hall on Saturday 7 June 2008, where it was hosted by the Blewbury Village Society Environment Group. The meeting was attended by 72 delegates, including 12 stalwarts from SOAG.

As has become traditional at this event, Paul Smith (County Archaeologist) started the proceedings with his '**Review of Recent Archaeology in the Shire**'. He described work at four different sites. At Kirtlington, about eight miles north of Oxford, the Port Way probably represents a north-south Roman road that meets the east-west Akeman Street just north of the town. In a small paddock to the south-west of Kirtlington, which had been ear-marked for development, John Moore Heritage Services uncovered part of a substantial Roman building which survived as five courses of stonework and a flagstone floor; the building had been protected as it underlay a later boundary bank and, despite its excellent construction, it is believed to have been an outbuilding associated with an even grander but as yet undiscovered building elsewhere. Two Roman wells were also found, with parts of their stone lining and surrounding paving still in place.

Some 20,000sqm of land were investigated by Wessex Archaeology to the south-west of Bicester, where discoveries included two Bronze Age ring ditches, Late Iron Age to Roman boundary and enclosure ditches, and evidence for a dense Roman settlement dating from the 1st to 2nd centuries and probably later.

Thames Valley Archaeological Services found lots of Saxon and Saxo-Norman ditches at St Mary's School, Wantage, suggesting that this area had been a focus of Saxon activity. Finally, the repair and stabilisation programme at Oxford Castle Mound has revealed the structure of the mound, which was built of gravel and sand capped with clay. The base of a tower was exposed on the summit with fire-marked stones: an old drawing shows a ten-sided tower extant in 1578-88, which was probably destroyed after the Civil War.

Andrew Hutt (Berkshire Archaeological Society) then described the work that he and Stan Hughes (Blewbury Village Society) had carried out on behalf of the **Blewburton Hill Geophysics Survey**, which is a community archaeology project. A gradiometer survey of the eastern end of the hill revealed 'lots of black spots' and some parallel lines that could represent either the local geology or ploughing activity. A circular feature just inside the entrance to the hillfort could be a roundhouse, but otherwise the archaeological features were very vague and it is planned to follow this work with a resistivity survey.

After coffee, Esther Cameron (Curator of Archaeology, Museum Resources Centre, Standlake) and Carol Anderson (Museums Service Manager, Standlake) described the documentary archive and bulk finds storage at **Standlake**, respectively, with a desperate plea for more space – a Tardis, perhaps? Once an archaeological site has been excavated and the report written up, Standlake will accept the site archive in its role as a designated archive depository. The documentary archive normally comprises the final report, correspondence, contracts, catalogues, specialist reports, drawings and plans, photographs and digital records. The finds archive includes bulk finds such as building material, pottery, stone, slag, shell and animal bone; sensitive finds such as metal, glass and human remains; and samples such as environmental evidence. All this material must be ordered methodically and the packaging materials and paper must be of archival quality. Selection may be necessary with bulk finds! Each archive has its own accession number, which is issued before the excavation commences, and the different components of the archive are trackable on a computer database. The archives are used by professional archaeologists, researchers, students, school parties – and Time Team. All this material requires space: 770 records have been added over the last two years, comprising nine metres of archive shelf space, 13 cubic metres of bulk finds and one cubic metre of small finds. By 2018 50% more storage space will be required and the corridors are already filling up. Ultimately, and unfortunately, much of the archival finds material will probably have to be disposed of.

The next presentation was of particular interest to some of the more long-standing SOAG members, as Gwilym Williams (John Moore Heritage Services) talked about recent work at **Newington House** in the light of the work that SOAG carried out there in the 1980s. In December 2006 a watching brief was started in the grounds of Newington House in advance of the construction of an artificial lake. The area of the lake was stripped and SOAG's trench was relocated just to the north of it. A large area of cobbles, a couple of walls and many nails were found, which related to the cobbling that SOAG had found previously. The lake site also yielded evidence for metalworking with much slag and hammerscale, and a possible quenching pit. The site was interpreted as a heavily ploughed out medieval smithy (Building 1), with an ephemeral house in SOAG's trench (Building 3) and another in the opposite direction (Building 2). Contemporary finds from the nearby Great Bowling Field that was intensively fieldwalked by SOAG included evidence for some high status activity, including 11th- to 13th-century quality pottery, encaustic floor tiles, glazed roof tiles and part of a spur. It was concluded that Newington was probably more than just a shrunken Deserted Medieval Village (DMV).

David Nicholls (SOAG) described one of SOAG's more recent projects at **Greys Mound**, near Rotherfield Greys to the west of Henley. He has had a personal interest in this enigmatic mound for the last 50 years and has recently instigated a series of non-intrusive investigations which has so far included a levelling survey, and dowsing, resistivity (which largely confirmed the dowsing survey), magnetometry and pseudosection resistivity surveys. The results have revealed a large, low mound with a central core 25m across and an outer ring or bank 64m in diameter. The central mound appears to contain a complex hidden feature which will be investigated using more sophisticated geophysical techniques. It is thought that this structure is possibly a massive Middle Bronze Age bowl barrow. Barrows of this type have not previously been recorded from this area, although a study of aerial photographs held in the English Heritage archive at Swindon has revealed some other possible barrows in the vicinity. It is hoped to be able to determine the identity of this earthwork by trial excavation, subject to funding.

The after-lunch speakers were led by Brian Durham (Oxford City Archaeologist), who presented his last **'Review of Recent Archaeology in the City'** before his impending retirement. He referred to several discoveries as rebuilding and redevelopment proceed apace in Oxford, pride of place being taken by St John's College where excavation revealed an Early Medieval mass burial of 30 young adult males, their bodies stripped and piled on top of each other in a trench that ran parallel to a massive prehistoric ditch which has been preserved for later investigation. Other excavations and surveys have been conducted at, among other places, Corpus Christi College, Queens College, Wolvercote Common and Headington School.

The London-based researcher Daniel Secker then described his study of four **Saxo-Norman churches in the Wallingford area**: St Michael at Aston Tirrold, All Saints at Aston Upthorpe, St John the Baptist at South Moreton, and St Mary at Upton. These churches were surveyed and their extant primary fabric meticulously recorded. The development of local churches within the Blewbury Hundred was examined and, despite the lack of direct documentary or archaeological evidence, it is argued that there was a minster church at Blewbury. [This study was published in 2007 in *Oxoniensia*, LXXI (2006): 31-66.]

Tea was followed by Dan Bashford (English Heritage), who talked about the role of the Historic Environment Field Officer in the **management of scheduled ancient monuments**. Oxfordshire has nearly 300 scheduled sites, each of which must be visited and assessed at least once every five years. Despite legislation, many sites become damaged by

ploughing, development and landscaping, some are targeted by metal detectorists, and some, especially the Rollright Stones and Uffington White Horse, are deliberately damaged. Efforts are being made to limit the effects of agriculture by establishing a minimum cultivation depth and removing sensitive areas from arable, but new threats appear all the time: the new incentive for farmers to grow biofuel crops has an indirect adverse effect by lowering the water table. Damage limitation can include the selective removal of trees and the protection of barrows from rabbits and badgers by the use of wire mesh. The 'Scheduled Monuments at Risk' programme was launched in July 2008 to highlight this problem.

The last presentation of the day was given by Paul Booth (Oxford Archaeology), who talked about the **Dorchester Project**, which is being jointly run by Oxford Archaeology, Oxford University Institute of Archaeology, Dorchester Museum and the Oxfordshire Architectural and Historical Society (OAHS). Dorchester has sites dating from the Neolithic to Post Medieval periods, many of which are of national importance. Unfortunately the Neolithic monument complex has now been largely destroyed by gravel digging – the A4074 runs along the line of the Dorchester Cursus – but some elements have survived and a geophysical survey will be carried out. Dorchester was of strategic importance during the Late Bronze Age when the Castle Hill hillfort was established, in the Iron Age when it was on the border of three tribal units (the Dobunni, Catuvellauni and Atrebates), and in the Roman period when it became a fort and small town along the road between the towns of Silchester and Alchester. Late Roman Dorchester had defensive walls, two cemeteries and important individual burials, and is key to the understanding of the transition between the Roman and Early Saxon periods. The Dorchester Project aims to take a holistic view of the town and wider landscape with small scale excavations within the town: "new evidence is needed to address old problems". Investigations at the Minchin Recreation Ground north of the village have revealed a Bronze Age ring ditch and Roman features, and a garden dig on the south side of the village yielded much mid 1st-century pottery and a Roman child burial. Current excavation is centred on the allotment area which was within the Roman walled town, with the objective of obtaining a complete sequence of events from the Iron Age to Anglo-Saxon periods.

The meeting ended with the presentation of a glass decanter to Brian Durham on the eve of his retirement (Oxpast will never be the same again) and thanks to the Blewbury Village Society Environment Group for hosting the event, and particularly to Peter Cockrell for his organisational skills in ensuring that the meeting ran smoothly and finished on schedule at 4.45 pm!

Oxfordshire Past 2009

Mike Green and Nancy Nichols

The 15th annual Oxpast conference took place on Saturday 30 May at Centre 70 near the Kinicroft in Wallingford. The host this year was TWHAS, The Wallingford Historical and Archaeological Society. There were at least ten SOAG members in the audience and SOAG committee member Mike Green gave a joint presentation with Stephen Miles from the *Victoria County History* on SOAG's recent work at Bix.

The conference was introduced by Judith Dewey from TWHAS who noted that Oxpast always coincided with excellent weather and complimented the good size audience for choosing archaeology over sunshine!

The first presentation was by Oxfordshire County Archaeologist Paul Smith who described four of the more significant recent projects in the county. The first was a dig undertaken prior to a major extension at the **Oxford Academy**, which confirmed a very early Anglo-Saxon presence on the site, yielding many post holes and some 6th-century pottery. He followed that by outlining work at **Whitelands Farm**, which is south of Bicester and close to the Roman town of Alchester. A late Iron Age/Romano-British settlement was confirmed with excellent finds, perhaps the most unusual of which was a stone-lined cistern for holding water before sluicing it into the nearby stream. A gap devoid of features and finds between the settlement and the nearby Roman road was also intriguing, suggesting perhaps a Roman-policed buffer zone. **Combe Mill** in West Oxfordshire had the SOAG members present seeing parallels with the Bix project. A 'lost' medieval settlement had been roughly mapped many years ago, but with much uncertainty about the location of its church. A recent pipeline project resulted in a new dig which uncovered the church walls and a burial, thereby resolving the mystery. The final project arose from a project to strengthen the old Abingdon road at **Redbridge**, south of Oxford. There is documentary evidence of the stream being culverted under the road as long ago as the 11th century, and archaeologists were given the chance to see if any evidence of this remained before engineers replaced the current culverts with modern structures able to withstand today's traffic loadings. Amazingly the 11th-century culverts were found to be still in place and clearly visible, subsequent road widenings and

strengthenings being built over and around the original structures rather than replacing them. As a result the council changed its plans: the new engineering preserves these original constructions *in situ*. There can't be many surviving 11th-century structures bearing 21st-century A-road traffic!

Oxpast has always given prominence to community-based history and archaeology, and in the first presentation after coffee Beryl Hunt talked about a local project designed first to save, then to revive, the **watercress beds at Ewelme**. Beryl began with a fascinating history of the beds, reminding us that in former times there was little choice of green vegetables in winter and that watercress filled that gap with its ability to crop at least four times a season. The streams in Ewelme are almost uniquely suited to this crop, although she described well the inevitable competition for the water supply with the local mills. At the height of the railway age, distribution spanned much of England. Many of us remember the beds in operation in the 1970s, but since then they have fallen into disuse and have also been threatened by building development. The latter has been staved off and in recent years a community project has been rebuilding the original stream banks – with what looked like some pretty backbreaking work – with the aim of bringing the beds back into production.

By way of introducing the work of the Northmoor Trust Ed Thomas presented a history of **Wittenham Clumps** from the last Ice Age to the present day, and described the excellent educational work now undertaken by the Trust. The last talk before lunch was introduced by Paul Smith as an excellent example of collaboration by historians and community archaeologists, namely the search undertaken by VCH and SOAG for the **'lost' church of Bix Gibwyn**. Stephen Miles set the historical background and Mike Green presented SOAG's work, led by David Nicholls, which resulted in the discovery of three late 12th-century skeletons (see p. 23). Stephen concluded by summarising how the project helped develop understanding of changing settlement patterns in this part of the Chilterns.

Lunch outside the Coach and Horses pub, sitting in the Kinicroft – which has survived largely unchanged since its Saxon origins – was an appropriate introduction to the first afternoon talk by Matt Edgeworth and Neil Christie from Leicester University, who updated us on the **Wallingford 'Burh to Borough' project**. This has been running now for several years and has involved three weeks of geophysics and digging each year in the Bullcroft, the Kinicroft and

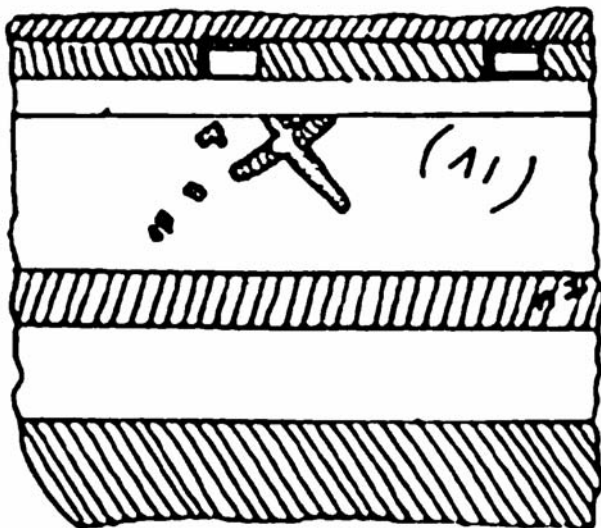
the grounds of the Castle, with the goal of understanding better the evolution of Wallingford from its Saxon origins into the post-Norman medieval era. Matt's talk was followed by Judith Dewey describing the first year of a related Wallingford community project in which locals, under guidance, dig test pits in their own gardens, thereby adding pieces to the jigsaw of Wallingford's past. In this first year the project's progress was initially rather slow, but a methodology was progressively developed through trial and error which should increase productivity in future years. Very much at the centre of this project is SOAG recruit Gerard Latham, who in recent years has been of enormous help to SOAG with his expertise and the use of his geophysics equipment.

The final presentation of the day was given by the new Oxford City archaeologist, David Radford. **Archaeology in the City** is largely driven by the demands of development. The university is striving to compete with the best in the world and this inevitably means development of new buildings and facilities. The city's planning regulations encourage the colleges to develop within their current boundaries rather than out-of-town. Height restrictions are also in place to protect the views of Oxford's famous 'dreaming spires'. A consequence of this is that much of the new development goes down rather than up, affording a unique opportunity for archaeologists to explore Oxford's prehistory as well as its more recent past. Recent examples described include developments at St. Johns College, the imminent redevelopment of the Radcliffe Infirmary site, and Pembroke College and adjacent Brewer Street.

The site at St. Johns yielded unexpected results. First, at a relatively shallow depth, a mass burial of about 35 males who had suffered violent deaths was discovered. Initially it was thought (indeed hoped by the college's academic residents!) that these were examples of the slaughter of resident Danes which was known to have been ordered by King Ethelred in 1003. However, radiocarbon dating now confidently places the deaths at least 30 years earlier, and the possibility of death in battle is now being considered. At lower depths clear evidence was then found of Bronze Age structures. Since the site was originally part of the gravel plain associated with the nearby River Cherwell just north of the city centre, and similar finds have been made in the nearby University Parks, this wasn't wholly unexpected.

At the Radcliffe site the digs were mainly exploratory: to guide planners as to what may be found under the main site when rebuilding starts in earnest. More Bronze Age features were revealed, possibly related to those at St. Johns and in the Parks discussed earlier. At Pembroke similar exploratory digging revealed some of the unknown routes of the many channels that the Isis formerly took through this part of Oxford, but which are now well and truly buried.

Throughout the day SOAG displayed material, prepared by Nancy Nichols, advertising its current projects. This generated interest, and all 15 of our membership forms were taken: together with the presentation on Bix, good publicity for SOAG. Finally, Paul Smith, a key figure in all Oxpast conferences, ended the meeting with the reassurance us that he intended to be present again at Oxpast 2010.



From the Archives: Masons' marks on a carved stone found among a heap of assorted medieval masonry in an old garden at Mapledurham

Illustration: Cynthia Graham Kerr. First published in SOAG Bulletin No. 48 (1992).

Reports and Articles

Greys Mound

Further Geophysical Investigations

David Nicholls

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During 2008, further non-intrusive investigations were conducted into this intriguing site, west of Henley-on-Thames, first reported in SOAG Bulletin, No. 62 (2008). The project has been very fortunate in having the support of Gerard Latham for carrying out resistivity studies at the site, and the collaboration of the Geophysics Unit of the Department of Archaeology at the University of Reading. This collaboration has led to new interpretations of the data and has enabled significant new Ground Penetrating Radar [GPR] results to be obtained.

Introduction

Initial work by SOAG was started in 2007 on this site, identified some 50 years ago as a significant mound and entered into the Ordnance Survey at that time (SOAG Bulletin, No. 62 (2008)). An aerial photograph from 1947, held in the National Monuments Record, shows the mound within a landscape that has since changed little (Fig. 1).

SOAG first carried out surface resistivity studies over the whole area of the mound, constituting a total of 48 20x20m square grids. The images obtained after filtering showed a high resistance central core with an outer ring of higher resistance with a diameter of about 62m, and with additional intriguing features (Fig. 2). This is a very large earthwork, and appears to be not just one feature but a series of constructions over a number of years. From the evidence, further investigations were clearly desirable and new studies were organised for the 2008 season.

Resistivity Cross-Sections

Cross-sectional results were obtained during the spring of 2008, using Gerard Latham's modified TR/CIA resistivity meter with Wenner array, and were re-analysed using the University of Reading advanced computer software programme (RES2DINV).



Fig. 1. Grey's Mound, 1947

RAF photo: NMR Swindon
(Ref. No. RAF/CPE/UK/1920 FR:4079 F/20"/182 SQDN)

The data was acquired by a team of five or six SOAG members carrying out sequences of measurements on a line of probes with increasingly wider separations (Fig. 3). This enabled resistance measurements at increasing depths to be plotted, providing a cross-sectional image of the subsurface to be produced to a depth of about 3.5m. Three 30m lines of measurements were taken on a west–east alignment across the centre of the mound, plus one line of measurements on a north–south alignment from the centre of the mound, constituting a total of 540 readings! The west–east sections were stitched together and the topographical data previously acquired (SOAG Bulletin, No. 62) were incorporated and used to correct and replot the sections. The resulting west–east cross-section of 87m in length is shown in Fig. 4.

The two resistivity sections (west–east and north–south) are consistent in that they confirm a highly resistant central core of approximately 2.2m depth, with a diameter of approximately 21m. The outer ring ditch, at a distance of about 31m from the mound centre, is also consistent, and can be seen in Fig. 4 as medium resistant incursions on either side of the central core, with a width of 3.5–4m and a depth of approximately 1–1.25m. Between the central core and the ditches, disturbances of the turf and top soil can be seen, indicative of layering over the mound. The low resistance areas, seen below the upper layers of turf to either side of the central core, are now interpreted to indicate natural porous geological features (such as chalk), leading to a reassessment of the provisional conclusions reported last year (SOAG Bulletin, No. 62).

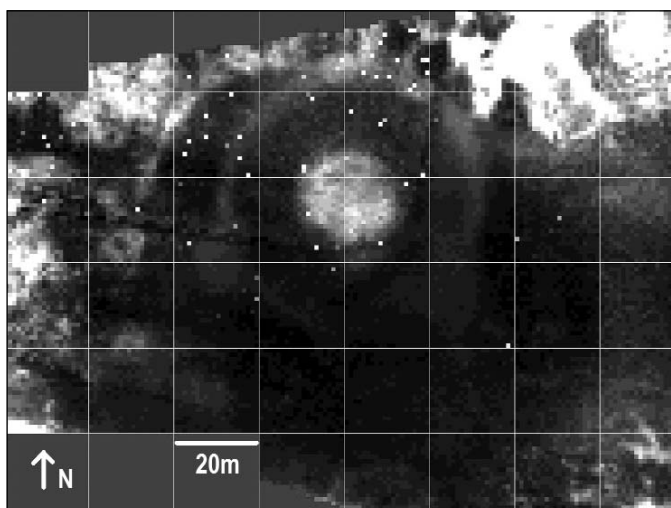


Fig. 2. Greys Mound: resistivity survey 2007



Fig. 3. SOAG members (l-r: Mike Green, David Oliver, Nancy Nichols, David Nicholls and Gerard Latham) acquiring cross-sectional resistivity (pseudo-section) data at Greys Mound

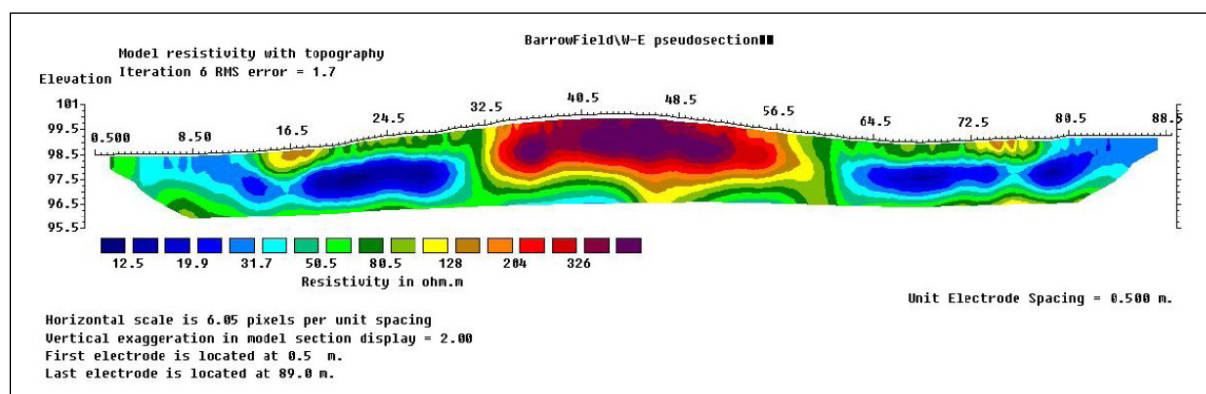


Fig. 4. Greys Mound: west–east resistivity cross-section

Ground Penetrating Radar (GPR) Studies

During early September 2008 a further survey was undertaken by a six-member team from SOAG using GPR equipment under the direction of the Geophysics Unit of the University of Reading – in less than ideal conditions (Fig. 5)! Initially 2D radial lines were collected on both west–east and north–south alignments, followed by a 3D survey over the central area of the mound. The results obtained can be described as extremely interesting – and, possibly, exceptional.

Initial 2D scans along the first survey grid lines, showing vertical features, were followed by closely aligned scans across the top of the mound, producing 3D images that allowed the data to be converted from vertical to horizontal slices at varying depths. The vertical profiles confirmed results obtained by the earlier resistivity cross-sectional survey, where strong reflections again show the central dominant 'cairn' to be about 21m across and 2.2m in depth (Fig. 6). The ring ditch surrounding the mound at a radius of about 31m is also clearly seen in the images. The west–east profile also indicates and confirms more complicated archaeology to the west of the mound, where further ditches and/or features are observed, as initially suggested from the first resistivity survey.

The interpretation of the vertical sections concludes that there are strong retaining walls to the central cairn. Similarly, the base of the 'cairn' indicates a 'solid' floor at a depth of approximately 2.2m. Dipping reflectors indicate layers of material that build out the sides of the mound, overlapping the central cairn. We may speculate as to the construction of the retaining walls: given their high reflectivity to radar, are the retaining 'walls' of quarried flint or locally obtained large pebble stones of glacial origin?



Fig. 5. SOAG members David Nicholls, Mike Green, Gerard Latham, Tom Walker, Nancy Nichols and Colin Davies with Tim Astin reviewing the results of the first profile from the long west–east GPR scan

More revealing images are provided by the GPR slices at successive depths. At 1m depth, the central 'cairn' appears to have an enclosed area featuring partitions within the strong retaining wall, and a central 'structure' of a cruciform plan (Fig. 7). (This is a pattern similar to a sunk trestle medieval post mill, but too large for this to be a possibility.) At 1.4m depth, below the level of the outer retaining wall, the interpretation is that of a smaller inner part of the cairn associated with the strong 'floor' imaging shown in cross-section. At 2.5m depth, interpretation is difficult, but the image could suggest an inner structure to the cairn: perhaps a lined chamber set into the original ground surface.

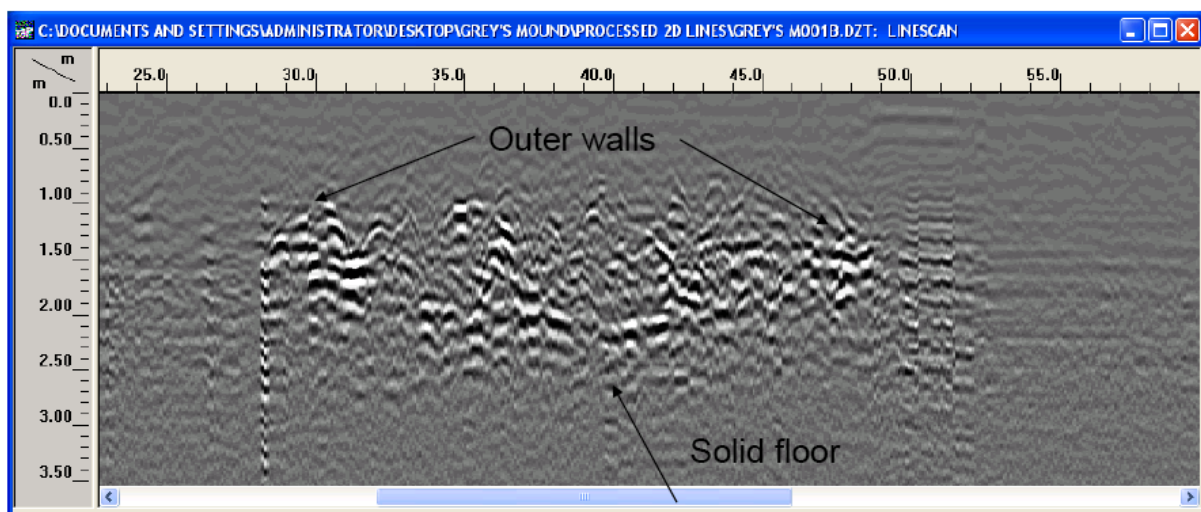


Fig. 6. North–south GPR scan of Greys Mound. The central cairn is 21m across and has a maximum depth of 2.2m.

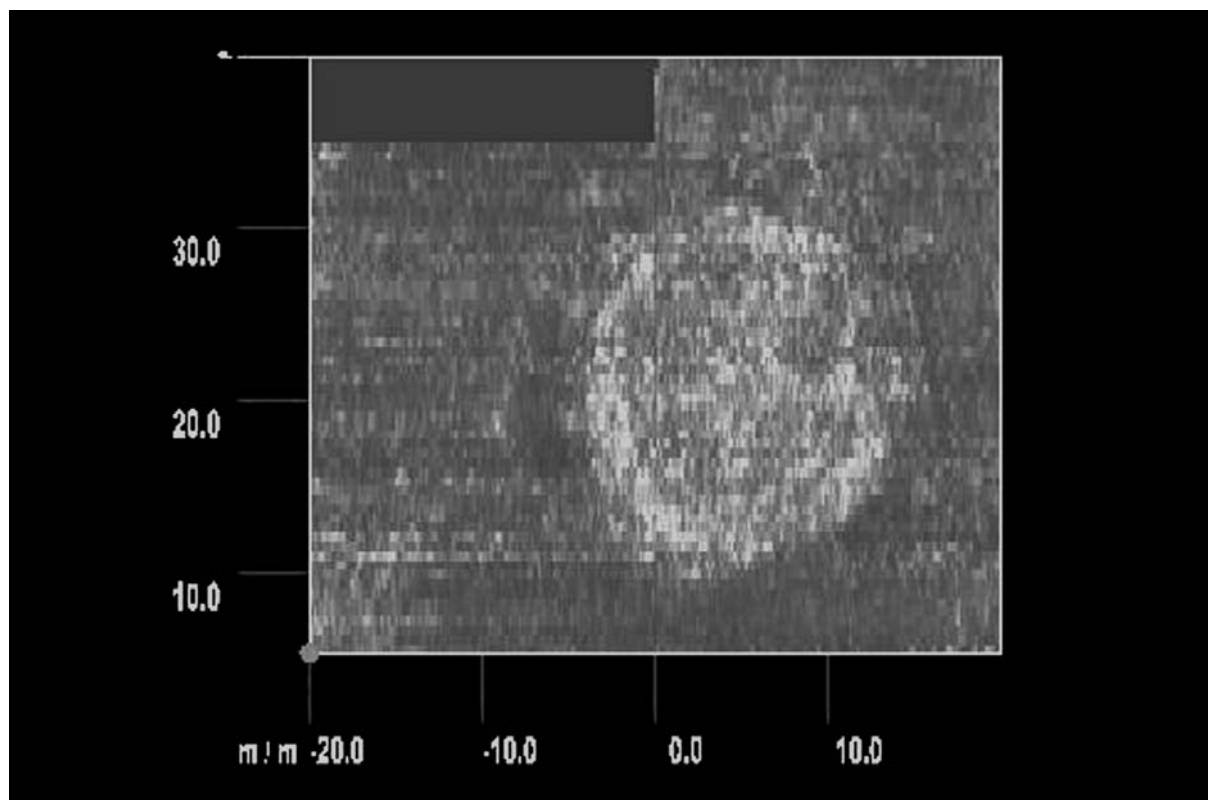


Fig. 7. Greys Mound GPR depth slice at 1m depth, showing retaining wall and inner partitions with a central structure

The GPR conclusions from the survey are that:

1. The central cairn has an ordered internal structure with a thick retaining wall and possibly internal partitions. This overlays a possible rectangular structure associated with a strongly reflective floor.
2. There are indications that the cairn has been extended laterally by overlapping layers of low resistivity material.
3. The ring ditch is wide and deep.
4. An outer western ring ditch is confirmed, with at least two further substantial ditches or pits on this side, although this is based on only one 2D line.

Conclusions

From the observations of more than one outer ditch, it would appear that we are dealing with more than one period of activity, and it is possible that a long sequence of perhaps ritual use occurred on this site. Further extensive geophysical survey work is planned for this year, 2009, when a new magnetometry survey will be conducted with SOAG by the University of Reading; that is, re-surveying the original 48 grid pattern (of 20 x 20m) with the University Bartington Magnetometer instrument, and extending this to cover the entire field. Following this, selected areas will be covered by a GPR survey.

Further resistivity surveying will also be undertaken to the west and to the north, and sample auguring will be undertaken in selected areas, with the objective of obtaining stratification data and possibly environmental material. Depending on the availability of funding, SOAG will also undertake trial trenching at locations over the ring ditch, with the aim of obtaining environmental and dating material, as well as determining the constructional profile of these features.

Greys Mound is proving to be an extremely important site. It appears from the typology of the main ring ditch and central cairn to be a Bronze Age monument of significant proportions (R. Bradley, pers. com.). The suggestion of an older ditch opens the possibility of a multi-period monument. The Oxfordshire County Archaeologist, Paul Smith, has indicated that if Neolithic period material is also recovered, this will further enhance the local, regional or even national importance of this site.

We must express our thanks to the site owners, Mr and Mrs S. Samuels, for their continued support and interest; to Gerard Latham for his invaluable support; to the SOAG team members for many hours of back-bending work; and to the Chilterns Conservation Board and the Robert Kiln Charitable Trust for their financial support.

Gatehampton Farm Roman Villa Excavation

Interim Report 2008

Hazel Williams

Introduction

The excavation year began better than expected. Worries about the future of the site were resolved when, after discussion with the new owners of the field, it was clear that they were keen to see the project continue. We are most grateful to Sarah and Roger Edmunds for their generous help and support.

We have continued to develop our understanding of the layout of the villa building. Two contrasting areas have emerged within the building: an apsidal room that may be part of the bathhouse; and a working area with a furnace feature. We have also done a substantial amount of work outside the villa building, particularly on the north side. A cobbled yard has been found in the area between the long north wall and the enclosure ditch. In addition to this, we have discovered another cobbled surface, north of the villa enclosure, close to the small boundary ditches.

As in previous years, the project has been popular, with plenty of volunteers. Our aim is to provide a good opportunity for newcomers to archaeology to learn more about excavation and for experienced diggers to practise their skills.

Survey

Site survey plan

A survey training day was organised in August 2008 to map the current trenches using a Sokkia Set 600 Series Total Station. We are grateful to the Archaeology In Marlow group for the loan of this equipment which provided an opportunity for a small group to gain experience in its use. Our particular thanks go to John Laker for an excellent training session and for spending a long day with us to complete the survey. A survey of the Gatehampton Farm site was originally done by Nigel Fradgley and Dan Miles in 1996. This was used as the basis of the site plan, with Cynthia Graham Kerr's plotting of Trench 3 (now backfilled) and the plot of the current trenches from the total station survey added (Fig. 1). This also includes an indication of the position and layout of the villa walls, although this needs further refinement. We are grateful to Janet Eastment, who was able to put these together and produce the new site plan.

The plan shows the site field with the associated farm shop, greenhouses and polytunnels that have changed little since 1996. The gentle slope of the field is illustrated by the contour plot, dropping 3m over a

distance of 70m, from the road at the top of the field to just south of the villa. The building is on an ESE-WNW axis, 16m wide and over 40m long; we know that it continues eastwards into the next field. The long north wall of the villa appears to be on the same alignment in Trenches 3 and 7 except for the section in the north-east corner of Trench 7 where a 5m section projects outwards half a metre. We hope to have the opportunity to find the extent of this feature. The exterior wall on the south side of the building was seen to be on the same alignment when Trenches 3 and 7 were open concurrently and some early resistivity supported this, but there is a 10m gap between the trenches and new survey of this area is planned.

This plan shows the position of the two smaller ditches, in Trench 11, 20m to the north-east of the villa enclosure. These are 3m apart and on slightly different alignments. The nearest produced mid Iron Age pottery; the other, Roman. We know from the geophysical survey of the adjacent field (SOAG Bulletin, No. 59 (2004)) that these ditches appear to continue in a north-easterly direction for over 100m. SOAG geologist Geoff Deakin, who conducted the survey, believes that they cross and re-cross at different points (always showing up as a single wide crop mark), suggesting perhaps a boundary line that remained in much the same place for centuries.

Geophysical survey

The 20m square geophysical survey area shown on the site plan (Fig. 1) is part of an initial survey done in 2008 using the SOAG Geoscan Research RM15D resistance meter. We intend to do a much more comprehensive survey of the site field and the adjacent car park during 2009 after clearing part of the spoil heap and backfilling of some of the trenches. This survey does show one interesting anomaly, an area of high resistance between the spoil heap and the villa. Although an immediate thought was that this was our route to the spoil heap, in the past occasionally used for vehicular access, Geoff assures us that this is unlikely to be the cause of the anomaly and we are planning to investigate this further. It does coincide with the part of the villa building that projects outwards and there is an area of high resistance where it meets the enclosure ditch.

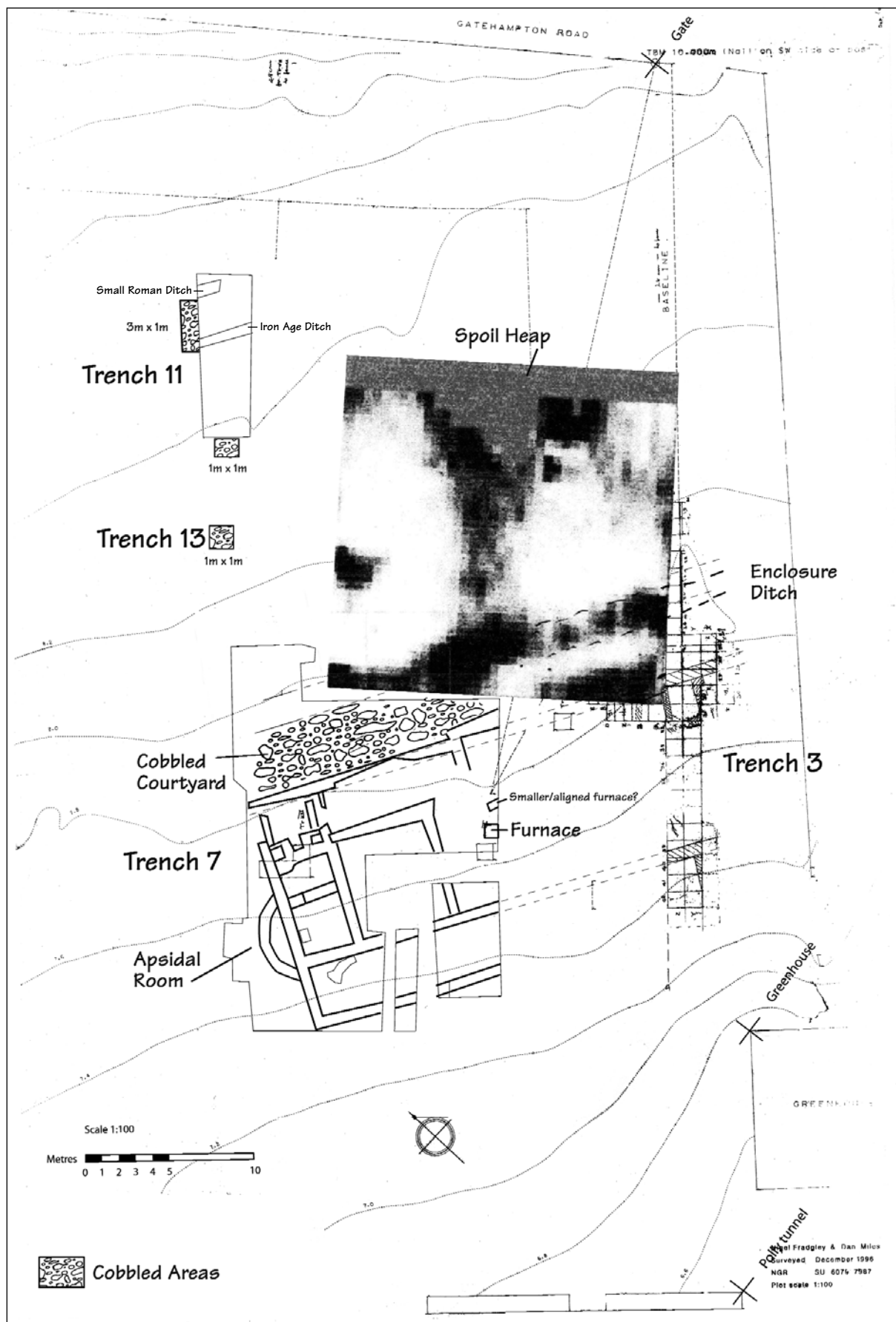


Fig. 1. Site survey plan and geophysical survey

Site Plans: 2008 survey plan drawn by Janet Eastment
 1996 survey plan by Nigel Fradgley and Dan Miles (with additions by Cynthia Graham Kerr in Trench 3)
 Geophysical survey: Geoff Deakin

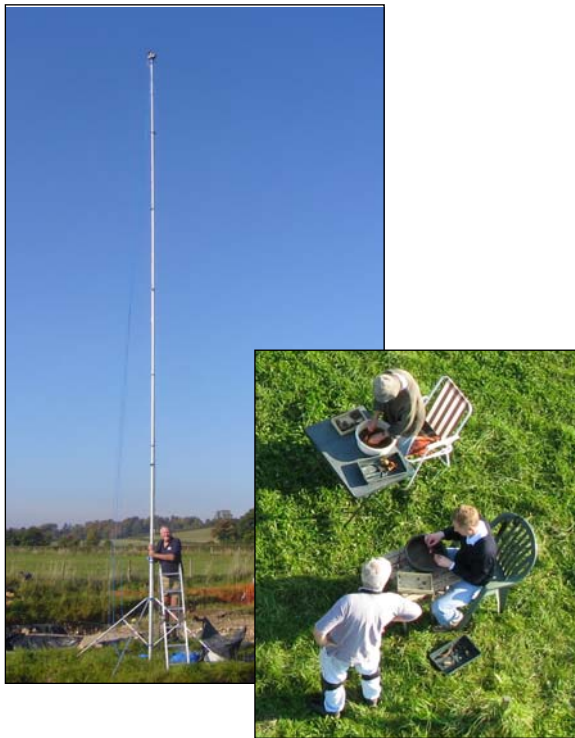


Fig. 2. Above: David Oliver setting up the camera

Photo: Hazel Williams

Fig. 3. Right: Aerial view of finds washing Photo: David Oliver

Overhead camera

An innovation this year was the use of an overhead camera, 12-13m above ground on an extendable pole (Fig. 2). This was brought to the site and set up by SOAG David Oliver, the camera angle and direction controlled via a laptop computer on the ground, and it gave a chance of a real 'bird's eye' view of the site. This was the first trial of this equipment and was very successful, producing good quality images (Figs. 3 and 4). Although this took place in October, with long shadows on the surfaces and some parts of the trench covered, it was a very useful exercise. As we found when photos were taken from an overhead cradle in 2006 (SOAG Bulletin No. 61 (2007): 27), these can be very revealing, showing both the layout of the building and individual features in detail. The camera was particularly effective in showing a newly excavated feature at the western end of the building: a new wall forming a semi-circular apse adjacent to the suite of heated rooms (Fig. 6). Fig. 5 shows a section of the north corridor where roof tiles were used to reinforce or repair the floor under a hearth (top left) and another more structured rectangular hearth can be seen built against the wall of the central room (centre left), close to the tessellated area on the lower right.



Fig. 4. Aerial view of site (showing A: cobbled surface in slot; B: north corridor; C: position of furnace)

Photo: David Oliver

Excavation

Apsidal room

This new room is at the western end of the villa, adjacent to the suite of heated rooms. It is semi-circular (Fig. 6) but angular in shape, with the wall footings forming a four sided apse; this is not unusual and the walls may still have been curved. The wall footings are the widest found on site so far at over 0.6m and the visible surface is of very hard mortar, but there appears to be very little depth to the foundations.

The enclosed floor area is approximately 4m by 2m and made of compacted chalk, with one or two thin patches of a concrete surface still showing. On the outer edge of the floor, against the wall, is a 0.1m high raised edge of hard concrete, of a similar composition to the surface. A feature of this room is the gully that runs along the straight interior wall, turning at an angle to exit through the wall of the room. Although there is no clear sign of any lining or structure in the section adjoining the hypocaust wall, the apsidal wall has a distinct gap built in to provide a route for the gully. If this part of a bathhouse, this could be a drainage gully.

At this stage this new feature appears to be associated with the adjacent suite of heated rooms but further work in 2009 will look at this in more detail to determine whether it is part of the same phase. The apsidal room is symmetrical with the west wall of the villa, positioned quite centrally, enclosing the warm room and part of both the hot room and a section of the south corridor. It seems likely to be contemporary with the adjacent bath suite and adds weight to the theory that this suite of heated rooms was used in this way. The adjacent warm room also has a floor with a raised edge and sill, but of reddish *opus signinum*, and it has a small sunken tank feature in the floor (SOAG Bulletin, No. 57 (2002): 15-17).

Discovery of a second infant skeleton

The first infant skeleton was found on the site in 2003 (SOAG Bulletin, No. 59 (2004): 14), buried in demolition rubble just over 1m beyond the western end of the south corridor. This was a remarkable find for us and it was intriguing to speculate when and how this neonate was buried. So it is even more interesting to find another infant burial in very similar circumstances. The second was discovered just under 5m from the first, again at the western end of the building, during the excavation of the apsidal room (Fig. 6). It lay partially over the wall footings of the room, in a layer of mortar and demolition rubble (Fig. 7).

The articulated skeleton is in reasonably good condition, except for the skull which has multiple fractures, probably due to the pressure of the soil above rather than any other disturbance. There are no associated finds but the infant does appear to have



Fig. 5. Hearths and tessellated pavement Photo: David Oliver

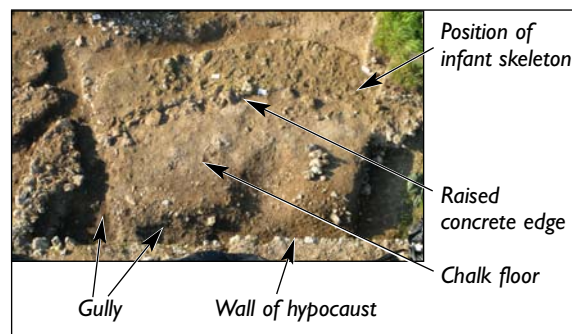


Fig. 6. Apsidal room adjacent to heated rooms Photo: David Oliver



Fig. 7. The infant skeleton (and scale) Photo: Hazel Williams

been interred in a shallow pit, just visible and defined on one side only by a thin layer of pea gravel. The skeleton was laid on the left side, right arm flexed toward the head. Most of the bones are present except for the lower limbs and feet, which are missing. This may be due to the fact that the skeleton was positioned right on the baulk lines of two much earlier trenches.

Burial in the demolition layer suggests these infants were interred during a period when the apsidal room and probably the adjacent hypocausts were no longer in use, at a time when all or part of the villa was abandoned. Although Roman law stated that burials should not take place within settlements, infant burials were the exception and they are commonly found on villa sites, most often within the building, often under thresholds and in the corners of rooms. However a number are also found in external areas,

especially near walls, pathways or yards. The fact that these skeletons are undisturbed and that one was buried in a shallow pit indicates that they were not simply exposed or abandoned. The rubble of the abandoned building provided protection from animal disturbance, but the placing of both these infants in similar association with the abandoned or partly disused building suggests that there was some ritual significance to their burial in this location.

Hearth or small furnace

This is a feature that we look forward to investigating in 2009 as part of it still lies under the baulk at the eastern end of Trench 7 (Fig. 8). The exposed part of this hearth or small furnace is rectangular, approximately 0.8m in width, slightly more in length. It was beneath a concentration of broken and burnt tile that may have been part of the structure above the floor surface. It is constructed with re-used broken roof tiles, burnt on the inner edges, with pale pink *opus signinum* used as cement and also capping the burnt deposits within. We are particularly interested in this feature as three similar hearths or furnaces were found in Trench 3 (now backfilled) 10m to the east and one of these had evidence of metalworking. If this is the same, it will have a narrow flue extending east under the baulk and what we can see is the furnace end positioned, as usual, against the nearest wall. This feature was found toward the end of the season, in the partly excavated room to the east of the narrow north – south corridor.

Cobbled areas

A cobbled yard has been found, covering an area of approximately 14m by 3m, between the north walls of the stokerroom and north corridor, and the villa enclosure ditch (marked on Fig. 1 site survey plan). A slot trench 1m wide and 4m long was cut across this area last year and the layers of the gravel path



Fig. 8 Partially exposed hearth or furnace

Photo: Hazel Williams

leading to the stokerroom were excavated (SOAG Bulletin, No. 62 (2008): 25). The clayey loam deposit beneath the path appeared at first to be natural but during the winter a small patch of cobbles was found beneath it. This year excavation of the slot was completed down to the level of the cobbled surface (Fig. 9). The cobbles extend from the wall of the building to the enclosure ditch, on a slight incline that may follow the natural slope of the field. It is made up of flint stones, river cobbles and gravel. The clayey loam deposit above was very consistent and devoid of finds. This is why it was thought at first to be a natural layer, but the explanation may be that it was deposited in one event, perhaps by hill wash or flooding. We are still not absolutely sure that the cobbled yard was laid after the enclosure ditch was dug. However a small extension of the slot on the north side of the ditch showed that the cobbles do not extend beyond the ditch at that point, so the evidence so far suggests that this is a cobbled yard laid within the existing enclosure. Both the stokerroom and north corridor have entrances that open onto this yard area.

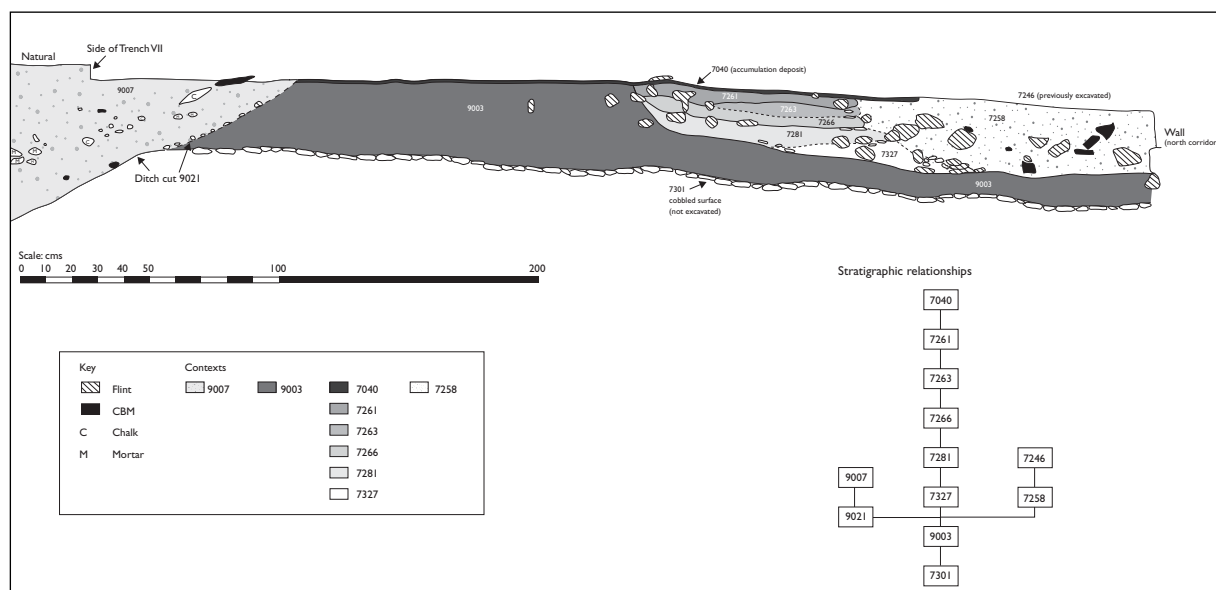


Fig. 9. Section drawing of slot across Trench 7 between the ditch and the corridor north wall

Illustration by Janet Eastment



Fig. 10. Cobbled surface between the stokerroom (left) and the ditch
Photo: Hazel Williams

Cobbled surface north of the villa enclosure

Excavation in Trench 11, 20m north of the villa enclosure, revealed a very similar cobbled layer to that discussed above (Fig. 12). Here the cobbles extend over the first small ditch with mid Iron Age pottery (Fig. 13) and end within a metre of the small Roman ditch (see survey plan (Fig. 1)). A series of small trenches opened between Trench 11 and the enclosure ditch in Trench 7 showed that the cobbled surface is at least 5m wide and extends more than 10m south towards the villa enclosure.

The people

An enthusiastic and hard working team of diggers and supervisors made this another successful year at Gatehampton. The site was open on 34 days from February to November 2008, with a total of 55 people participating and over 30 visitors. As in previous years, several students from the University of Bristol used their dig experience as part of their practical course credits and students from other universities including Reading and Nottingham participated too. Many of our diggers are very experienced in excavation and we provide opportunities for them to use their skills. We were also able to have small groups training on the total station survey and on geophysical survey and we plan to do more of this during 2009. We also like to encourage newcomers to archaeology and again this year we have been able to provide basic training on most on-site activities. Twelve young people participated this year, keen to find out what it is like to be on a dig. Some are thinking about courses in archaeology or related subjects and are keen to get some practical experience. Our youngest digger was a nine-year-old: another budding archaeologist, we hope.

Acknowledgements

I have already thanked the new landowners, Roger and Sarah Edmunds, for their help and encouragement, which this year included providing us with an area for storage and shelter in a newly covered, dry, polytunnel. We would also like to thank Robin Cloke who continues to provide car parking, mowing and advice about the local soils and landscape.



Fig. 11. Edge of cobbles in slot with large rib bones and complete tegula in ditch
Photo: Janet Eastment



Fig. 12. Cobbled surface in Trench 11
Photo: Steve Gibson



Fig. 13. Cobbled layer shown crossing the Iron Age ditch
Photo: Steve Gibson



Fig. 14. Trowelling and finds washing
Photo: Hazel Williams

Our thanks also to Paul Smith, Oxfordshire County Archaeologist, for his support for the project and his help and advice on the procedures for dealing with skeletal remains.

Cynthia Graham Kerr – 25 years at Gatehampton

Hazel Williams

In the year that SOAG is celebrating 40 years of independent archaeology and the elevation of Cynthia Graham Kerr to President Emeritus, we must pay tribute to her outstanding contribution to the success of the Gatehampton excavation over 25 of those years. Cyn, as she is known to everyone on site, led the first SOAG team that worked with Oxford Archaeology at Gatehampton in the mid 1980s. She went on to organise the field walking, surveying and trial trenching that eventually, in 1992,

led to the start of the current excavation project at Gatehampton. As the first Director of Excavation, her enthusiasm and ability to get things done and to bring in expert help and advice established Gatehampton as SOAG's major project. Her legendary shorts, worn in all weathers with her trademark SOAG T-shirt and hat, set the dress code for the site. Most of all, it is thanks to Cyn that hundreds of people have had the opportunity to participate in and enjoy archaeology at Gatehampton.



With Oxford Archaeology in the mid 1980s

Left: Cyn pointing to the burial in the Middle Neolithic enclosure ditch
Below: Cyn at the site of the corndryer



Photos: from the SOAG archives



Cyn excavating the 'opus signinum' floor of the warm room



Cyn excavating the tessellated floor in Trench 7, October 2007



Cyn excavating in Trench 7, October 2008

Photos: Hazel Williams

Roman Rats at Gatehampton?

Janet Sharpe

The previous examination of an owl pellet assemblage from the floor of the large square room at the western end of Gatehampton Roman villa yielded tantalising evidence for the presence of rats in South Oxfordshire during the late Roman period (Sharpe, 2007: 32). Although it is recognised that the black or ship rat (*Rattus rattus*), which originated in south-east Asia, was present in Britain during the Roman period, it had only been recorded from the ports of London (3rd century) and York (4th century), and the town of Wroxeter (Yalden, 1999: 125). The earliest evidence so far for the black rat in Oxfordshire appears to be from the early medieval period (Robinson, unpublished).

It was therefore decided to excavate more of the Gatehampton owl pellet deposit in order to confirm, or otherwise, the presence of rats at this site at a time when at least part of the villa building remained standing and roofed, during the late Roman or immediately post-Roman period.

Methods

Whereas the previous sample was sieved from an undetermined volume of the overlying deposit on the chalk floor at the western edge of the square room (context 7147), the present material consisted of six samples recovered from adjacent blocks of deposit (each approx. 80cm long x 50cm wide x 12.5cm thick) taken from the cleaned (i.e., cut back 15cm) western edge of the remaining undisturbed baulk (Sharpe, 2007: Fig. 1) at two levels each of three blocks, labelled 'top-north, top-central, top-south' and 'bottom-north, bottom-central, bottom-south' (Table 1). These blocks all corresponded to context

	North	Central	South
Top	Wt = 2 g MNI = 9	Wt = 10 g MNI = 15	Wt = 7 g MNI = 20
Bottom	Wt = 2 g MNI = 10	Wt = 14 g MNI = 43	Wt = 33 g MNI = 76

Table 1. Weight of bones (to nearest g) and Minimum Number of Individuals (MNI) recorded for each sample

7298 which equates to context 7147: both contexts overlies the chalk floor of the square room. The lower blocks were taken immediately above the chalk floor and the upper blocks were immediately above them, corresponding to the total 25cm depth of context 7298, which comprised a deposit of mortar and soil overlain by an undisturbed layer of topsoil over 30cm deep. The centre of the central blocks corresponded to the midpoint from the north wall of the square room to the south of the baulk, which is slightly to the north of the east – west axis of the room.

The blocks of deposit were sieved down to a 1mm mesh size, which recovered all the mandibles, bone fragments, individual teeth, vertebrae, limb and foot bones, and unfused epiphyses derived from the skeletons of the mammalian prey consumed by the owls. The mandibles were identified and counted to provide the Minimum Number of Individuals (MNI) of each species represented (i.e., each animal has only one left or right mandible and therefore one of each gives an MNI of 1 but, say, four left and only two right mandibles give an MNI of 4, and so on). The bone assemblage was also examined for the presence of non-mammalian bones, which were identified as far as possible.

Results

Table 1 shows the spatial relationship between the sampled blocks and the approximate weight of bones and the estimated MNI of the prey animals recovered from each. The total weight of the bones was 78g, which is only slightly smaller than the 90g sample weight examined previously (Sharpe, 2007). It can be seen that the quantity and therefore density of prey increases from north to south and is relatively very much higher in the bottom-south sample, which more or less corresponds to the position of the east–west axis of the room and therefore to the roof beam that the owls were presumably roosting on while regurgitating their pellets.

Eleven species of small mammals were identified from their mandibles, including mole, three species of shrews, three species of mice, rat, and three species of voles (Table 2). The large number of unfused epiphyses from the ends of the long bones suggests that a considerable proportion of the prey was juvenile. At least two species of birds were recognised from various bones and particularly the humerus, which fell into two length categories: approx. 18mm and 25mm respectively. The former was also represented by the premaxilla (upper beak) and part of the cranium of a broad-billed seed-eating bird similar in size to a sparrow. The latter, which was less frequent, may represent one of the larger finches.

Only two bones were present that could not have been derived from owl pellets and are therefore considered intrusive: an eroded fragment of the distal left metatarsal of a sheep in the top-north sample,

and a larger distal bird humerus, probably from a domestic chicken, in the bottom-central sample.

A few snail shells were also incidentally recovered among the bones: *Cecilioides acicula* (a burrowing species of no environmental significance), *Discus rotundatus* and *Vitrea contracta* (which are both shade-loving species associated with woodland), and *Trochulus hispidus* (which also likes damp and shade but is found in many different habitats).

Discussion

As with the previous sample (Sharpe, 2007: 31), the species represented and their relative proportions form the typical prey of the barn owl (*Tyto alba*), with wood mouse (*Apodemus* spp.), field vole (*Microtus agrestis*) and common shrew (*Sorex araneus*) as the preferred prey items, and a small but distinct presence of birds. Other species of owls rarely include shrews in their diet to any great extent.

In addition to the eight species of small mammals previously listed, three new species are recorded here: a single right mandible of a mole (*Talpa europaea*) from the bottom-south sample, a single right mandible of a bank vole (*Clethrionomys glareolus*) from the top-north sample and, unexpectedly, a right and a left mandible of a house mouse (*Mus domesticus*) from the bottom-south sample. The house mouse, which like the rat originated in Asia, appears to have arrived in Britain during the Iron Age and is not uncommon on Roman sites (Yaldon, 1999: 124).

Species	MNI	%
Mole (<i>Talpa europaea</i>)	1	0.6
Water shrew (<i>Neomys fodiens</i>)	4	2.3
Common shrew (<i>Sorex araneus</i>)	31	17.9
Pygmy shrew (<i>Sorex minutus</i>)	8	4.6
Wood mouse (<i>Apodemus</i> spp.)	57	32.9
Harvest mouse (<i>Micromys minutus</i>)	3	1.7
House mouse (<i>Mus domesticus</i>)	1	0.6
Rat (<i>Rattus rattus</i>)	7	4.1
Bank vole (<i>Clethrionomys glareolus</i>)	1	0.6
Field vole (<i>Microtus agrestis</i>)	44	25.4
Water vole (<i>Arvicola terrestris</i>)	2	1.2
Birds	14	8.1
Total	173	100.0

Table 2. Species composition of the owl pellet assemblage from Gatehampton Roman villa (MNI = Minimum Number of Individuals)

However, the earliest record of house mouse from Oxford until now was during the Saxon period (Robinson, unpublished) and this finding may be a first record for Roman house mice in South Oxfordshire.

As before, rats were present among the bone assemblage. Three juvenile right mandibles, two of which were fragmentary, were found in the top-central sample, and two lower incisors, right and left but of different sizes and therefore probably representing two different animals, were found in the bottom-central sample. It is possible that these incisors may relate to the mandibles in the sample immediately above. Two rat molars and a right maxilla and palate were present in the bottom-south sample. The rounded angle of the anterior zygomatic arch on this specimen would appear to confirm the identity of this rat as the black rat (*Rattus rattus*) and not the larger brown rat (*Rattus norvegicus*) which was not introduced until the 18th century (Corbet and Southern, 1977: 236). Some of the long bones in the samples were too large to have come from mice or voles, and may also represent the rat.

The position and context of this owl pellet assemblage appear to be late Roman in date. The context consists of a layer of mortar and soil that was deposited as the building deteriorated and no post-Roman material has been recovered from it. The villa building had been deserted but the square room at least remained more or less intact and roofed, and was inhabited by barn owls. The large accumulation of prey remains (168g of bones and an estimated 355 prey animals from the previous and present samples combined, with possibly more remaining unexcavated within the baulk) suggest that the room was occupied by the barn owls for a relatively long period.

The question remains, were the rat bones part of the owl pellet assemblage, or intrusive? Rats are known to be taken by barn owls as prey (Lawrence and Brown, 1967: 270) and the specimens represented all appear to have been juveniles. One alternative explanation is that the rats burrowed into the owl pellet deposit and reared their young there at a later date, but there is no evidence for disturbance by animal burrows and in any case the black rat nests in the roofs of buildings, not on the ground like its relative the brown rat (Lawrence and Brown, 1967: 102). Another possible explanation is that the square room remained standing for a very long time, even though the rat remains were found close to the original chalk floor. However, it seems unrealistic to assume that it survived until the early medieval period; heavier flint rubble and tile immediately above context 7298 at the edges of the room attest to its eventual collapse.

Overall, the evidence for the presence of both the black rat and the house mouse at Roman Gatehampton is fairly strong, although this remains dependent on the absolute dating of the owl pellet

assemblage. If this assumption is correct, then it pushes back the first arrival of the black rat in South Oxfordshire by perhaps 700 years, and the appearance of the house mouse by perhaps 200 years. There remains a paucity of data, which could possibly be supplemented by the analysis of more Roman owl pellet assemblages from sites elsewhere in Oxfordshire.

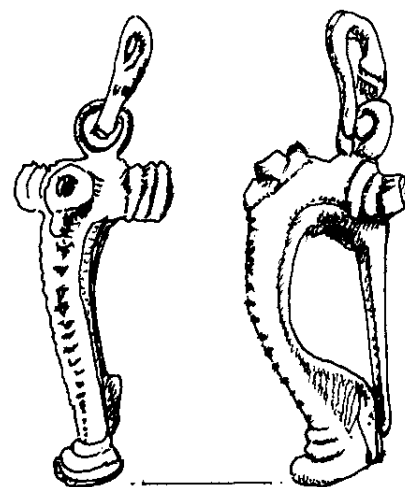
It is interesting to note that, like the rabbit, not so long ago the black rat was believed to have been introduced to Britain during the medieval period (Yalden, 1999: 125); both species now appear to have made their debut in this country in Roman times and then to have become extinct until they were reintroduced at a later (medieval) date.

Acknowledgement

My grateful thanks are due to Tom Walker, who excavated the samples and then sieved and cleaned them ready for me to examine.

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From the Archives: Bow brooch from Gatehampton Farm
Illustration: Cynthia Graham Kerr, first published in *SOAG Bulletin* No. 60 (2006)

The Lost Church of St Michael, Bix Gibwyn, Bix

David Nicholls

Interim Report

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Interim Report

David Nicholls

Background

December 2006 saw discussions between Dr Stephen Miles of the *Victoria County History: Oxfordshire* (VCH), and the author concerning the England's Past for Everyone (EPE) project. The author mentioned fieldwork which had taken place in 1955/56 to investigate the enigma of the 'missing' site of the medieval church of Bix Gibwyn. Despite several decades of sporadic fieldwork, and documentary research by various county and local historians, no conclusive structural evidence had been obtained for the site of the church. Several diverse locations had been suggested throughout the Assendon and side valleys and also the higher Bix parish land for this church which, in the medieval period, belonged to one of the two main manors, each with its own church. A smaller estate of Bromsden also existed to the south-west. The manors were absorbed into the adjacent Stonor Estate in the 14th century and then united in the 15th century.

The medieval settlement pattern in this area appears to have been quite dispersed and very little physical evidence remains, with the particular exception of the well-known, beautiful ruinous church of St. James in the parish of Bix Brand. This has been extensively recorded and surveyed. It is possible that this church was founded in the late Saxon period and survived as a living church into the late 19th century.

The importance of locating the site of Bix Gibwyn church by systematic search techniques, including the application of geophysical survey equipment, was outlined by Stephen Miles, but, due to VCH budgeting constraints, it was impossible for this work to be commissioned. The search was anticipated to be quite extensive despite initial identification of four possible primary locations by the VCH.

Pending final approval of the SOAG Committee, and the availability of expert technical support and equip-

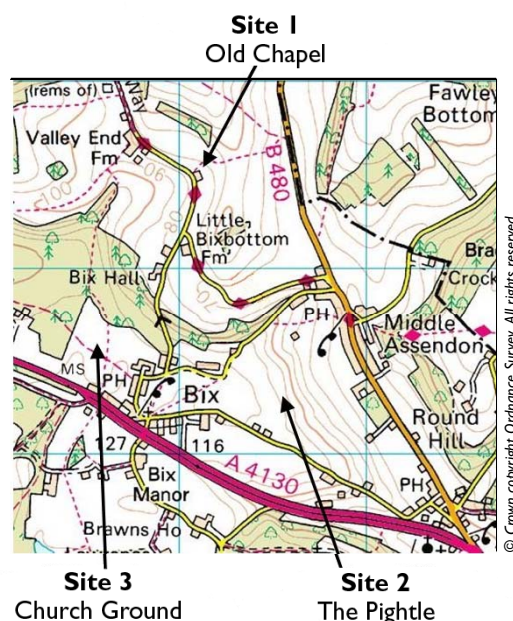


Fig. 1. Sites surveyed at Bix

ment, the voluntary services of SOAG were offered to undertake this task, for it was considered that this could be an extremely interesting field challenge for the Group. This was agreed, and in June of 2007 the first survey was undertaken in conjunction with the Marlow Archaeological Society which had expressed interest in participating through local Bix member John Robinson. The first site, Old Chapel, was selected as the most promising, and likely to yield some evidence.

Until 1725, this site was shown on the Stonor Estate map as Old Chapel, comprising a small close with a larger enclosure behind (Site 1 in Fig. 1. SU 731865). Before 1841 this was arable land. As Little Chapel Field it was sold off in 1899 by the local rector of Bix to a J. Broad. Soon after this, two cottages were built on the land and were then known as Broads Cottages, but during this period of change an excavation took place before the erection of the cottages in 1900, by Harry Watts, who was later to become County Surveyor. In 1936 he wrote to local historian Greening Lamborn, who was of the opinion that the church was sited up the hill.

"I know quite certainly it [the lost church] stood on the site upon which Broads Cottages are now built. I dug them quite extensively many years ago, when the then rector was using it for growing his potatoes. My attention was first attracted by the growth of poppies, very luxuriantly, in a fairly regular parallelogram – and the surface soil strewn thickly with broken tiles. Such dense growth of poppies suggested a wealth of lime in the soil, so I started digging. No doubt that was a disused graveyard surrounding the poppies – any amount of human bones (no sign of coffins or nails). On digging on the site of the church I concluded that the whole of the north wall had collapsed almost bodily to the south."

We do not know where the exact position of this apparent structure was in relation to these two early cottages. In c. 1971, these cottages, situated near, and parallel to, the road as a joined pair, were demolished, and two detached houses were built, now known as Holly Hill and Keeper's Cottages. These are positioned much further back from the road at different orientations. Local people remember a number of skeletons being uncovered during the foundation excavations, and these were reported to the local Constabulary – in all possibly 14 bodies, but apparently no recording was undertaken as it was realised these were old bones, and the remains were covered by the new building. Over a number of years, a former tenant also reported carting large quantities of flint and stone off the site to enable cultivation of the gardens.

Geophysics

Against this background, and with the kind approval of the owner, Major General Lord Alvingham, and the tenants, we had to decide where it might be possible to obtain geophysical survey imaging using resistivity survey equipment. It was decided to concentrate on two areas at Old Chapel (Site 1 in Fig. 1). The Marlow group was to scan the gardens of both cottages: a difficult and interrupted task due to modern features such as concrete paths, drainage systems and garden features, and SOAG was to scan the adjacent large field to the south of Holly Hill Cottage where 16 20m x 20m grids yielded no historic images whatsoever.

The task for the Marlow group yielded tantalising imaging but some eight varied grid systems proved difficult to correlate with no firm conclusions (Fig. 2).



Fig. 2. Resistivity survey at Chapel Cottages

Because of obvious ground disturbance during periods of building, demolition work, drainage installation and garden activity, it was only possible to obtain partial imaging, and, where this was recorded, it was not feasible to proceed further with trial excavations. In conclusion, the results obtained were not considered sufficiently positive to suggest either definite structural features and/or graves.

The SOAG survey team decided to scan two further sites identified by Stephen Miles (see Fig. 1).

Site 2, The Pightle, is an area to the north-east of the Old Bix Hill Road, close to Bix Common and very near to the Romano-British building excavated in 1955. This site is on high ground and in a commanding position above the Assendon valley. Including two further potential locations identified in this area from Google aerial photographs, 14 20m x 20m grids were covered, but these yielded nothing further than indeterminate geological anomalies. A survey of another image on Bix Common also obtained from Google maps included four grids. This position was behind the new Bix Parish Church. No archaeology was detected.

We then turned to Site 3, Church Ground, west of the common and alongside the Roman road surveyed by Janet Sharpe (unpublished). Six grids were laid out and surveyed, but no structural images were obtained. It is possible, however, that Iron Age storage pits are located here and merit further investigation (see Fig. 3).

This extensive search, conducted in the summer months of 2007, had yielded no evidence whatsoever for the church or other medieval structures.

The extensive photographic archive collection for the area in the National Monuments Record in Swindon was also carefully examined and, whilst no images to indicate buried medieval foundations were observed, intriguing linear and other crop marks were noted. These also merit further research as a separate project and possibly relate to medieval farming and land use.

In July 2007, SOAG and the VCH also conducted an evening aerial search in idyllic conditions, flying from White Waltham Airfield. This over-view also indicated interesting features in Bix parish. The search season for 2007 was closed.

Further discussions were held with the VCH in the early months of 2008. Stephen Miles considered that the most promising site remaining, despite early negative results, was Old Chapel (Site 1). It was agreed that permission should be sought from the owner, Lord Alvingham, to undertake small scale trenching to the rear of Keeper's Cottage, very close to the house. In the meantime, the VCH issued a brief 'Summary of Evidence' for the probability of this location being the strongest contender for the church, based on documentary evidence and the earlier finds.



Fig. 3. Resistivity survey at Church Ground, Bix



Fig. 4. August 2008 dig at Chapel Cottages, Bix

Archaeology

In August 2008, a 6m interrupted trench 1m wide was excavated to the front of the right hand cottage, known as Holly Hill, by six SOAG members, to a depth of c. 1.2m (see Fig. 4).

Stratification revealed an unexpected homogenous full depth layer, apart from the plough or worked garden soil, of c. 250mm, of disturbed gravelly soil with some small flints, containing fragments of bone, including human bone, pottery of Roman, medieval and 19th-century date, with assorted tile fragments. This layer was not backfill and had not related to constructional activity, but was disturbed. No firm conclusions were reached on how this matrix was created, but we were to find similar stratification later, elsewhere.

Further permission was sought from the owner to undertake other trenching, and this approval was delayed until late in the year, mid October, to avoid disturbing the tenants in summer conditions. Two positions were selected, with the object of providing a broad overview of the original plot conditions. The first, a 2m by 2m grid, was excavated to the front of Holly Hill Cottage. This was located close to the right hand hedge, avoiding drainage runs, but in a lawned area. Excavation here obtained a depth similar to the previous test trench, approximately 1.3m. Virtually identical soil stratification was met, with similar unremarkable scattered finds. This excavation was quickly closed down and the garden reinstated.

The second trench, initially interrupted, nominally of 4m by 1m, was positioned north-west to the rear of the left hand cottage, Keeper's Cottage. Here the ground rises slightly and is part of the garden.



Fig. 5. Hook excavated at November 2009 dig at Chapel Cottages, Bix

A small waste area lies beyond it, and the original brick dog kennels remain (see below). Excavation work proceeded for several days, encountering similar soil conditions, but with increased disturbance, and quantities of tile pieces; bone fragments, including those of humans; pottery shards of different periods, including 3rd- to 4th-century Roman; and a few shards of medieval ware. All these were within the main homogenous layer: large and small flints and pebbles mixed in with dark loam and clay. The top layer, about 500mm of worked garden soil, contained various rubbish and indications of normal outside privy soil disposal from the early cottages. At first, there was no indication of church use. Within the fill, at a depth of 650mm, an interesting small bronze hook was found. This has been identified as a hooked tag, used to fasten either clothing or a purse. This example may be Anglo-Saxon, probably 10th- or 11th-century (Fig. 5). A collection of similar tags was discovered in the Winchester excavations. Such tags were in use, intermittently, until the Tudor period.

Towards the end of our anticipated period of excavation, when little appeared to be gained by continuing, and natural undisturbed gravel was being revealed, part of what appeared to be a femur was uncovered at a depth of 960mm to the west elevation at the north end of the trench. Further trowelling confirmed this to be the case and work continued in uncovering the whole of the lower body of this, the first human skeleton (No. 1, Fig. 6) in a WNW/ESE orientation. Shortly after this discovery and during the same work period, the cranium of a second body (No. 3, Fig. 6) was uncovered at the south end of the trench.



Fig. 6. The three skeletons at Chapel Cottages, Bix

Conditions for excavation during this latter part of November demanded that careful nightly covering of the trench was essential to prevent flooding, and daylight was short. Work continued for several days and a midway baulk was removed. A third skeleton (No. 2, Fig. 6) was uncovered shortly after the second and all three were carefully exposed over several days.

Due to the way this exploratory trench had been sited, the three skeletons were not exposed completely, and only one, No. 3, revealed skeleton remains from the cranium. This body was exposed to the limit of mid femur point, with the left arm bones intact. The orientation was again WNW/ESE and the body was lying at a depth, to the top of the cranium, of 890mm. The central body in the trench, No. 2, was slightly deeper at a depth of 1,115mm to the spine, with an orientation almost perfectly W/E.

Assuming that normal ground level increase over the centuries is also applicable to this site, and despite obvious human activity, particularly during the past two centuries, it would appear that these three bodies were buried at a relatively shallow depth: an average of no more than 750-900mm. This is about half the normal depth, but there may be an unexpected reason for this (see below). Or possibly the bodies were buried quickly and concurrently. The spacing of the bodies was equal, indicating perhaps that the burial party or parties were aware of the exact position of each. Perhaps the graves were marked or mounded over.

It was agreed with the VCH that it would be very useful if the opinion of a forensic pathologist could be obtained. Anna Williams, Lecturer in Forensic Anthropology at Cranfield University, who had recently given SOAG an excellent seasonal lecture, was approached and she agreed to come over to examine the bodies (see p. 27). It was also necessary to obtain an Exhumation Licence from the Ministry of Justice before the skeletal remains were removed. Anna Williams spent a day working with the team in abysmal weather conditions, but under cover, cleaning and examining primary bones from each skeleton. We are fortunate in receiving a great deal of information concerning the sex, age, indications of trauma, height and general condition of the bones. On further consideration, primarily to endeavour to obtain a burial date(s), the VCH commissioned a radiocarbon dating analysis of selected skeletal material by the Research Laboratory for Archaeology and the History of Art at Oxford (see p. 30). The results dated the skeletons to the late 12th/early 13th century, and this, in conjunction with the orientation of the bodies, supports the theory that this is a medieval churchyard.

Soil stratification has been discussed. Paul Smith, County Archaeologist, visited the site when final uncovering of the skeletons was in progress.



Fig. 7. Lime mortar beneath the skeletons revealed at Chapel Cottages, Bix

Trowelling had revealed localised deposits of highly sandy layers, believed, initially, to be natural overlay to the gravel subsoil, particularly to the north end of the trench. However, in addition to this, lime mortar was uncovered, first in traces and then in a tight homogeneous layer. It was apparent that the bodies had been laid over this mortar which was sample excavated to a further depth of some 350mm below the level of the bodies (Fig. 7).

Within this layer were fragments and nodules of flint. The conclusion was that this layer was a deliberate spread – not a loose fill or result of collapsed masonry. Is this a floor, and, if so, is it within a church structure? This might explain the very shallow depth of the interments. The loose sandy fill was also removed, and this exposed further mortar spread.

It was anticipated that clear indications of grave cuts would be revealed, at least in section, but this did not prove to be the case. Faint traces were noted on plan, especially to body No. 2. Body No. 1 to the north end of the trench was buried with the feet resting on a small piece of squared tile – possibly cut from a roof tile, and measuring some 60mm x 75mm. No traces of coffin boarding or nails were found, except for one small nail found below the mortar spread below body No. 2. It is assumed that the bodies were wrapped in shrouds for burial. No traces of clothing or footwear fastenings were discovered. After a reburial service, backfilling and reinstatement was completed at the end of November.

Conclusions and further work

This small scale, simple excavation has yielded interesting results, but such a small sample of human remains cannot be completely conclusive. However, taken in association with the discovery of a number of other skeletons during the 1970s, it would appear

that this is a Christian graveyard. Because of the discovery of the deep mortar spread, samples of which have been analysed at the Scottish Lime Centre, it has been decided to undertake a further programme of geophysical scanning, using Ground Penetrating Radar and possibly magnetometry. This will be undertaken during the early summer months of 2009, after extensive clearing of parts of the garden and adjacent areas.

The Keeper's Cottage dog kennels have been referred to earlier. These remain from the first pair of cottages. The land in front of them has been relatively undisturbed. It is hoped that further scanning here may yield data on the extent of the mortar, and whether this relates to structural foundations which may provide a footprint of part of a building. Further sample trenching may be undertaken in this unused area, if footings are detected.

The SOAG team: Professor Nancy Nichols, Mike Green, Mike Vincent, Tom Walker and myself, David Nicholls, would like to acknowledge and express our gratitude to the following: Major General Lord Alvingham for permission to undertake this fieldwork and for his interest; his agent Chris Lloyd; the tenants of both cottages for their patience and interest during the excavations, and, in particular, Paul and Jane Wyatt of Keeper's Cottage, who gave their enthusiastic support; David Acreman, Environmental Enforcement Officer of South Oxfordshire District Council, for liaising so helpfully over matters of exhumation procedure; and the Reverend Brendan Bailey, for conducting such a moving re-burial service. Thanks also to Paul Booth for examining the finds and giving his expert opinion; and to Stephen Miles on and Simon Townley from the VCH, for asking us to participate in this search, the primary aim of which was to find the lost medieval church. The secondary aim, to locate the Anglo-Saxon and medieval manorial centres of both early parishes, has yet to be undertaken.

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Initial Analysis of the Human Remains

Anna Williams MA (Oxon) MSc PhD

In November 2008 I was asked by Dr Stephen Miles on of the *Victoria County History*, and David Nicholls of SOAG, to visit the excavation at Chapel Cottages in Bix Bottom and conduct an analysis of the human bones that had been recently uncovered. Three human skeletons were partially exposed by the trench. Analysis was conducted as the skeletal elements were *in situ*, although removal and cleaning of the os coxae and other elements was permitted to facilitate determination of the sex, age at death and stature of the individuals. It should be emphasised that these are initial findings only, and that more detailed and precise conclusions would be attainable through thorough laboratory analysis. The skeletons are numbered 1 to 3 as they lay from north to south in the trench.

Skeleton 1

Skeleton 1 was partially exposed, from the pelvis to the feet. The left os coxa and the left femur were lifted, cleaned and examined.



Fig. 1. Skeleton 1 at Chapel Cottages, Bix Photo: Mike Green

Sex

The sex of this individual was indeterminate, due the presence of features characteristic of both sexes. The sciatic notch of the ilium was large and wide (score = 2, Buikstra and Ubelaker, 1994), which is a typically feminine trait, but the metric measurements of the femur (bicondylar breadth = 96mm) suggest a male individual (Buikstra and Ubelaker, 1994). Without further examination of the rest of the pelvis, the skull and other long bones, it would be imprudent to categorically determine the sex of this individual.

Age

It was possible to estimate the age of Skeleton 1 through analysis of the auricular surface of the pelvis. The morphology of the auricular surface was best described by Phase VII of the Meindl and Lovejoy scoring system, which suggests an age range of 50- 59 years old (Buikstra and Ubelaker, 1994). This is corroborated by the presence of slight increase in porosity on the distal articular surface of the femur, with the possible beginnings of eburnation (polishing caused by bone-on-bone contact), which may be indicative of the earliest stages of arthritis (Buikstra and Ubelaker, 1994).

Stature

The approximate stature of Skeleton 1 during life was estimated using long bone measurements. Using the maximum length of the femur, 46.8cm, it was estimated that the height was between 170.16cm to 178.05cm (c. 5'7" to 5'10"), with an average of 174.11cm, or about 5'8½" (Trotter and Gleser, 1977). This estimate is only based on the length of the femur, and could be refined if the tibial length was included in the calculation. This calculation also assumes the individual was male, which may be incorrect.

Skeleton 2

Skeleton 2 was partially exposed, from the rib cage to the feet. The left os coxa and the left femur were lifted, cleaned and examined.



Fig. 2. Skeleton 2 at Chapel Cottages, Bix Photo: Mike Green

Sex

The sex of this individual was determined to be male, through an analysis of the morphological features of the pelvis according to Phenice (1969) and the metric analysis of the femoral dimensions. The pelvis was determined to have a narrow sciatic notch (Buikstra and Ubelaker, 1994), and a broad medial surface to the ischiopubic ramus (Phenice, 1969), which are both characteristics indicative of a male individual. The diameter of the femoral head in a vertical plane was

found to be 44.43mm, and the bicondylar breadth of the femur to be 100mm, both of which strongly suggest that the individual was male (Bass, 1995).

Age

It was possible to estimate the age of Skeleton 2 through analysis of epiphyseal union of the long bones and pelvis, and the surface of the pubic symphysis.

Fusion of the head of the femur and the distal epiphysis to the shaft was not quite complete – the epiphyseal line was visible. Complete fusion of these epiphyses to the shaft usually occurs at about 18-20 years (Schwartz, 1995). The epiphyseal line was still visible around the ischial tuberosity, and the iliac crest was not completely fused. Fusion occurs in these areas between the ages of 16 and 23 years (Schwartz, 1995). The surface of the pubic symphysis showed extreme billowing and furrowing, indicative of a young adult, and its characteristics were best described by Phase I of the Todd scoring system (Buikstra and Ubelaker, 1994), which suggests an age of 18-19 years. As a result of these observations, it is estimated that Skeleton 2 was approximately 17-19 years old at the time of death.

The approximate stature of Skeleton 2 during life was estimated using long bone measurements. Using the maximum length of the femur, 47.5cm, it was estimated that his height was between 171.79cm to 179.67cm (c. 5'7" to 5'10½"), with an average of 175.73 cm, or about 5'9" (Trotter and Gleser, 1977). This estimate is only based on the length of the femur, and could be refined if the tibial length was included in the calculation.

Skeleton 3

Skeleton 3 was partially exposed, from the head to the femora. The left os coxa, left clavicle, left humerus and the mandible and maxillae were lifted, cleaned and examined.



Fig. 3. Skeleton 3 at Chapel Cottages, Bix Photo: Mike Green

Sex

The sex of the individual was determined to be female from an analysis of the morphological features of the skull, the pelvis, and metric measurements of the humerus.

The skull was gracile, and exhibited small mastoid processes, sharp supra-orbital margins and minimal prominence of the supra-orbital ridges and glabella.

The mandible exhibited a small mental eminence with little projection and the angle of the mandible was obtuse. All of these features suggest a female individual (Buikstra and Ubelaker, 1994). The diameter of the humeral head in a vertical plane was 41.67mm, which falls into the female range (Bass, 1995). The pelvis exhibited an oval shaped pelvic inlet and flared ilium, subpubic concavity, as well as the presence of a preauricular sulcus, which is more common in female individuals (Buikstra and Ubelaker, 1994).

Age

The age of the individual was estimated using the pubic symphysis and the auricular surface, as well as dentition and epiphyseal fusion.

The epiphysis at the sternal end of the clavicle was fully fused to the shaft, and the third mandibular and maxillary molars had fully erupted, indicating that the individual had reached skeletal maturity, and was at least 21 years old (Schwartz, 1995). The morphology of the pubic symphyseal surface was best described by the Suchey-Brooks scoring system at Phase II, which suggests an age range of 19-40 years old (Buikstra and Ubelaker, 1994). The auricular surface morphology was best described by Phase II of the Meindl and Lovejoy scoring system (Buikstra and Ubelaker, 1994), which suggests an age range of 25-29 years old. As a result of these observations, it is estimated that Skeleton 3 was approximately 21-29 years old at the time of death.

Stature

The stature during life of Skeleton 3 was estimated using the length of her humerus. It was calculated to be between 165.74cm and 174.64cm (c. 5'5" and 5'9"), with an average of about 170.19cm, or 5'7" (Trotter

and Gleser, 1977). It must be remembered that this estimate is based only on the humerus, which does not directly contribute to the height of the individual, and is therefore not the best element on which to base stature estimation. It does, however, give a rough idea of the height of the individual during life.

Dentition

Skeleton 3 exhibited poor dental health. The majority of her molars and premolars were worn down to the dentine. She had lost her lower left first and second molar ante-mortem, as the alveolar bone of the mandible exhibited evidence of healing. She exhibited extremely large cavities in her upper left first and second molars, which in the second molar extended into the root. These extremely large cavities resulted in the formation of two apical abscesses at the apices of the roots of the upper left first and second molars, with drainage channels perforating the buccal side of the alveolar bone. These abscesses would have been extremely painful during life and dramatically reduced her quality, if not the length, of her life.



Fig. 4. Photograph of the left maxillary molar exhibiting severe cavities (no scale available)

Photo: Mike Green



Fig. 5. Photograph of the buccal surface of the left maxilla, showing evidence of apical abscesses at the roots of the upper left first and second molars (no scale available)

Photo: Mike Green

Summary of Findings

Skeleton	Sex	Age (years)	Stature (av. cm)	Comments
Skeleton 1	Indeterminate	50 - 59	174	Possible signs of early arthritis
Skeleton 2	Male	17 - 19	175	
Skeleton 3	Female	21 - 29	170	2 dental abscesses

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Carbon Dating the Human Bones

Mike Green

Abstract

We explain how radiocarbon dating plots are interpreted and apply this to the results of the radiocarbon dating undertaken on the three skeletons uncovered by SOAG at Chapel Cottages in Bix. We argue that the data can be interpreted as supporting the case for the individuals represented by the skeletons being contemporaries and possibly related to each other.

Radiocarbon dating

Radio carbon dating is a technique for determining the age of archaeological artefacts of biological origin up to about 60,000 years old by means of measuring the amount of Carbon-14 that is left in the object.

Carbon-14 (C14) is created in the earth's atmosphere as a product of collisions between cosmic rays and atmospheric nitrogen, and is radioactive with a half life of 5730 years. C14 atoms combine with oxygen to form carbon dioxide, which plants absorb naturally and incorporate into plant fibres by photosynthesis. Animals and people eat plants and so take in C14 as well. The ratio of normal carbon (C12) to C14 in the air, and in all living things, is nearly constant. When the plant or animal dies it stops taking in new carbon and the C14 atoms decay whilst the amount of C12 remains constant. By measuring the proportion of C12 to C14 atoms we can work out how long ago the sample died.

Radiocarbon ages are usually reported in radiocarbon years "Before Present" (BP), "Present" being defined as AD 1950. (For samples taken after this, radioactive debris in the atmosphere from the testing of nuclear weapons has meant that this technique is no longer valid.) In practice the ratio of C12 to C14 in the atmosphere does vary somewhat with time. Raw radio carbon ages therefore need to be calibrated to give calendar dates (see below).

The radio carbon dating technique was first developed in 1949 by Willard Libby at the University of Chicago who was awarded the Nobel Prize for Chemistry for his work. His first demonstration of its accuracy was the dating of wood from an ancient Egyptian royal barge the real age of which was known from historical documents (Arnold and Libby, 1949).

Calibration

This section is based on explanatory texts supplied with the radiocarbon dating results by the Radiocarbon Accelerator Unit at the Research Department for Archaeology and the History of Art at Oxford University.

The radiocarbon result of, say, 1000 ± 35 BP indicates that the notional age is 1000 years with a standard

uncertainty of 35 years (statistically ± 1 standard deviation). This notional age is calculated on the simplistic assumption that the amount of radiocarbon in the atmosphere has always been the same. This is not quite the case and so for anything other than a very rough indication of age the measurement must be calibrated.

Calibration is performed by comparing the radiocarbon measurements on the sample to those made on material (usually tree rings) of known age. This comparison allows one to determine the possible calendar age of the sample. An example calibration is shown here:

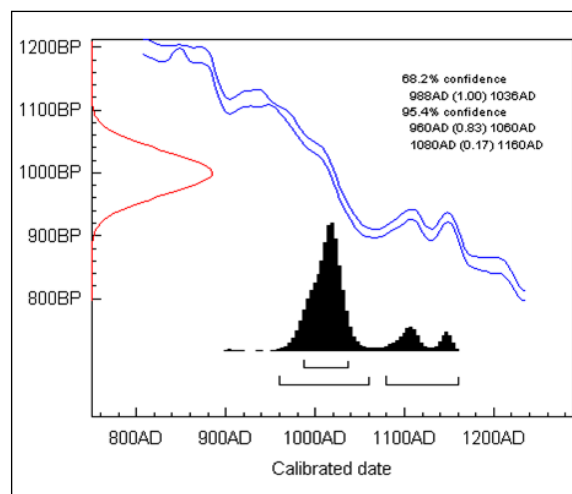


Fig. 1. Radiocarbon calibration plots

The main elements of this plot are:

- the radiocarbon determination itself shown on the left hand axis
- the measurements on known age material shown as the uneven double line
- the likelihood of different possible ages of the sample shown as the solid black distribution. From this you can see that the most likely date is just after AD1000.

It should be noted that the two secondary peaks at about 1110AD and 1160AD in the double line represent something unusual happening to natural C14 in the atmosphere at those dates. These produce a small but statistically significant additional double peaks in the calibrated date range. (*This secondary peak phenomenon is relevant to the samples for Bix as described below.*)

The range of possible ages is also shown for two different levels of confidence. We can be 68.2% sure that the sample dates to between 988AD and 1036AD, i.e. one standard deviation (SD) either side of the mean, but there is a reasonable chance (31.8%) that it is older or younger than this. However we can be 95.4% certain, i.e. within 2 standard deviations, that it dates either to the period AD960 to AD1060 or (much less likely) the period AD1080 to AD1160.

The values given within the brackets in the graph give the relative probability of the individual ranges. (Although note that in the graphs below for the Bix below these probabilities are expressed as percentages.)

Radiocarbon dates for the Bix skeletons

In November 2008 SOAG excavations in the garden at Chapel Cottages partially uncovered three human skeletons (See *'The Search for the Lost Church of St Michael, Bix Gibwyn'*, p. 23). The bones of these skeletons were subject to *in situ* analysis by Dr Anna Williams, Lecturer in Forensic Anthropology at Cranfield University (See *'Initial Analysis of the Human Remains'*, p. 27). At the same time bone samples from all three skeletons were taken and sent to The Research Department for Archaeology and the History of Art at Oxford University for radiocarbon dating. This process is expensive and can entail a wait of several months for the results. We are grateful to the *Victoria County History: Oxfordshire* (VCH) for providing the funds to fast track the analysis, as a result of which VCH were able to present the results only three weeks later at their annual conference in Oxford.

Analysis

The radiocarbon dating results for each skeleton are shown in Figures 2 – 4.

The graphs supply much data on the age of the skeletons at Chapel Cottages. We can say almost with certainty that the individuals represented by the skeletons died between the late 11th and early 13th centuries and with only slightly less confidence between the late 12th and early 13th centuries. The goal of our analysis is to find a valid way of narrowing down this wide range of dates, and see if it enables us to speculate about the individuals.

Narrowing the spread of dates for our analysis is complicated by the irregular nature of the calibrated graphs. Specifically there are several secondary peaks centered principally on 1070AD, 1130AD and 1250AD which are particularly obvious in the graphs for skeletons 2 and 3. Our approach is therefore to ignore the relatively low probability of the real dates being within these secondary peaks (probabilities of the order 20% and 7% for skeletons 2 and 3 respectively). We thereby narrow our considerations to the main distribution curves (labeled A, B and C in the three graphs). The data spreads that best define these curves are the 95.4%, 68.2% and 68.2% confidence levels for skeletons 1, 2 and 3 respectively. We then take the mid points of these date spreads and subtract the age ranges for the individuals as supplied by Anna Williams to arrive at a range of

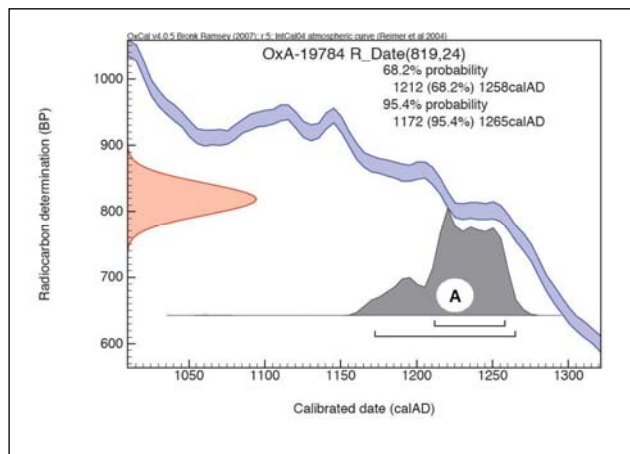


Fig. 2. Radiocarbon plots for Skeleton 1

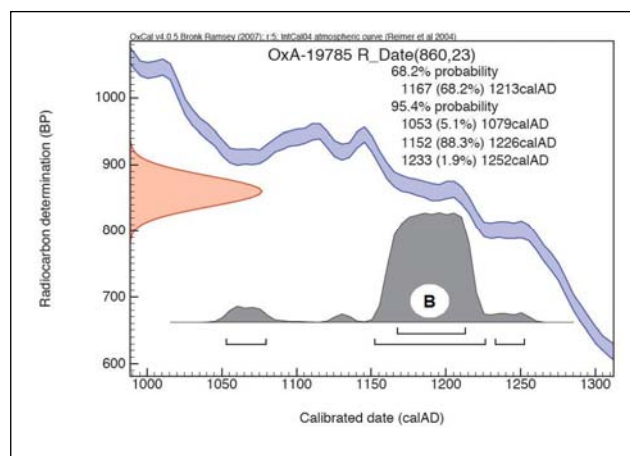


Fig. 3. Radiocarbon plots for Skeleton 2

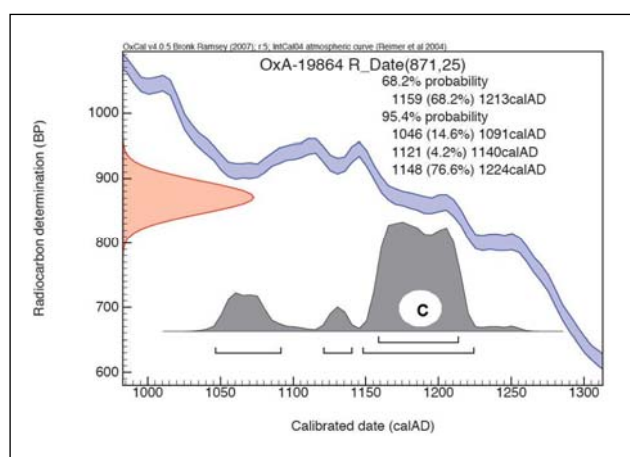


Fig. 4. Radiocarbon plots for Skeleton 3

dates for the births of the individuals. We admit that the selection of different confidence levels for each of the graphs, and the taking of mid points, is not rigorous statistically but defend it as reasonable here.

The following table shows our calculations.

	Skeleton 1	Skeleton 2	Skeleton 3
Date of death	1172 – 1265 (95.4% confidence level)	1159 – 1213 (68.2% confidence level)	1167 – 1213 (68.2% confidence level)
Midpoint of date of death range (X)	1218	1187	1190
Age from Williams data (Y)	50 – 59	18 – 19	20 – 29
Date of birth (X – Y)	1159 – 1168	1167 – 1168	1160 – 69

Table 1. Range of dates for births from carbon dating results

Interpretation

We observe that all three individuals may have been born within the decade 1159 – 1169, and, if this was the case, in such a small community they would almost certainly at least have known each other. Their differing lifespans meant that their deaths spanned up to 30 years: nevertheless they were buried immediately adjacent to each other.

We therefore speculate, with the caveats already mentioned, that the individuals might be related – possibly siblings close in age – who lived to very different ages but were buried close to each other, possibly in a family plot.

Acknowledgments

Victoria County History: Oxfordshire, for funding the costs of the radiocarbon dating.

Dr Anna Williams, Lecturer in Forensic Anthropology at Cranfield University, for selecting and removing the bones samples from the skeletons for analysis.

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SOAG and the Cliveden Snail

Tom Walker



Fig. 1. Cliveden House showing the Borghese balustrade in the foreground

A 'new' snail has recently been described as living in Britain – a rare event indeed. This snail was found at Cliveden House in Buckinghamshire (Fig. 1), and SOAG was closely involved in its recognition. How this happened makes an interesting story.

In 2004, a volunteer gardener, while cleaning an old balustrade at Cliveden, noticed a snail which he did not recognise. Later that month he attended a talk at the Marlow Archaeological Society on 'Snails in Archaeology', given by Janet Ridout Sharpe, a member of SOAG; he sent some shells to Janet who recognised them as *Papillifera papillaris* (now known by the earlier name of *Papillifera bidens*), a snail which had not previously been recorded in Britain. This has a beautiful shell with lines of distinctive white dots on a brown stripe (Fig. 2). It measures about 12-15mm [half an inch] in length. The author later took Janet to Cliveden to see the shells in their newly discovered location, and it was estimated that there were around 5000-6000 specimens present, mainly on the balustrade but also around the base of the main house. Its presence was then officially recorded in 2005 in the *Archaeo+Malacology Group Newsletter* (Ridout-Sharpe, 2006).



Fig. 2. *Papillifera bidens*

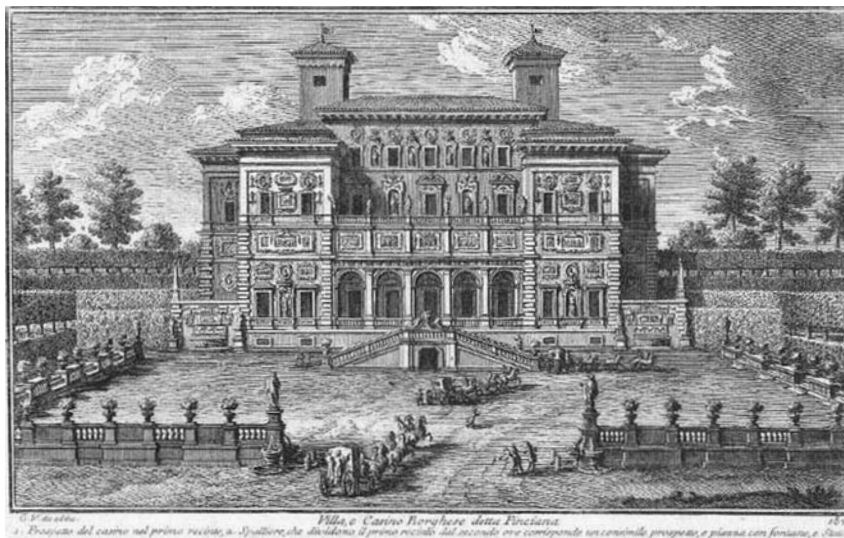


Fig. 3. The Villa Borghese, between 1745 and 1761. Etching by Giuseppe Vasi (1710-1782). Image from www.romeartlover.it/Vasi187

So how did this shell come to be in Britain? Cliveden House was purchased in 1893 by William Waldorf, 1st Viscount Astor, and he wished to develop an Italianate theme for the house and gardens. As part of his grand plans he bought a balustrade from the Villa Borghese in Rome (Fig. 3), which he installed at Cliveden in 1896; it consists of travertine marble with brick infill panels, and was originally carved in 1618-19. There is still a balustrade at the original location, but this is a reproduction to replace that which had been exported to England.

It seems almost certain that the shells were imported on some of the marble, and found this new habitat to their liking. What is extraordinary is that they remained undetected for so long: it took 108 years before they were recognised. They live in crevices within the wall, either on the marble or among fragments of decaying mortar in the brickwork, although there are many in the debris at the base of the wall (Fig. 4). They have now spread across the lawns between the balustrade and the house, a distance of about 30m, and a few can be found on the grand staircase and at the base of the walls of the house itself.

Papillifera bidens is native to mainland Italy and the islands of Sardinia, Sicily, Corsica and Malta. It seems to have limited powers of natural dispersal, but has been spread outside its native area by the actions of man. Thus it has recently been reported in Turkey (Gümüş, 2006; Örsan, 2006) Greece, Gibraltar, France, Spain, and North Africa (Mienis and Gümüş, 2007) in sites associated with ancient buildings, especially Roman, and it seems to have been transported either with building material or other trade goods. This certainly is a snail with archaeological connections.



Fig. 4. *Papillifera bidens* feeding on algae on the marble of the balustrade

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Archaeology and the Snail Trail

Janet Sharpe

The 'Cliveden snail' (*Papillifera bidens*, formerly known as *Papillifera papillaris*) is a striking example of how plants and animals can be moved out of their original areas of distribution through the often unwitting agency of man. If these organisms end up in areas which, although outside their natural range, are favourable to their becoming established and surviving long term, they can sometimes provide us with a clue to human activity in the past. Snail shells present an enduring presence in the archaeological record: what can they tell us about ancient population movements and trade routes?

Wherever it appears outside its natural homeland, *Papillifera bidens* is found in association with limestone, and particularly marble that has been exported from Italy to other regions for building or ornamental purposes. This species naturally lives on calcareous rocks, both for their calcium content which is needed to form the shell and also to feed on the algae and lichen that grows on them. It has very limited powers of dispersal as is evidenced by its virtual restriction to the Borghese balustrade at Cliveden. However, it is also known to occur in various other isolated localities around the Mediterranean.

For example, it is found today in Istanbul, where it is believed to have been introduced during the reign of Constantine the Great around AD 330 when stone was imported for the rebuilding of Constantinople. Subsequently, as the building stone was reused, it found its way into two medieval forts, and an Armenian monastery on an island in the Sea of Marmara (Örstan, 2006). I have found it among the ruins of Carthage in northern Tunisia, which was rebuilt by the Romans in the aftermath of the Punic Wars. Much later, in the 18th century AD, it was introduced to the Garrison Library Gardens in Gibraltar on garden ornaments (Menez, 2007) – as indeed it was to Cliveden House in this country in 1896. A close examination of garden statuary elsewhere may well prove productive. So limited are its powers of dispersal from its points of introduction that Örstan (2006) has suggested that a chronology of the dispersion of *Papillifera bidens* might be constructed using the known ages of the buildings where it has so far been found.

The 'Cliveden snail' is not the only species to have been transported long distances as a stowaway in imported material. The closely related 'Nîmes snail' (*Leucostigma candidescens*) has an even more restricted homeland in central Italy, and in France is

found only at the 1st-century AD amphitheatre at Nîmes: after almost 2000 years at this spot, it has spread no further (Sandford, 2009). Yet another clausiliid snail, *Elia moesta moesta*, is associated with several archaeological sites in Israel, away from its natural distribution area in the northern Levant (Mienis, 2007).

Other snails, once introduced into a new habitat, are not quite so restrained. Many now common snails in the British fauna have been introduced at various times in the past, often from the Mediterranean region. Work is currently underway by Tom Walker (SOAG) and others to attempt to pinpoint exactly when some of these introduced species first appeared in Britain. The best known, of course, is the 'Roman snail' or 'French escargot' (*Helix pomatia*) which was almost certainly introduced by the Romans; the large size of this snail suggests that it was probably deliberately introduced as food, rather than as an unbidden stowaway. This magnificent snail still lingers on in the limestone and chalk hills of southern England, prime Roman villa territory, but after nearly 2000 years its numbers are declining and it is now against the law to collect it in this country. A closely related species, the common 'Garden snail' (*Cornu aspersum*), was introduced at the same time and was a much more successful coloniser; it is now found throughout the British Isles and southern Ireland, being absent only from the highlands of the north and west, and the mountains of central Scotland. This species may also have been introduced by the Romans as food, and until recently it was still being eaten in Britain. In 1894, the Victorian pastor-naturalist J.G. Wood wrote in his charming little book, '*Natural History Rambles: Lane and Field*' (from which the accompanying illustration (Fig. 1) is taken) that "At Newcastle there used to be, and may be still, an annual custom among the glass-blowers of holding a snail-feast". However, it is worth noting that *Cornu aspersum* is a common pest snail in the Mediterranean region where it is known as the 'Vineyard snail', and it is possible that it was accidentally imported by the Romans among plant material.

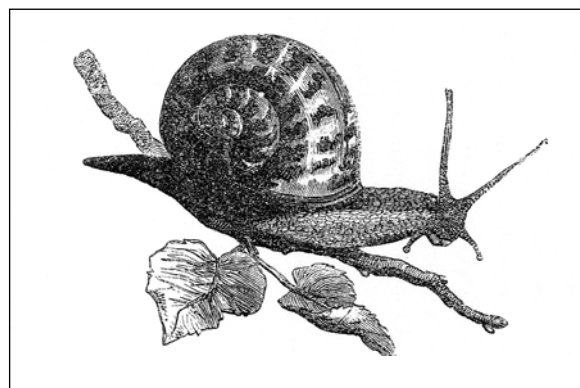


Fig. 1. The Garden Snail (*Cornu aspersum*)

Several other smaller species of snails are believed to have entered this country at various times between the neolithic and the present day (Kerney, 1999; Davies, 2008): most of these were probably accidental introductions although some of them, such as the 'Sandhill snail' (*Theba pisana*), are still eaten in their native Mediterranean. Establishing the time of arrival of these different species is difficult and dependent on well-dated contexts. A lot more work is needed before we can attempt to elucidate the history of many of them, and once a snail has arrived it will take an indeterminate length of time to spread to other areas, if at all. Once the time of arrival has been established, however, these snails can provide important dating evidence of the *terminus post quem* variety. For example, the chalk hill figure known as 'The Long Man of Wilmington' on the South Downs near Hastings was once thought to have been made in prehistoric times. The discovery, beneath the chalk debris produced during its construction, of two species of snails of Mediterranean origin, the 'Wrinkled snail' (*Candidula intersepta*) and the 'Striped snail' (*Ceriuella virgata*), which are not known to have occurred in southeast England prior to the medieval period, coupled with optical thermoluminescence evidence, has now dated this hill figure firmly to the post-medieval (Martin Bell, pers. comm.).

The increasing use of molecular genetics in molluscan research has recently produced some exciting evidence concerning the early archaeology of Ireland. The common 'Brown-lipped snail' (*Cepaea nemoralis*) is polymorphic for lip colour, and the white-lipped variety outnumbers the brown-lipped form on the west coast of Ireland – and in the Pyrenees. An analysis of the mitochondrial DNA of hundreds of individuals has shown that most of the Irish snails appear to have been derived from populations in Iberia. Given that fossil evidence indicates that *Cepaea nemoralis* has been present in Ireland for at least 8000 years, it has been suggested that it may have been introduced in association with a post-glacial human colonisation of Ireland from Spain (Grindon, 2008), perhaps accidentally hidden among plant material or even deliberately as a food source, bearing in mind that this species has been found in 9400-year-old shell middens in Pyrenean caves (Bahn, 1983). This hypothesis has been given some support by an independent study of the human Y chromosome, which has demonstrated a link between populations in Ireland and the Basque Country.

From 8000 years ago to the present day, human population movements and imported materials have been responsible for the introduction of numerous species of snails to Great Britain and Ireland. In the 1950s, a snail from the south of France ended up in Paignton, South Devon, where it probably arrived in a plant pot. This 'Girdled snail' (*Hygromia cinctella*) found

the Mediterranean-type climate of this part of south-west England to its liking. It gained a foothold but did not spread any further for nearly 50 years until global warming prompted a population explosion out of Devon: I recorded the first colony in South Oxfordshire (Wallingford) in 2001 and it was subsequently found at the Gatehampton dig site by Tom Walker. It is now found as far north as Sheffield. In 2006 yet another common Mediterranean snail arrived in this country: a single specimen of *Eobania vermiculata*, which is similar to the 'Garden snail' in size and has the same potential to attain pest status, was spotted on a wall behind the ticket office of Lewisham railway station in south-east London (Notton, 2006). The 'Lewisham snail' was probably introduced on someone's holiday luggage. And so the process continues. The presence of non-native species in archaeological shell assemblages can indicate human population movements, invasions, the spread of agriculture and the dispersal of crop plants, ancient trade routes, and the importation of specific goods and materials. It deserves closer study.

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Brightwell Baldwin Community History and Archaeology Project

The Brightwell Baldwin Community History and Archaeology Project (BBCHAP) is a community-based project being run in association with the South Oxfordshire Archaeological Group (SOAG). An introduction to the project was published in South Midlands Archaeology No. 37 (Clarke 2007a), in SOAG Bulletin No. 61 (Clarke 2007b) and appears on the SOAG website at: <http://www.soagarch.org.uk/bbintro.html>.

Early work is concentrated on two areas: Cadwell, in the north of the parish, where we have evidence for Roman occupation and a Deserted Medieval Village (DMV), and the central and southern areas of Brightwell Park where extensive earthworks also suggest decayed, or moved, earlier settlement. Large parts of these areas are permanently under grass where geophysical survey is essential. In July 2007 SOAG was awarded a National Lottery grant of £10,000 for BBCHAP through 'Awards for All' for the purchase of a Geoscan Research resistance meter and support equipment. This equipment was first used for a survey at Cadwell Farm in 2007 (Clarke 2008a; 2008b). A balance of about £1500 was used in 2008 to support a training excavation at Cadwell Farm, as reported below. Ian Clarke

2008 excavation at Cadwell Farm Monastery Field

(SU 646 958)

Ian Clarke

A note on the background for Cadwell, with details of earlier and recent survey work, is given in *South Midlands Archaeology* No. 38 (Clarke, 2008a) and in *SOAG Bulletin* No. 62 (Clarke, 2008b). Aerial photographs from 1943 in the National Archive at Swindon and the resistance meter survey in 2007 revealed a moated enclosure in the north-east corner of Monastery Field (Fig. 1a), presumed to be the location of the medieval manor of Cadwell. James Bond earlier

found a scatter of stone in this area (Bond, 1975). The moat is fed by the spring at the east end of Monastery Field and encloses a sub-rectangular area of about 0.6ha. Its size is fairly typical for Oxfordshire domestic moated sites, which vary from 0.3-0.8ha, as is its location on the spring line, in this case where the Upper Greensand gives way to the Gault clay vale below the Chiltern scarp (Bond, 1986, 150-151). There is a raised platform at the western side of the enclosure – presumed to be the site of the manor house – which the aerial photos and geophysical survey suggest was separated from the rest of the enclosure by another moat cut, parallel to the western arm of the outer moat. The photographic and geophysical evidence suggests this inner arm may possibly be narrower and shallower than the main moat.

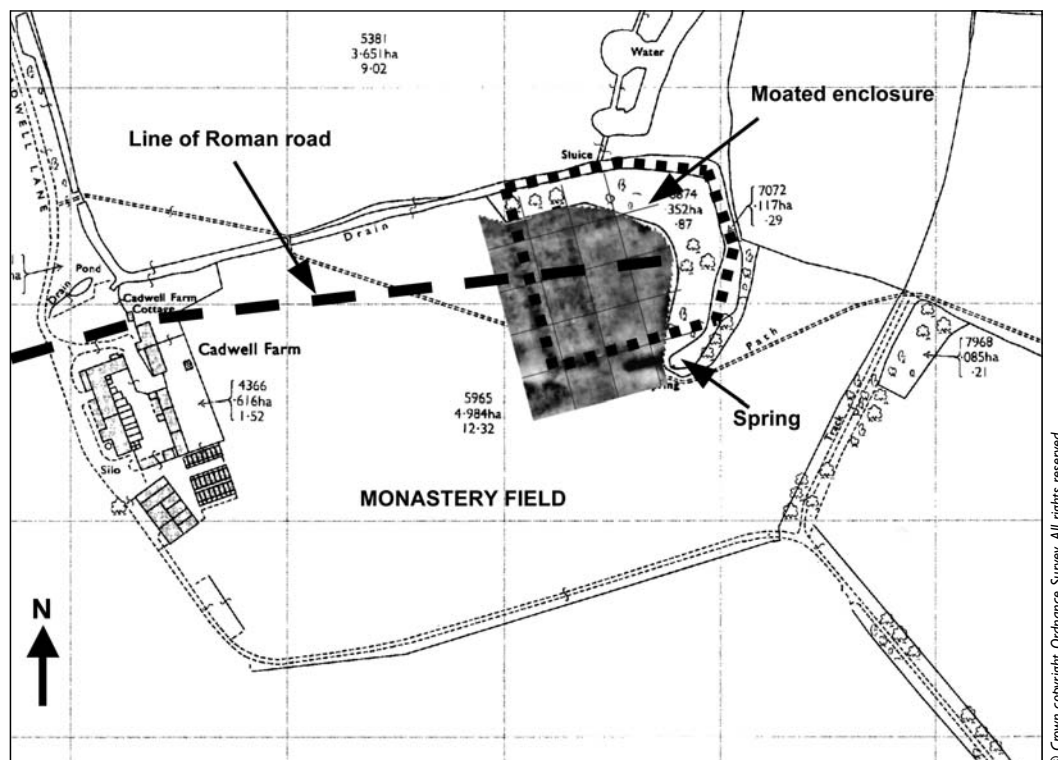


Fig. 1a. Location of the spring, moated enclosure and Roman road in Monastery Field

In the summer of 2008 an exploratory excavation was carried out on this moated site. Three trenches were opened by machine excavator: Trench 1 across a high resistance feature just outside the southern arm of the moat; Trench 2 across the western arm of the moat; and Trench 3 on the 'house platform' over an area showing higher resistance and thought possibly to be a building. Unfortunately, Trench 3 contained no recognizable archaeology and so was closed down. A fourth trench was opened to section a Roman road crossing the site that the 2007 geophysical survey had revealed. The locations of the trenches are shown in Fig. 1b.

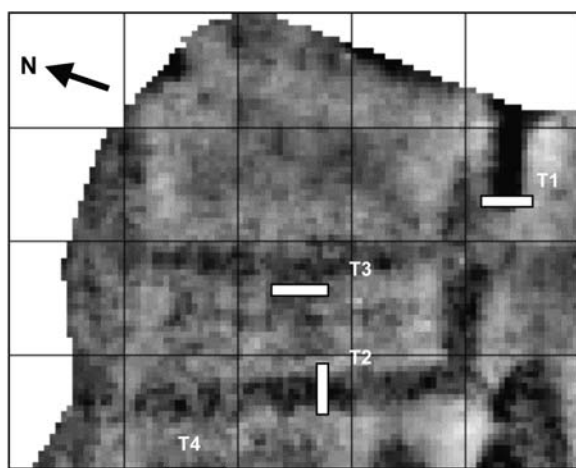


Fig. 1b. 2007 resistivity survey of the moated enclosure and the locations of the exploratory trenches

Trench 1: medieval track – Fig. 2

This trench revealed a well-laid track paved with medium and large stones rough-hewn from the local Lower Chalk (Totternhoe stone) and some from the Upper Greensand, tightly packed together and bonded with clay and clayey-soil. A single line of stones marked the northern side, these being laid on edge and at right angles to the line of the track for greater stability. We may reasonably assume that the south side was similarly treated but plough damage had removed all trace from the area examined. The track was laid directly on the natural clay after removing the turf and thin topsoil. On the uphill



Fig. 2. Trench 1 – medieval track

(south) side there were indications that the clay may have been cut into slightly to even out but not eliminate the slope. Natural processes and human activity had caused the metalling to become partially embedded into the clay. Due to the plough damage on the uphill side, the width was difficult to determine but seems to have been 3m, although it is possible that it was originally only 2.4m and was later widened. There were indications of local, patch repairs using mixed-size flints. Later, a layer of medium sized flints had been laid over the whole track to a depth of about 75mm, tapering out beyond the previous width for a distance of about 0.75m on each side. This layer had been much disturbed by the plough which may partly account for the greater width. The flints had either been mixed with sand and gravel when laid or perhaps top dressed with the fines: the distribution of sand and gravel within the layer was uneven.

The track is on an east–west alignment, parallel to and outside the moat, and leads from just outside the crossing of the moat to the spring. It probably dates from the time of the manor house – a few sherds of medieval pottery were recovered from the track surface – and was most likely for fetching fresh water for the kitchen, quite possibly using mules. It would of course also have been used by the villagers. An animal bone was embedded in the track between large stones and lay directly on the clay. Whether it dates from the time the track was laid or was dropped and trodden in later we cannot know for sure, although the degree of wear might suggest the former. Carbon dating of this should at least give us a *terminus post quem* for the track.

On opening this trench with the mechanical excavator, some damage to the archaeology was caused when the bucket was allowed to go too deep, removing part of the track edging on the north side over a width of 1m. This was no fault of the operator, simply inexperience and lack of attention on the part of myself!

Trench 2: medieval moat – Fig. 3

The moat was cut directly into the Gault clay natural which at the time was overlaid by a thin topsoil and turf layer only 0.1m deep. The western arm of the moat was sectioned to the full width and depth and



Fig. 3. Trench 2 – section of the western arm of the medieval moat

is of a typical, symmetrical shape with sloping sides and a flat bottom. The width was 6.1m and depth 1.55m with both sides steeply sloped at about 40°. When flooded, this would have been a significant statement and deterrent to vagabonds. The moat had silted up to a depth of about 0.75m before being put out of use and grassing over. In the late 1950s or early 1960s it was levelled with top soil and the field deep ploughed for potatoes. Fortunately the top soil in this part of the field had built up sufficiently by then to protect the original land surface from which the moat was dug, which showed clearly as an organic layer in the side of the trench, overlying the Gault clay natural.

A fragment of medieval roof tile found resting directly on the lower part of the east-side cut may be contemporary with the digging of the moat. Arguably the tile could be later if the moat was cleaned out at some time, although there was no evidence that such had occurred; also significant tree root activity apparent on this side of the moat could have disturbed the stratification. If the tile is contemporary, then it could support a date for the construction of the moat in the 13th or 14th century. Tilers were certainly active in the area from the early 14th century but probably earlier: documentary records for nearby Cuxham show that many of the domestic and agricultural building of the manorial centre there were tiled between 1312-13 and 1335-36 (Bond *et al*, 1980). The tile is oxidised to a pale buff colour indicative of a low-iron clay and may come from nearby Nettlebed or possibly from the Chalgrove area. A c.13th-century dating is supported by pottery analysis. A body sherd of Abingdon Ware (Mellor *et al*, 1995, OXAG) from a pitcher was found low down in the primary silting of the west side cut. The transparent lead glaze fired to light green is suggestive of an early date, perhaps prior to the mid 13th century. A body sherd of East Wiltshire Ware (Mellor *et al*, 1995, OXAG) from a pitcher or cistern was found in a similar location in the primary silting of the east-side cut. This ware is unlikely to have penetrated the area before the very late 12th century. The evidence therefore suggests a 13th-century date for the construction of the moat, with some time in the first half perhaps more likely. This is consistent with the high period for domestic moats (Bond, 1986:151). Animal bone was recovered from two levels in the moat and carbon dating will hopefully help to confirm the dating framework.

Outside and close to the edge of the moat was a small, V-shaped ditch with rounded bottom, cut from the same ancient land surface. This was about 0.7m wide and 0.4m deep. Lack of time and resources prevented us from fully exploring this smaller ditch and so the chronology relative to the moat could not be determined. It is probably related to other linear enclosure ditches in the lower part of the field,

revealed by the aerial photographs. It might possibly be an earlier enclosure ditch for the manorial site but seems too small for that.

Trench 3: supposed manor house site

This trench was mechanically excavated down to the clay natural but revealed no material evidence of buildings. The soil removed was noticeably clean with no signs of building rubble and no demolition layer in the side of the trench. Our conclusion is that the buildings have left evidence in the subsoil and natural which the resistance meter is picking up, but that all trace of the building fabric has been removed. We have an eye-witness account from a farm hand who worked there in the 1950s and 60s that significant stonework was removed from this area of the field and that his instructions were to remove all trace of buildings. Careful trowelling of the old (buried) land surface in this area should reveal evidence for timber-framed buildings, something we may well do once the volunteers have acquired the necessary skills.

Trench 4: Roman road – Fig. 4

This road runs roughly east–west across the entire length of Monastery Field, passing just under the north end of Cadwell Farm house where the line kinks to the south slightly and continues on towards Berwick Salome, following the line of an old ride called the Slipe. The 1943 aerial photos show this ride lined with ash trees that were cut down shortly after for the war effort. It was ploughed out in the 1950s by the same farmer who levelled and ploughed Monastery Field. Roman coins were earlier recovered from the front garden of Cadwell Farm by the present owners. Eastwards, the line of the road is pointing towards the old ford across the Chalgrove Brook once known as Cadwell Ford and identified as the *strætforda* of the Anglo-Saxon charter of Brightwell of 887 (S 217; Clarke, 2006), pointing to this having been a Roman ford. The Roman road is likely to have passed just to the south of the spring, which must then have emerged slightly further north.

Whatever hard surfacing the Roman road once had (probably gravel) has been ploughed away from the area excavated, but from the spacing of the ditches either side we can be sure that it was a standard, single lane highway about 8-10 Roman feet wide (2.4-3.0m). From excavation of the south ditch we know that the ditches were originally a standard Roman V-shape with slot bottom. This is suggestive of military involvement which, if taken together with the early annexation of this area of Britain, probably points to a 1st-century date. The north ditch (not fully excavated) remained a V-ditch but the south ditch had later been re-cut on the outer (south) side to create a trapezoidal ditch of about three times the capacity. This must have been in response to problems of run-off from the slope. No Roman finds were recovered from the road but some fine medieval pottery was recovered from the spoil heap.



Fig. 4. Trench 3 – section of the south ditch of the Roman road

Summary/Conclusions

The well-laid track in Trench 1 and the moat in Trench 2 confirm that there was formerly a high-status, medieval house on this site. We can reasonably conclude that this is the 'Manor of Cadwallis/Cadwallys' mentioned in several documents in early Brightwell Baldwin estate papers (ORO E43). Although no building rubble or demolition layer was found in Trench 3, it is likely that there was a substantial timber-framed house on the raised platform, something we hope to prove in the future. The stratified pottery is all medieval and analysis of this suggests the moat was most probably dug in the 13th century, perhaps some time in the first half. None of the residual pottery is later than the late medieval, which is consistent with the site having been abandoned quite early. Carbon dating of stratified animal bone will hopefully provide further dating evidence for the moat and track. The presence of a Roman road across the field is confirmed but it cannot be precisely dated, although an early date seems likely.

Acknowledgements

A community project's success is entirely dependent on the enthusiasm and skill of its volunteers. I would like to thank all who took part in the excavation and congratulate them on their achievement. Thanks are especially due to the National Lottery for the generous grant through 'Awards for All', part of which funding supported the excavation; and to Maureen Mellor, Curator at the British Museum, for her valuable advice on the pottery. And finally I express a very big thank-you to the landowners, Richard and Kellie Davey, for their enthusiastic support. We are very fortunate that they have once more returned Monastery Field to permanent pasture.

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2008 Geophysical Survey in Brightwell Park: The Discovery of a Lost Manor House

Ian Clarke

Introduction

A brief introduction to BBCHAP appears in the preceding article, *Brightwell Baldwin Community History and Archaeology Project: 2008 Excavation at Cadwell Farm*. The National Lottery 'Awards for All' funded Geoscan resistance meter was first used for the survey at Cadwell Farm in the latter half of 2007. The award ran for one year, through to August 2008, so it was essential to complete as much geophysical survey work as possible during that year to fulfil our obligations to the awarding body. From May 2008 surveying moved to Brightwell Park and, despite the very poor summer, the bulk of the work there was completed in time to put in a satisfactory report to 'Awards for All' in August.

Brightwell Park covers a large area, so first a decision was needed as to where to start the survey for maximum likely return. The south end of the park, nearest to the village and church, was a possible location, where extensive humps and bumps suggest earlier settlement and human activity. Another possibility, and the one of greatest interest to the landowners and the community volunteers, was to try to find evidence for the earlier manor house, the one that pre-dated the extant Georgian manor house. But could we pinpoint a likely location for this?

Evidence for the location of the manor house

There was more than one manor in Brightwell in the Middle Ages but the most important was that of the de Parco family, which became known by various names such as Parc Brightwell or the Manor of Parkes, on down to the present Brightwell Park. The late medieval/early post-medieval Brightwell Park manor house was burned to the ground on 11 March, 1788. It was replaced by a new house for William Lowndes-Stone, who inherited the estate in 1789, and was built in a restrained Georgian style attributed to Humphry Repton, who must also have been responsible for landscaping the park. As far as we know, there is no record of the site of the old manor house and there are no known illustrations or paintings of it, but it was generally believed in the village that the Georgian house was built on the same site as the earlier one and that the brick-built cellars were those of the earlier, supposed Tudor period house. We know there were cellars because *Jackson's Oxford Journal* reporting on the 1788 fire noted, 'no sooner were the buildings destroyed that the populace broke

into the cellars, and beside intoxicating themselves, carried off what liquor they could conveniently secrete'. Three labourers were committed to Oxford Gaol charged with theft but only one, William Collins, was convicted and given a sentence of six months hard labour. Although the cellars below the Georgian house are still there, they have been filled in with rubble and cannot at present be inspected. Certainly the later house is close to the parish church, which is often the case with a medieval manor. The site is on higher ground and although this an obvious location for a late 18th-century house with landscaped parkland vista, it is perhaps less likely for a medieval manor house which we might well expect to be closer to the running water in the park.

An important part of the visual landscape of the Georgian house is the large, isolated dovecote (Fig. 1) down towards the lake. A good sense of its isolation is given by Fig. 2. Clearly it is in an older architectural style than the later house, but how old is it? Peter and Jean Hansell (Hansell and Hansell, 1988) give it as 18th-century, but architectural details suggested a possible Tudor date and the owners too thought the 16th century more likely. Such isolated buildings are a typical feature of the English landscape garden movement. But although isolated now (it is over 220m from the Georgian house) it seemed most unlikely that it would have been so originally if it dated from the Tudor period. Another significant indicator is that the single doorway faces east, away from the present house.



Fig. 1. The dovecote in Brightwell Park from the south-east



Fig. 2. The geophys team take a welcome break, perched on a Victorian drain! (L – r: Kaz and Leigh Greenham, Bill Irving (from Australia) and Mike Atkinson.)

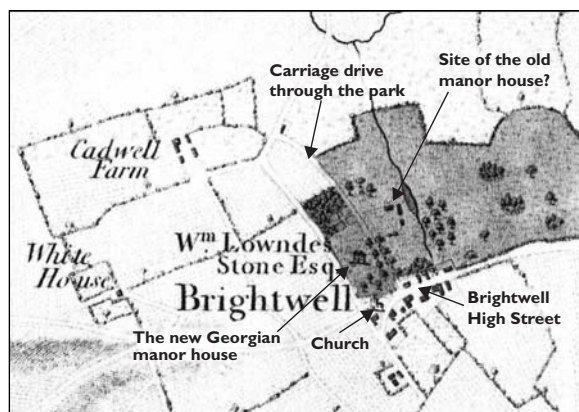


Fig. 3. Brightwell Park (shaded area) – from the Richard Davis map of Oxfordshire of 1797

The Richard Davis '2 inches to the mile' map of Oxfordshire of 1797 (Fig. 3) shows three buildings in the dovecote area, with a hint of an enclosure wall on the north side. One of these must include, or be, the dovecote. Davis lived in Lewknor, only a four-mile ride from Brightwell along the Lower Icknield Way (a Roman road) and we might reasonably expect his map to be both detailed and accurate for an area close to his home. His survey and map date from the precise period of the fire at Brightwell and the subsequent building of the new manor house by William Lowndes-Stone, events Davis would have known about. Certainly Davis' map suggests that the dovecote was not isolated, but part of a complex of buildings, some of them still extant in 1797. Could this be the location of the old manor house?

The ground slopes gently in the central area of the park from west to east, from just above 90m at the Georgian house to just below 80m at the floodplain beside the lake, over a distance of about 250m. The dovecote is at the bottom of this slope and occupies the north end of a roughly level platform some 80m long, raised a little above the flood plain. An inspection of the ground around the dovecote showed extensive humps and bumps, with some features suggesting large, rectangular buildings stretching in a line southwards from the dovecote along the 80m platform. All the evidence seemed to be pointing to this being the probable location for the old manor house. We therefore decided to centre the 2008 survey on the dovecote, initially covering an area 60 x 120m. The results of this first survey were so encouraging that the survey area was progressively enlarged through the summer as more and more archaeology was revealed, eventually covering 220 x 220m.

The dovecote and an historical note

A building survey of the dovecote was carried out in July 2008 by Alan Whitworth of the British Dovecote Society and David Clark of the Oxfordshire Buildings Record, as a result of which

David Clark has tentatively suggested a late 16th-century dating (Clark, 2008). Alan Whitworth concurred with this (Whitworth, 2008). The dovecote is built on an unusual, elongated Greek cross plan, 9.8m long x 8.5m wide. David Clark has suggested that the Greek cross form may have been a gesture by a recusant landlord. The manor was held by the Carltons for much of the 16th century and the dovecote may have been built by Sir Anthony Carlton (d.1575), his widow Joyce, or (less likely) his son George, but we have so far not established the Carltons' religious leanings at this time. Perhaps the most likely candidate is Sir John Simeon who purchased the estate from George Carlton c. 1590, soon after George inherited it. The Simeons were a notable Roman Catholic family who held a great deal of property in the neighbourhood, including Pyrton. Sir John's son George sold the manor back to Dudley Carlton, Viscount Dorchester, in 1630 (Fraser, 1988: 35-47). It is just possible that it was Dudley Carlton who built the dovecote, perhaps reusing some old materials and echoing the style of earlier buildings on the site. It is likely that it replaced an earlier, wooden dovecote on the same site or close by.

Geophysical survey details

The survey was completed over about 20 days between 12 May and 29 September 2008. The location is shown in Fig. 4 and covers an area of 4.8ha of the central enclosure of the park, designated Area A. (Note: For convenience the various enclosures of the park west of the lake and brook have been designated Areas A – D. The dovecote is located at SU 6528 9540. The direction of survey is 25.5° west of grid north, i.e. roughly on a NNW – SSE line.)

Geology:	Upper Greensand
Land use:	Pasture – long grass
Survey type:	0.5m Twin-probe resistance
Instrument:	Geoscan Research RM15D
Gain setting:	x10
Settling time:	0.5s
Survey area:	220 x 220m (4.8ha)
Grid size:	20 x 20m
Sample interval:	1m
Traverse interval:	1m
Method:	Zig-zag
Post-processing s/w:	Geoplot

The processed data is shown in Figs. 4 and 5. Grids were edge-matched and all data despiked before further processing. Figs. 4, 5(a) and 5(c) show the data after high-pass filtering and Fig. 5(b) shows the unfiltered data as a relief plot. Dark features indicate high resistance and light features low resistance.

Interpretation of the data

The survey data reveals extensive archaeology of what we interpret to be the buildings of the manor house that burnt down in 1788, together with evidence for Italianate style gardens that once surrounded the manor house complex and carriage

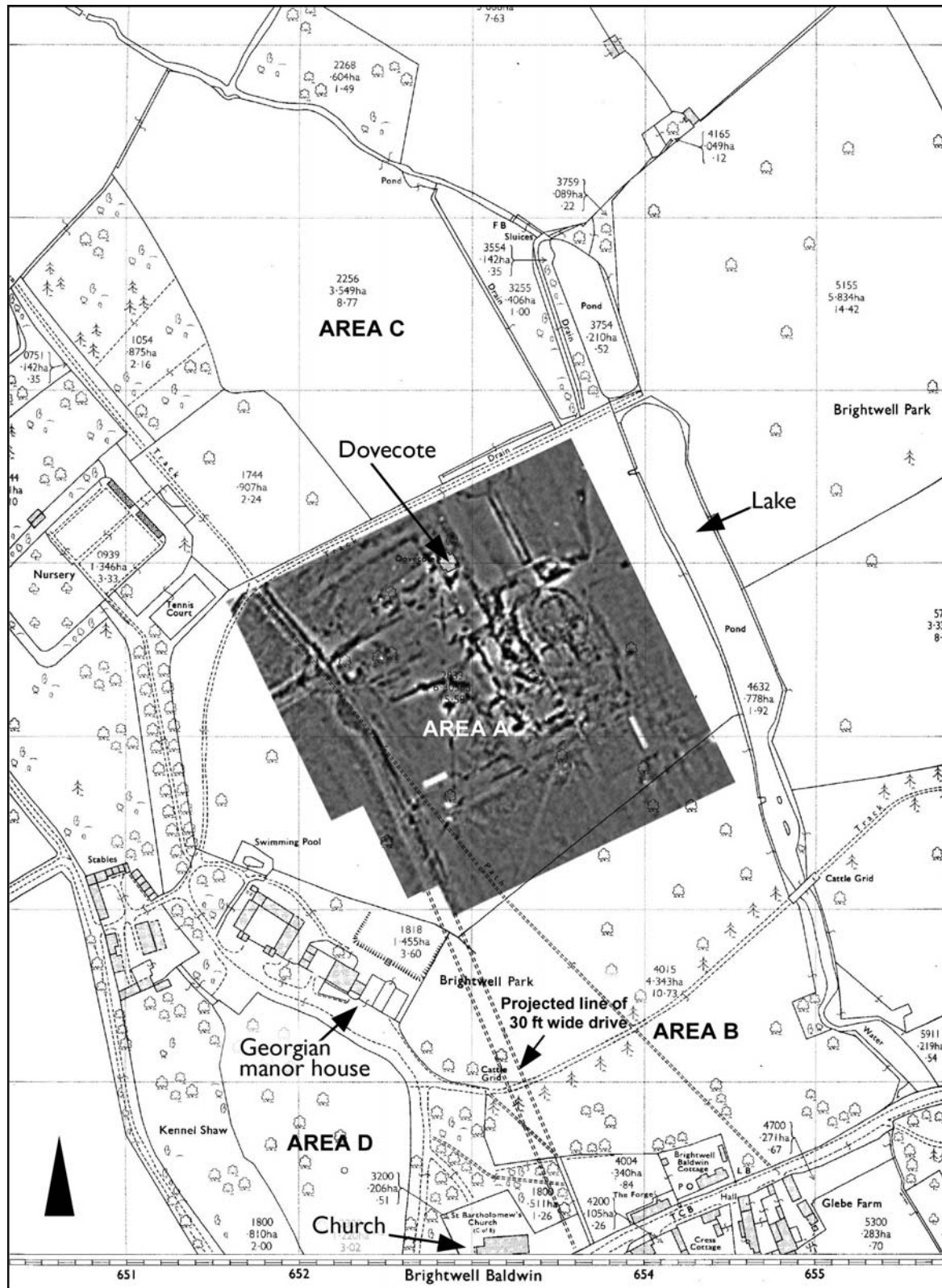


Fig. 4. 2008 twin-probe resistance survey of the central enclosure of Brightwell Park (Area A)

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drives that provided a formal approach from the north and south. The dovecote is shown to be an integral part of the layout. Much of the archaeology can be understood with a fair degree of certainty as the following description will show.

The carriage drives

Fig. 4 shows the survey data overlaid on the 1:2500 OS map (1972 edition). Along the western edge of the survey area, a dark (i.e. high resistance) linear feature is clear evidence for a track, or road, that follows a gently curving line and is a continuation of

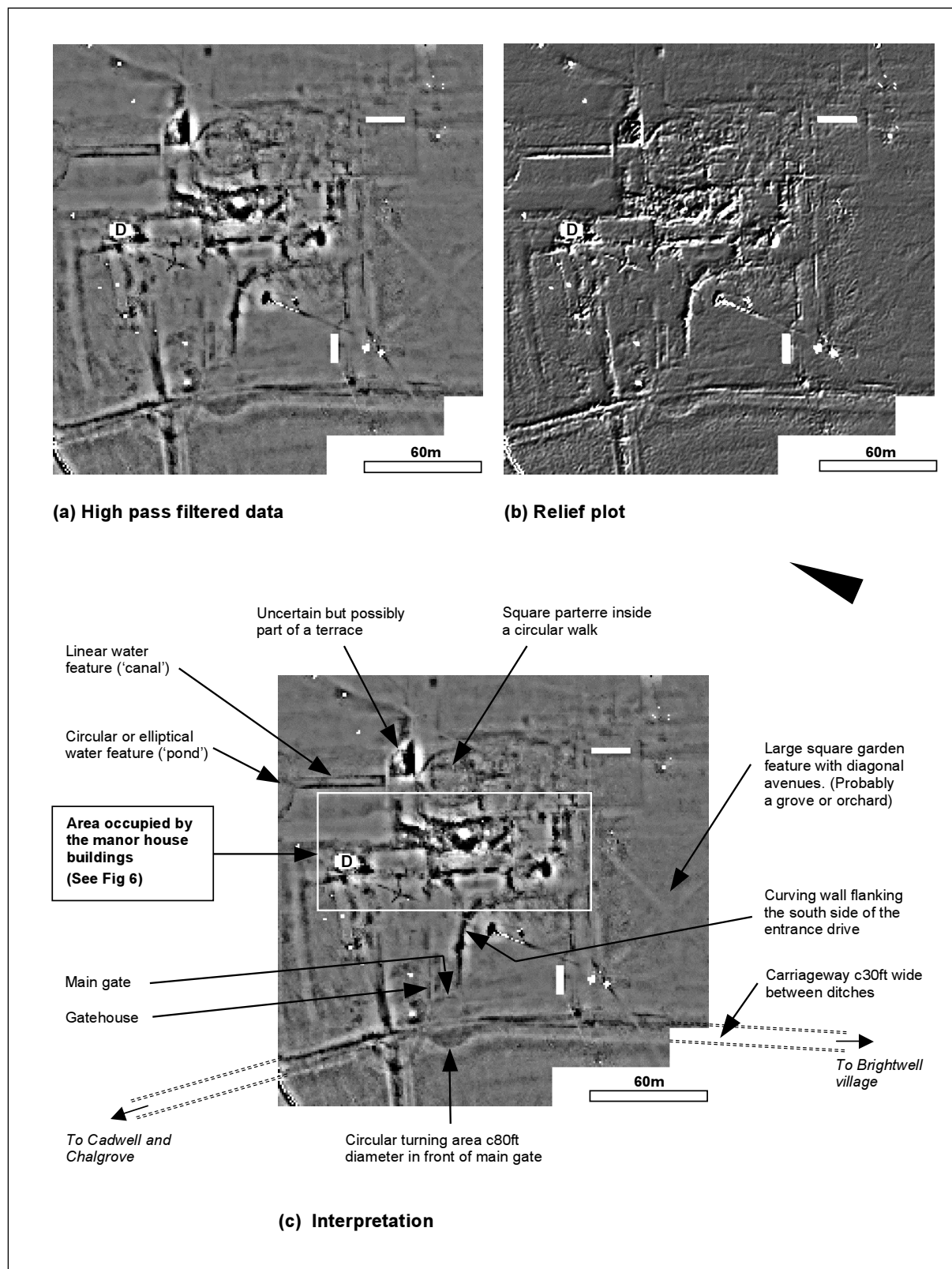


Fig. 5. Brightwell Park (Area A) – 2008 twin-probe resistance data at 1 x 1 m intervals. (Note: D locates the dovecote.)

the track (now a footpath) running through the woods to the northern edge of the park. Underlying this curving 'track' feature, both from the south and the north, are two straight, parallel lines, showing as light (i.e. low resistance) features. The parallel lines are ditches flanking what was once a formal carriage drive c. 9m (30ft) wide. To the south, the east ditch of the projected line of this carriage drive (indicated by dashed lines in Fig. 4) aligns with a narrow passage that runs alongside the churchyard east wall and gives access to the park from Brightwell High Street. This passage is the last remnant of the carriage drive that once led to the old manor house.

The Richard Davis map of 1797 (Fig. 3) shows the old drive curving through the park from south to north, its southern approach from Brightwell High Street being lined with an avenue of mature trees. William Lowndes-Stone's newly built Georgian house is shown just to the west of this avenue. The carriage drives to the new house from the Eagle and Cuxham Cross lodge gates had not yet been built.

The carriage drives were originally straight, not curved. The north carriage drive is inclined some 15° to the west from the south drive. They meet at a circular feature, showing up as a dark circle inside a partial light ring in the data. This is interpreted as an ornamental 'turning' circle, directly in front of the main gate of the manor. The circle is some 24m (80ft) in diameter and is partly encircled by a ditch as a continuation of the drive ditches, certainly on the west side.

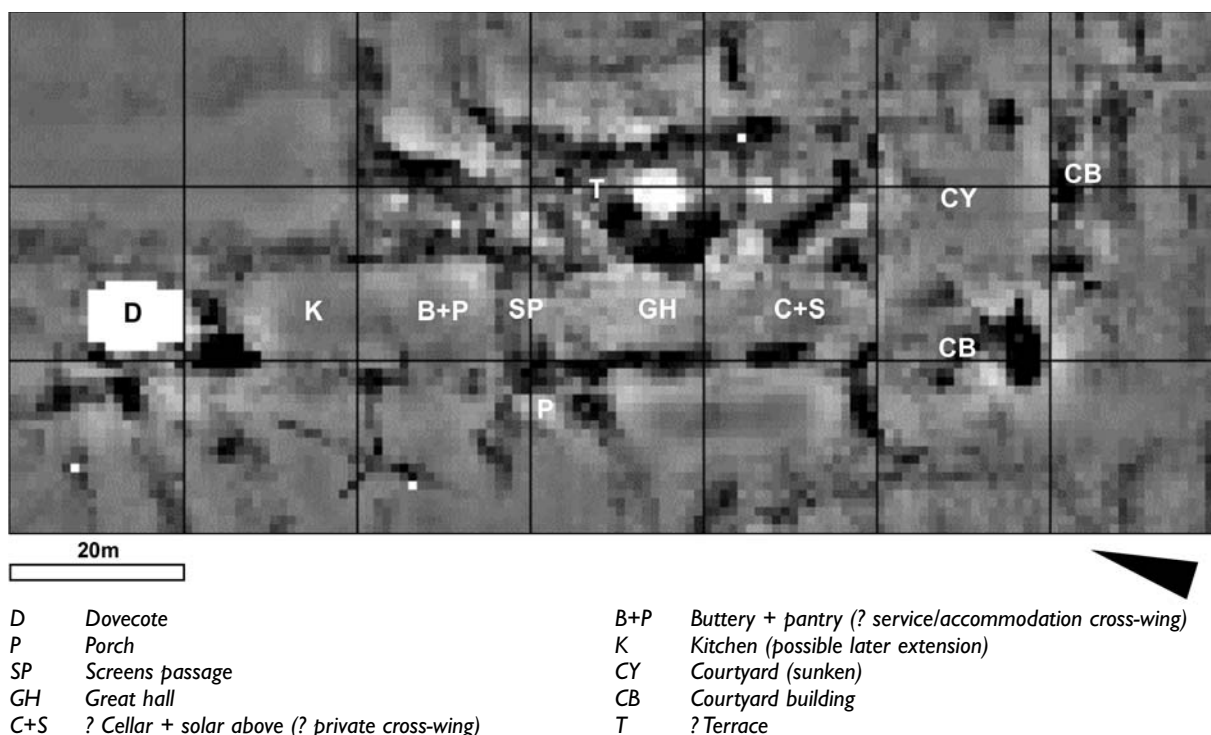
Reference should now be made to Fig. 5. The data plots have here been rotated so that north is towards the left side of the page with the carriageways running across the bottom. The main archaeological features are indicated in view (c), but the reader will find frequent reference to view (a) and particularly view (b) helpful.

The formal entry to the manor house

The main gate was on the east side of the turning circle with a drive leading from there directly to the west front of the house. There is evidence for a small building on the north side of the entrance gate and drive, which is probably a gatehouse. The curving feature to the east of the gatehouse is an enclosure or retaining wall flanking the south side of the drive. It appears to have pillars at intervals along its length. It curves to the right as the house is approached, opening out the drive. Whether there was a similar feature to the north of the drive is not clear. There is some evidence for buildings in the area to the west of the dovecote which might be stabling or a coach house, so an open courtyard here may be more likely. Directly in line with the main gate is the entrance porch of the house.

The manor house buildings

The white rectangle in Fig. 5(c) outlines the area occupied by the main buildings and Fig. 6 is an enlargement of the data for this area. At this stage it is not possible to give other than a very general indication of the layout of the house. Much of what follows is speculative and coloured by knowledge of what we



Note: Some of the late medieval descriptions and usage will have changed in the post-medieval period

Fig. 6. Main buildings of the manor house – suggested interpretation

might expect, or perhaps hope, to find in a building of this period. The proof can only come from excavation.

The principal buildings are aligned on a NNW-SSE axis with the dovecote at the northern end. The latter appears to be separated from the other buildings by a few metres. There is clear indication of walls (high resistance linear features) defining two very large, rectangular 'rooms'. Between these is a broad higher resistance area that may be a screens passage. In line with the latter is a feature protruding from the west front of the building, which is likely to be the entrance porch as it is directly in line with the main gate. The porch appears wider than the screens and may possibly contain a newel stair on the south side, in which case it must have had at least two storeys. The large 'room' to the south is probably a medieval great hall. If so, it is of exceptionally large size for a manor house, at least 9 x 18m (30 x 60ft) not including the screens. At the upper (south) end is evidence for a cross wing for the great chamber, or solar. The geophysical data and topography suggest that the great hall and chamber may possibly have an undercroft – the cellars of our 1788 event – and if this proves to be the case it should provide valuable dating evidence for the antiquity of the great hall.

The other large 'room', the one to the north of the porch, is wider and may not be of one build. Again there is some evidence for a possible cross wing here which, if we are right about the location of the great hall, would be the service wing. This end of the building may have been extended towards the dovecote at a later date to provide symmetry to the west front of the house: a desirable feature from the later Tudor period onwards.

Immediately to the east of these main 'rooms' is a very confused area of high resistance features that is impossible to interpret with any certainty. The interpretation proposed at this stage is that there were cross wings at each end protruding eastwards which, together with the great hall, enclosed a terrace overlooking the gardens. But it is also possible that the whole of this area could be part of the house.

The Italianate gardens

The survey data provides some fascinating evidence for formal, Italianate style gardens on two sides of the manor house.

Referring again to Fig. 5, immediately to the east of the main buildings is a feature comprising a square within a circle. This is almost certainly a parterre enclosed by a circular path. Close inspection suggests that the parterre is divided into four quarters with crossing paths. If we are right about the house having cross wings enclosing a terrace, then the parterre is centred on this terrace, which appears to have a curving front, matching the curve of the surrounding path of the parterre.

To the north of the parterre and directly in line with it, is a long, narrow, linear feature, almost certainly a water feature, or 'canal'. This leads to and joins with a large circular, or more probably elliptical, feature which must be a 'pond', and which may have had a central feature, such as a statue or fountain. The canal and pond are centred on a wide causeway, on either side of which are broad ditches ending in circular terminals at the south. These are clearly part of the garden design although their function is not clear. The water features must have been fed with running water from the fish pond and brook just to the east, so a targeted, deeper survey may well reveal a brick conduit. The pond is truncated by the northern limit of our survey, defined by a modern, causewayed track, so an extension of the survey across the causeway into Area C may reveal more. There appears to be another causeway running the length of Area C, so it is possible that the gardens continue to the north-west to provide a long vista. A high resistance feature near the south end of the canal may be part of a raised terrace, or a garden building of some kind.

There must have been ornamental gardens to the south of the parterre too, but the data does not provide clear evidence of their layout. Later activity may have disturbed this area too much, but a twin-probe survey of the gardens at 0.5 x 0.5m might be worthwhile.

To the south-west of the buildings is another large garden feature, defined by a c. 75m square of higher resistance, with a lower resistance border and diagonals. It is rather large for parterre planting in this context and is perhaps more likely to have been a grove or orchard, with paths around the outside and along the diagonals some 3.5m wide.

Enclosing walls and other buildings

Possible service buildings to the west of the dovecote have already been mentioned above. There is evidence for walls enclosing the main building complex on the north and south sides and we might expect there to have been walls linking these along the carriage drives, either side of the main gate; one along the south drive may be evident in the data. A walled track appears to run alongside the square 'orchard' feature from the south end of the manor house to join the carriage drive about 70m south of the main gate. The track leads to the gardens and was probably for maintenance access. Towards the east end of this track is a building in line with the main house but separated from it by a 20m (65ft) square area that may be a courtyard. This 'courtyard' occupies an area that is significantly lower than the house platforms on either side and it appears to have a gateway into the gardens on the east side. There is evidence of a building on the west side of this 'courtyard' too.

Later archaeology

There is a brick built ice-house in the park that is probably 18th-century and contemporary with the later period of the old manor house. The high resistance feature crossing the survey area at an angle from roughly the south-west corner towards the dovecote is a Victorian, cast-iron drain, which incorporated automated settling tanks. There was also an underground gas plant from the same period. Both these features belong to the later Georgian manor house but are worthy of examination at some time. On the east side of the survey and cutting through the Italianate gardens is evidence for a large, rectangular enclosure some 105m long by at least 70m wide. (It is truncated by the eastern limit of the survey.) A possible interpretation of this is a playing field for the school that was evacuated to Brightwell House during the Second World War.

Discussion and conclusions

The survey has located a complex of large buildings associated with the extant dovecote. Analysis of the data suggests that at the core of this complex is a medieval hall house, which was then extended and remodelled as fashions changed. The formal gardens were probably started in the late Tudor and early Stuart eras, but the formal approaches, axial and cross-axial alignments, water features and long vistas suggest that the gardens may owe more to post-Restoration French Baroque and Dutch influences than the earlier Renaissance. The alignment of the main buildings shows that the dovecote is an integral part of the layout and the reason for its east facing door becomes clear: it was a decorative feature to be seen from the gardens. The archaeology appears to cover the broad period from the mid – late medieval, through the Tudor and Stuart dynasties and on into the 18th century, and clearly relates to a single manor house complex. It was not all created in one historical period but much of it may well have existed together in the later 17th and 18th centuries.

Taken together, the evidence can leave us in no doubt that we are dealing with a very high-status property. It occupies the whole of the central area of the park and must represent the principal residence of Brightwell: the old Manor of Parkes that burnt down in 1788.

The layout of the buildings and gardens suggest significant investment in the 16th and 17th centuries, which must be attributed in the main to the Carltons and their descendents through the female line, the Stones. But by the late 18th century, the old manor house and gardens represented an outmoded style and the fire of 1788 provided an opportunity for William Lowndes-Stone to modernise. It is interesting that he retained Humphry Repton, then at an early stage in his career. Repton, an ardent proponent of the English landscape garden movement, advised

the location for the new house on the highest ground and near to one edge of the park, to offer a wide vista over the managed landscape – a significant departure from the old manor house located at the centre of its grounds.

The Richard Davis map of 1797 provides a fascinating glimpse of this change in progress. The new house is shown but the old one has not yet completely gone. The old carriage drive through the park is still there and the new drives from the Eagle and East Lodges have not yet been built. The new drives were to be a significant element in the changes, providing approaches from beyond each end of the village. The old approach from the centre of the village was a relic of the feudal link between landlord and tenant. The new approaches emphasised the landlord's link with his surrounding estate and the wider countryside. No longer would visitors to the great house have to go through the village, which could now be conveniently screened from view with trees.

The parish records provide an interesting footnote. The churchyard was enlarged in 1892 (Fraser, 1988: 138a), the land being given by the landlord, Roger F. Lowndes-Stone-Norton. The piece of land given was just to the east of the churchyard where the old carriage drive had once joined the High Street. The evidence is there in the churchyard wall: a section of this was taken down and rebuilt some 20m further east and a new section to close off the frontage was constructed with a different style of capping brick. Just outside the new east wall is a narrow passage that provides access to the park and the geophysical data shows that this is directly on the line of the east ditch of the old carriage drive. In 1910 the Parish Meeting approved a landowner's request that the public footpath be moved to enter the park opposite Glebe Farm, but refused to allow the old passageway to be closed. It remains open to this day and is used by the villagers, but it is not listed as a public footpath on the Ordnance Survey. Old rights can be vigorously defended!

The fire-damaged buildings of the old manor house were robbed for usable materials for the construction of the new house and the remains then razed to the ground and grassed over: all that is except the old dovecote, which must have survived the fire and was retained by Humphry Repton and William Lowndes-Stone as a desirable parkland feature – the last visible reminder of a bygone era.

Acknowledgments

The spectacular results of this survey demonstrate the clear benefits of carrying out large-area, twin-probe resistance surveys on late medieval/early post-medieval sites. Our grateful thanks must therefore go first to the National Lottery 'Awards for All' team, whose support and generous grant to SOAG for the

BBCHAP project paid for the equipment that made all this possible. I am delighted to pay special tribute to the 'geophys' team who contributed their time so willingly, often in indifferent weather: to Jean Agate, Zoe Church, Kaz and Leigh Greenham, Mike Atkinson, Bill Irving (over from New Zealand), Mike Vincent, Geoff Deakin (who kept the survey going on his own while we dug at Cadwell Farm), and last but not least to my wife Catherine who could always be relied on when others couldn't make it and whose support for my work is so important. Thank you all for your time and enthusiasm in completing the 116 grids and for every one of the 46,400 readings – it has all been very worth while! And finally, my grateful thanks to our patient and enthusiastic landowners, Tessa and Nigel Mogg. I hope they will enjoy having their ancestors' old manor house back again.

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Problems of Water in the Oxfordshire Chilterns

Pat Preece

Nowadays clean water for all our needs – the washing machine, a bath or shower, or a simple glass of water – is available at the turning of a tap or the flick of a switch. Just imagine that your only supply of water was a mile away and then from a well, if you were lucky, otherwise from a rather dirty pond.

In many areas of the Oxfordshire Chilterns until the beginning of the 20th century water came from ponds, springs, or, preferably, a well. Mary Kift has written about wells in the *SOAG Bulletin* (Kift: 1999). Even if there was a well the water had to be carried to the house and the use of a yoke was common (Fig. 1). The distance the water was carried was sometimes measured in miles! Since local wells had to be very deep, they were expensive to dig: the majority were financed by local landowners.

A recurring problem was water shortage. The only supply in many districts was ponds, which were supposed to be kept clean. The late Charles Paddick, of Withy Copse, Gallowstree Common, told me that when he was a boy many of the ponds had a gravel bottom and clear water. Few of them are like that today. It is strange that these ponds were classified as 'public ponds' and in 1896 the minutes of the Henley Rural District Council (ORO III/i) stated that 'public', as applied to well, pond or spring, means that the water is open to all parishioners or rate payers ... the water must be fenced in ... and thus held in possession'.



Fig. 1. Yokes in use at Stoke Row

Photo from the collection of Charles Paddick

The Sanitary Authorities were only set up in 1872 (ORO I/i) and a Medical Officer of Health and an Inspector of Nuisances were appointed. These new appointments were very active men looking into all the problems with water supply. In 1884 the organisms causing several infectious diseases were isolated. It was discovered that cholera and typhoid were carried by water. It was therefore considered that excreta from infected persons should be prevented from polluting water supplies. The great problem was ascertaining whether the water was polluted or not. Cory (Frazer, 1950) and others produced evidence to show that chemical results might show the presence of typhoid. Bacteriology was in the future.

The first mention of problems was on 29 July, 1873: pigsties were draining into the public pond at Kidmore End (Fig. 2). The farmer was advised to alter the drainage. Kidmore End pond was inspected again in 1880 and the water found to be dark in colour; when the water was low there was a 'bad smell and various things draining into it'.

In 1884 the Authority reported that 'in the hill districts the people are suffering very much for want of pure water' and 'a great natural want of that part of Henley District, is sufficient water. The Authority should consider steps for efficient collection and storage of rain water'. Apparently there was a drought because rainwater was in short supply, though in October it was recorded that 'the recent fall of rain has considerably abated the sufferings of the people on the hills – they are no longer obliged

to grudge a little water for sanitary purposes as the ponds are now filling'.

One place that was very short of clean water was, extraordinarily, Nettlebed. One would have thought that a large village with kilns for pottery, tiles and bricks, as well as a chair making industry, would at least have had a well. It is possible that there was no munificent landowner there prepared to finance the digging of a well, as had happened elsewhere. The main sources of water for the cottagers until the beginning of the 20th century were the several ponds, among them one known as the Sea; Stradwell Pond; and a pool on the Common. We examined these ponds and although the Sea is the largest, nowadays none is large and they are very muddy and full of weeds.

Theoretically the ponds should have been cleaned regularly and fenced, as they were 'public ponds'. In 1874 there was a statement that 'even the large pond [the Sea] is now getting extremely low'. Also the fence was broken on the Common and the cattle could get in. There was a reminder that as it was used for drinking it should be cleaned and fenced. Things did not improve. In July 1885 the water was 'very bad at the Sea' and there was pollution from smoke from a grist engine giving a smell of soot. However the chief problem was said to be insects in the water. Later that year there were complaints about this pond. The water was very low and there were weeds growing in it, but it was free of 'bad smells'. The Inspector of Nuisances came and drank a glass of



Fig. 2. Kidmore End pond

water from it; no mention is made of any bad effects or his opinion of the water! The water situation at Nettlebed continued and the Minutes of the Sanitary District record that four water tanks had been provided to cottages in Nettlebed owned by E. Holly and that three others were being erected. However a W. Jones claimed in a letter that 'some have tanks on their premises [for rainwater] and these are not often cleaned – they collect a considerable deposit and there is an objectionable smell. The majority of the poorer classes use the dip can to get water from the local ponds, the water of which in times of drought is anything but wholesome. In two years there have been 100 cases of fever' – 15% of the population.

Apart from Nettlebed, many other areas had problems, some of which led to illness and even death. In Homer, where they drank from a pond, there were two deaths of children from typhoid and five other people became ill, including two working men: it was thought that the pond had become polluted with manure. A filter was supplied to the cottages there. In 1885 the Medical Officer of Health said that 'filtration does not destroy the germs of poison in the water'. Nowadays we would know that, but knowledge of hygiene was in its infancy. We looked at the pond: it was small and in the middle of a field.

In 1885 there was one death at Greys Green where water was obtained from an open pond. Nearby at Brickfield there was illness. Here the inhabitants got water from a pond which was 'more filthy than Greys Green pond'. The pond was examined and found to be unfit for drinking: the cottagers were to filter and boil the water. A sample of the water from Greys Green was sent for analysis. 'The sample was very turbid and contained suspended matter ... the water shows signs of large vegetation pollution. Filtering such water would improve but should boil and filter'. About the same time there were two cases of typhoid at Shiplake Kilns where there had been diarrhoea during the summer. The Inspector examined the pond from which these people drank and found the water 'turbid of a bad colour with decaying vegetable matter'; needless to say he did not drink it. The authorities supplied them with a filter. One wonders how effective this was; there was no mention of boiling the water.

One report which struck home to us [*Pat Preece lives in Caversham!* – Ed.] was from 1875. 'There are several cases of typhoid in Caversham – the people of very filthy habits, Alice Humphrey of Toots farm is a bad case'.

Sonning Common was lucky because there was a clean spring in Spring Wood. This now has a stone surround with an elephant carved on top, which was supplied by the Blounts, an elephant being their insignia. When we visited it, unfortunately some

vandals had poured paint over the elephant. The local baker used to bring a water cart down to fill up. It is quite a rough climb up from the spring. Imagine carrying up your water supply, and then having to trudge perhaps a mile to your home!



Fig. 3. The spring in Spring Wood

Another source of clean drinking water which, according to the Chiltern Open Air Museum at Chalfont St Giles, is unique, was at Whitchurch Hill. It consisted of a rain catchment arrangement, 80 feet [24 m] long and 44 feet [13 m] wide, which sloped inward from both sides. The water went from there through a gravel filtering system. A very elderly man told the Whitchurch Hill historian, Vicky Jordan, that he remembered cleaning gravel for this structure, which is now built over. The water was then piped into a large holding reservoir 30 feet by 9 feet and 12 feet deep, [9 x 3 x 3.6m] which held 22,452 gallons [84,965 litres]. From there it was pumped by an engine, thought to be a steam engine, to a tap in the pump house. The latter had a notice on the door dated 1886: each person was entitled to 2 gallons [7.6 litres] of drinking water for 1d a day; if they had more than 2 gallons a day they were not allowed to have any more in the future. There was a caretaker whose bungalow was over the reservoir. It was given by the Gardiner family who also provided the nearby well. As there were only about 20 cottages in the immediate vicinity, it seems likely that people came from some distance to obtain clean drinking water. I saw the site before it was demolished.

At Rotherfield Peppard there was another difficulty. It was customary for the inhabitants to take water carts to the river at Mill Lane, Henley, but in 1898 (ORO III/i) the owner of the filling point refused them entry. The inhabitants threatened him with court proceedings. In 1900 entry was allowed and the owner agreed to provide a flight of steps with handrails to the river for a dipping point, and also to dredge the area. Strange to think that river water was considered to be superior to pond water.

At Whitchurch Hill in 1897 39 cottages with tiled or slated roofs used rain water tanks but there were 25 or 26 without any such provision where the

cottagers still used ponds. The supply from these was insufficient. The best pond was Tyne Pit, which was in need of thorough cleaning and more protection from fouling by animals. The problems continued. In 1898 Crays Pond was to be cleaned for 7 pounds 15 shillings and was to be fenced. Later, in 1902, Crays Pond gained a pump in a fenced enclosure with a locked gate.

Gradually most cottages were supplied with a better alternative to ponds: guttering to catch the water from the roof. This water was then filtered into a tank in the garden from which it could be pumped. At a cottage in Nuney Green we were shown a tank which was supplied with water from the thatched roof which had been covered with corrugated iron. The water was filtered through gravel, then charcoal. The owner said that when the tank was empty they went down and cleaned it out. During this time they got water from a neighbour. Before these arrangements a pool in the woods provided water. We were shown two pools, one of which was for animals, the other for humans!



Fig. 4. 'Human' pond at Nuney Green

There were so many problems, but light was at the end of the tunnel. Gradually villagers were supplied with tanks and at the beginning of the 20th century some villages got a mains supply. When this was made available some local people objected to paying for water, saying that since the rain from heaven was free they should not have to pay. Mains water meant change, and even when connected quite a few would not have any of those pipes in the house; a tap by the front gate was almost too near!

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Distant Guns: What Archaeology Will Not Tell You

John White

It is hard to believe that it is now seventy years ago since the Second World War started, the biggest conflict the world has ever known. In just five years this south-eastern part of England was changed to become what was almost one big military camp with nearly every other farm an airfield. But then the war ended and most signs of conflict have now melted away. Even those that are still here are fading. At strategic points in the countryside and along the Thames pillboxes were built. Many of these can still be found, for example at the Brunel bridge near Gatehampton (Fig. 1). The countryside was also used to collect troops and ammunition for the invasion of Europe and some of the shelters that were constructed can still be seen, for example by the Reading road outside Woodcote (Fig. 2). Some of the local Thames and Kennet valley airfields, for example Ramsbury, have been returned to farming; others, such as Aldermaston and Harwell, have been put to 'special' new uses; and two, Benson and Chalgrove, are still in use.

It is interesting how a rough survey shows how poor and variable now is knowledge of the war. It seems that only about one in ten knows the date that the war started, although because of films about the event about one in two knows the date of D-Day. Surprisingly, in this country less than one in a hundred seems to know the date the war in Europe ended; in France nearly every community has a street commemorating the date: May 8.

With the disappearance of the bricks and mortar it is not surprising that memories are even more ephemeral. I never asked my father "What did you do in the war, Dad?", which was a shame, as I believe he must have had an interesting story to tell. Now I will never know. He was a schoolmaster teaching chemistry and running the school's laboratories. He had started as a laboratory assistant and studied at night school, but before he could take his degree war was declared, examinations stopped, and the school evacuated to Berkshire. I know he received his call-up papers many times, but each time these were deferred and my parents ran one of the school's hostels. The school, St Paul's, was much involved in the events of the war, with the High Master visiting America by submarine on a secret mission, and the London buildings from which the school had been evacuated being used by an old boy, Montgomery, B.

L., to plan D-Day. These school buildings survived the wartime bombing but not the post-war planning. The commemorative plaque that Monty unveiled (Fig. 3) was moved to the new buildings.

I know more about what my uncle did as a gunner in the army. Although the fighting at Monte Cassino was too terrible for me to be told about, I think my uncle enjoyed his time in North Africa. The reason for this was his great interest in natural history, helped by the fact that the officer who had been so sadistic during training had disappeared in the blackout one night on the voyage out. Among my uncle's books I have found pressed flowers from Algeria, a hand-written issue of the *Journal of the Palestine Natural History Society*, and notes about specimens he sent to the Natural History Museum. It was this interest in things that crawled or wriggled and had more than four legs, and my uncle's delight in handling them, that was the key to his success. When an army sets up camp in a desert the most sumptuous tents and fittings go to the highest-ranking officers, and it is just these tents and bedding that attract the wriggliest, most poisonous creatures. Being able to deal with these brought my uncle to a position analogous to that of the food-taster of the ancient courts. As a result, he became the only person in the regiment below officer rank to be issued with binoculars, of course with the proviso that if while studying the nesting habits of the hoopoe he noticed any enemy activity, reporting the latter should be made his first priority.

As for my own war stories, the earliest of these are 'second-hand'. Although I was born before the war started I was still too young to remember when I lay on the bare boards upstairs in my cot, alone upstairs all through an air-raid, while my teddy-bear was snuggled up in my bedding down in the shelter: a dreadful shock for my mother when the lights were put back on! Neither do I personally remember jumping into a ditch to avoid the bullets from the guns of a roving Messerschmitt as it made holes in a neighbour's car.

My own memories come from later in the war when we were living in Crowthorne, Berkshire, in a big house between the village and the station, which my parents ran as a hostel for the school, and mostly from when I was playing outside in the garden or in the field next to the house. Some of these memories show the war from an unusual perspective (and I do not just mean lying in a ditch looking up at the underneath of a tank when we got caught up in a military exercise!). One evening I told my mother that I could hear voices in the bushes in the garden. My mother, who was all of five feet tall, grabbed her shotgun, a dainty little 4.10, and shouted at whoever it was to come out. My mother said she was terrified when more than half a dozen enormous soldiers emerged, but they just said 'Sorry to disturb you ma'am,' with



Fig. 1. Pillbox beside a Brunel railway bridge over the Thames near Gatehampton
Photo: John White



Fig. 2. WWII shelter on the Reading road outside Woodcote
Photo: John White



Fig. 3. Field Marshall Bernard Montgomery and the St Paul's School Captain at the unveiling of the plaque commemorating the part played by the school in the planning of D-Day
Photo: Edwin White

a North American accent, and disappeared into the darkness to continue 'voting with their feet' against invading Europe, as we learned later.

It is said that in those days there was no crime in the countryside and villagers never locked their doors: not quite true. Most people grew their own vegetables and kept chickens without any need to protect them from theft. However, just before one Christmas, the chickens kept in a garden at the end of our road 'disappeared' during the night. The next night the same thing happened at the next house along. This was repeated the following night, and it was obvious that our chickens would soon follow the others to some London market stall. Our chicken run was a long way from our house but in clear view of it, so my father borrowed a battery, some copper wire and a bell from the school laboratories to make an alarm for the chicken house door. He also borrowed the school projector with its 1000 watt lamp which he focused on the chicken house, ready to light up the scene when the alarm sounded. It sounded at about 4 a.m. a couple of nights later. My father always claimed he had put one blank cartridge in his 12 bore, but must have fired the wrong barrel in the heat of the moment. However the chicken house was at the extreme end of the range of the shotgun so that one could barely see a 'shadow' on the side of the chicken house. The main evidence of the intrusion was the wire of the run, which had been charged down as the intruder escaped. News travelled fast in the country, so it was no surprise that the postman a few hours later knew all about our visit from the 'fox'. We never found out who it was who got pellets instead of pullets, but no further chickens in the village 'disappeared'.

It is not just the exciting events that stick in the memory. I remember one picture in what must have been the very first book I was given. The book was a rag book, but the picture so impressed me that I still had it when I was old enough to read the caption. The picture showed a speeding express train with much steam and spray, with the caption 'Picking up water at Goring'. For years that caption meant nothing to me, but then after university I got my first job, with ICI at Whitchurch Hill, and a house in Goring. I then researched this picture and found that Goring was the site of water troughs used to refill the water tanks of steam trains as they travelled to or from Paddington. This was done by taking water from the Thames, softening it in treatment tanks, then pumping it into troughs about a mile long between the rails. Engine drivers then refilled the water tanks in the locomotive tenders by lowering a scoop as the engine travelled over the troughs, picking up several thousands of gallons of water in about a minute, and then raising the scoop when the tank was full. I discovered that the engine driver in the picture I had treasured for so long had been a poor driver, as the

amount of spray that was shown would only occur when the driver was late raising the scoop, causing water to gush out of the tank overflow, a mistake that would have been drawn to the notice of any passenger in the front of the train who had not closed the coach windows on their approach to Goring. I also discovered that the earthworks by the Brunel bridge were neither ancient nor modern fortifications, but were for the water treatment process.

Other memories are linked to objects. I have my father's blackout bicycle lamp – which had no glass or mirror to help it shine diagonally downwards – and I think stored somewhere I have his ARP (Air Raid Precautions) Warden tin hat. These remind me of being told of the air raid when our house, which was built of white brick, was surrounded by flares and so shone like a lighthouse. My father had to race round shovelling earth on the flares before the bomber force arrived. Such events caused him to make many comments about the government's planning, which evacuated a school from London for the pupils' safety and then put it in the next village to Sandhurst!

With so many airfields in the area I must have seen aircraft during the war as frequently as I do today in Goring, so it was only the unusual sightings that I remember. There was one plane that seemed obviously different even to a five-year-old. It was not the usual dull camouflaged colour, but was bright yellow – and it was flying backwards! This one I did get identified, just from that description, about a dozen years after I saw it. During my later school summer holidays I got jobs at Miles Aircraft which was then based at Shoreham. I mentioned this memory and was told that the Miles factory had been at Woodley during the war, just a few miles from where I had lived, and the aircraft was their M39B Libellula. Later I discovered there had been an easier route to finding out: I had got the job in Shoreham through a friend of my father, who used to work in the Miles design office and so had worked on the aircraft I had seen. He was also the owner of the car the Messerschmitt had perforated.

I must also have seen many vapour trails during the war, but again there is only one that I remember. Most pictures show vapour trails as wide and sweeping, crossing the whole sky. The one I remember was just a tight knot in one small part of a blue sky, looking like a piece of string that had been in my pocket. Now I know it was a fierce dogfight, but then distant guns could not be heard. As a little boy I did not realise I was watching two pilots trying to kill each other.

I also remember getting for my birthday a 'click beetle' toy. This was an oval piece of metal with a kinked piece of spring fitted as a rectangular head to the beetle. It made an interesting noise but did not have very great play value. I suppose the only reason I remember it was because there were very few

other toys around. Then many years later I saw a film about D-Day in which my 'click beetle' was used as an identifying signal. That explained why my toy was painted matt khaki, but raises other questions. It is possible that some were sold as toys to hide their real purpose, but this would have been more convincing if they had been painted dark brown. It is unlikely the troops would have been issued with a secret signal before they sailed, so I think it most likely that my beetle was one of the army supplies that 'fell off the back of a lorry'.

As a small boy I was not really affected by the gloom of the war, but some sights anyone would find magical, as on the morning when I found the field next to our house covered with strips of silver paper. These were about as long as I was tall and were made in two parts, a metal foil and a paper backing that could be peeled away. I gathered up armfuls of them: they were used later in the year to decorate our Christmas tree. Of course the number I took was negligible, but I never saw what happened to the rest of them. It just seemed that the strips had all gone when I next went into the field. During the war these strips were known as 'Window', a code name that I think may owe its origin to the way windows dazzle when reflecting sunlight. They were used by both sides to produce false radar reflections so I do not know whether the pieces I collected were of Allied or enemy origin. It could be that they were used to hide a group of attacking German bombers, but I like to think they were thrown out by a single Allied aircraft pretending to be a whole fleet of our bombers while the actual attack took a different route undetected. Many months later I did see some more of them when the field was again given the fairyland look. This time the strips were all metal. Because of the change in wavelength in use for radar that had occurred, they were now so tiny they were of no use to a small boy, so I did not collect any. Again these strips seemed to vanish without trace, due I suspect to collection operations to recycle this valuable material.

During the war the bicycle had been our family's method of travel. My father's had been a basic sports model, painted black of course, with a fixed wheel and no gears. My father said that the fixed wheel meant he had no need to lock the bicycle as anyone who 'borrowed' it would be thrown off at the first corner. It sprouted various additions, such as a seat on the crossbar for me, and even on occasions a side-car, and it was used for all transport jobs. One such job was when my father had bought me a second-hand rocking horse for Christmas. So that it would be a surprise for me he had to fetch it from the previous owner late on Christmas Eve. My father cycled over to collect it, and perched it on his bicycle to wheel home. It was a dark night but all went well until he was about half way back. Then the moon

came out, and one of the locals who had just staggered out of the pub saw appear from the darkness and coming towards him a large pale grey horse riding a bicycle. The man screamed and ran, my father rocked with laughter, and the horse nearly fell off the bicycle.

The one event of the war that I remember most vividly happened on an overcast day when again I was out playing in the field next to our house. Unfortunately dates are of little interest to small boys as it would be easier to find out what I saw if I knew when I saw it. I heard the sound of engines, and I looked up and saw a formation of aircraft flying towards me. There were three aircraft in a V. Each was towing a glider with the tow-lines clearly visible. To each side of this V was a similar one. And outside these were other Vs in a line abreast for as far as I could see. And behind this line came another, and another, and another ... until the sky was full of aircraft in every direction. I soon lost count of how many rows there were, but the end of the formation did come eventually, finishing with a number of individual aircraft without gliders bringing up the rear. I can only guess that there were many hundreds of aircraft in the formation: it was a truly awesome sight, impossible to repeat today. When I was old enough to link what I had seen to the history of the war, I decided this must have been the 'Market' part of 'Operation Market Garden' on its way to Arnhem. It was only many years later when I studied maps of this Operation that I found the routes used went round the north of London, whereas I was living to the south (at about 51° 22' N, 0° 48' W). It was suggested to me that I may have seen a daytime training exercise but I think it would be unlikely that so many aircraft would have been used just for practice. I then wondered if it could have been part of D-Day, but those seem all to have been night-time operations. I have recently read that fog interfered with the daytime re-supply flights for the Allied forces at Arnhem in mid September 1944, but on at least two days about 400 tug and glider combinations did form up over the Thames Valley before setting off for Europe. As the time, numbers and the weather conditions match I am now sure that one of these was the armada that I saw.

The last event of the war that I remember (maybe from the photo my father took) was V E Day. The boys from our hostel collected all the wood they could find in the surrounding woods for a really big bonfire in our paddock, such things having been banned during wartime. After the evening meal we all went outside for refreshments of homemade ice cream (frozen custard!) while the fire was lit. As the fire blazed (Fig. 4) we realized that a lot of extra people had joined us. The woodland watchtower had seen the flames in the distance and had sent two fire engines to join our celebration.

When the war ended we returned to London and I remember seeing the bombsites and brick-built street air raid shelters on the roads in the suburbs, so I can picture an event that obviously had made a great impression on my father. During the war although the school had been evacuated, much of their equipment was still in the laboratories in London so my father had to make trips back there. The easiest way for him to travel the 40 miles in wartime conditions was by bicycle, about a two-hour ride each way. On this occasion he had set off at about 6.30 a.m. on a pleasant spring day, pedalled through Windsor Great Park and had just reached Hounslow when the air raid sirens sounded. Round the next corner was one of those street shelters that looked like a long barrow built of brick and concrete on the surface along one side of the road. As he approached it the thought occurred to him that the time spent there waiting until the raid was over would make him late getting back that evening, so he made the fateful decision, put his head down and pedalled hard. He did get safely to the laboratories, arriving before the all-clear was sounded. He got the work he had come to do finished in good time, and pedalled off back to Berkshire. One advantage of travel by bicycle is that one can easily get round obstacles, such as the debris left by an air raid. This time there was an awful lot of this debris, and then he found his route completely blocked by a bomb crater. He said it was a dreadful shock to realise that where that hole was, that



Fig. 4. Boys from St Paul's School hostel at Crowthorne, Berkshire, at their V E Day celebration bonfire

Photo: Edwin White

morning there had been the welcoming shelter, and that his life or death had depended on a mental toss of a coin.

These memories show me how varied can be the tales told by distant guns; a reminder that archaeology only provides the stage, without revealing whether the play was a comedy or a tragedy.

From the Archives: The Lilley Farm Dig

Janet Sharpe

"A rather odd moat" near Lilley Farm, Mapledurham (SU 678 768) was reported by Marian and Derek Fallowfield at a SOAG meeting held at the Thatched Cottage, Whitchurch Hill, on 10 July 1970 – and the Group resolved to explore it further. Having obtained permission from the tenant of Lilley Farm, Mrs Beacroft, seven members conducted a preliminary investigation of this feature on the evening of 22 July 1970. Cynthia described this visit to Lilley Farm in her logbook:

"After negotiating the pig field, with an immense pig eyeing us, we came to the edge of a wood and found the moat, nearly dry and full of Horrid Things, but definitely not a natural feature. We made a wobbly and very unsafe crossing of the deep and odorous

mud on a rotten log ... We found ourselves on a little island covered with hazels and a few large trees. We scattered and searched and Cynthia discovered a definite piece of wall in a rabbit-hole; a piece of dressed stone could be seen. This sent everyone poking and the wall seems to go both ways. Digging would be difficult but possible."

A return visit was made on 10 August 1970: "Three members and five visitors went to the moat and excavated a length of wall. We dug along for 7 feet and about a foot down. This has produced a flint wall with chalk blocks under and a parallel piece for about 2 feet, about 6 inches away. The main wall seemed to turn a corner into a tree. Bricks were laid on top at one point and a good many broken medieval tiles were in the duct formed between the walls. A piece of green-glaze tile was discovered also. Simon [Jones] sounded the moat with a stick and it was quite 4 feet deep in the mud." Someone must have informed the *Reading Evening Post*, which published a brief article about the Lilley Farm dig on 7 September 1970 under the headline 'Medieval tower unearthed?'

By the next visit on 27 September 1970, W. J. (Bill) Fowler had taken over as site director (Bill was the father of Professor Peter Fowler whose name appeared as Vice-President on the back of the *SOAG Bulletin* until 1997) and permission to continue with the dig had been formally obtained from the landowner, Mr Eyston. Bill Fowler injected some professionalism into the infant SOAG and at a general meeting on 9 October 1970, Cyn records that, in referring to the dig, he “explained in detail ... how it must be done and that we must make our mark as a Group by doing one job and doing it Properly with a report at the end – or we’d be No Good”.

SOAG Bulletin No.9 for November 1970 (then an irregular one- to two-page foolscap document) includes the following report: “The Director of the Medieval Site project at Lilley Farm, Mapledurham, Mr W. Fowler, provided an up-to-date interim report, including plans of work done. Five boxes are now under investigation, two covering the corners of the very substantial chalk block and flint foundation. Two sorts of pottery were found in one box, together with many tile fragments and one whole tile, together with a Roman coin.” It is interesting to note the use of the term ‘boxes’ for trenches, which suggests that SOAG was then following the box grid style of excavation pioneered by Sir Mortimer Wheeler in the early 20th century.

The dig continued on most Sundays, with the help of up to 15 SOAG members and friends at any one time, until it was covered for the winter on 5 December 1970. Apart from the foundations, Cyn’s logbook describes the finds which included assumed medieval tile and pottery, nails and a few bones, and also “Dick the Gamekeeper [who] regaled us with local stories and offered us tools”. *SOAG Bulletin* No.10 for January 1971 states that “Mr W. Fowler has sent a report to the C.B.A. [Council for British Archaeology] on progress at Lilley Farm.”

Work recommenced on 21 March 1971, according to Cyn’s logbook: “We cleared the surfaces to inspect the sections and measure them, and dug away the soil

between Boxes 1 and 5 exposing more foundation.” On 4 April 1971, “ten members continued cleaning the boxes at the moat and the whole of one side of the foundation is now partially exposed. The centre box promises a continuation of the building. Clive [Hart] is cleaning a section into the moat to see if it has been built up artificially.”

As in the previous year, work continued at the site on most Sundays during the spring and summer. In *SOAG Bulletin* No. 13 for May 1971, Bill Fowler was able to report: “Excavation here has uncovered the N. wall and part of the W. side of a substantial foundation of flint, brick and chalk blocks, some 4.5m square, set on an island 14.5 by 12.5m, surrounded by a moat 4m broad. Despite the discovery of a Roman coin ... and a medieval sherd, the structure is probably of 18th-century construction, and the few small finds would indicate that this was never a habitation site. Work will continue to determine the limits and eventually uncover the whole of the foundation structure, and outside to study the composition of what seems to be an artificial island.”

After the end of May 1971 visits to the Lilley Farm moat became more infrequent as SOAG discovered other sites to explore. In *SOAG Bulletin* No. 14 for July 1971, Bill Fowler wrote: “It seemed that an approx. 5 by 4m solid brick and flint foundation occupied the N.E. sector of the rectangular island. Recent work has modified this in two respects: first the solid foundation does not extend over the whole of this sector. It rather consists of containing flint wall bases of different thicknesses and there are indications of at least one interior wall. Secondly there is the N. end of another wall, or the continuation of the West wall, into the S.W. sector of the island, outside the structure as hitherto envisaged (Fig. 1). Ian Mason is pursuing the estate records ... which could tell us what this structure was.”

On 3 October 1971, Cyn’s logbook reports the first find of Bellarmine ware at Lilley Farm, and the site was covered for the winter on 12 December 1971.

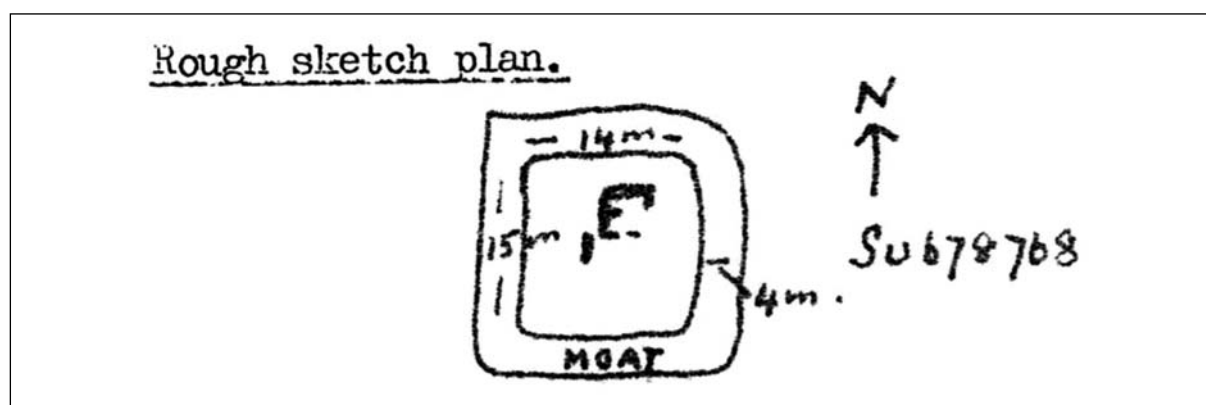


Fig. 1. The Lilley Farm moated site, from *SOAG Bulletin* No. 14 (1971)

Bill Fowler's report in *SOAG Bulletin* No. 16 for December 1971 adds the following details: "It is clear that we are dealing with a much more complex structure than the simple rectangular foundation envisaged a year ago ... While the general inferences still point to a context not much over 200 years ago, the identification of some few sherds as being from the 16th and 17th century could indicate an earlier or longer occupation ... It seems that there may have been two or three linked structures, not all on the same level. The main material of the wall lines is flint, with some brick and chalk blocks, but in the S.E. there are two apparently tooled and probably reused sandstone blocks ... Most of the small finds have been found outside or between the presumed structures. The small finds comprise 15 pottery sherds, iron spikes and nails and miscellaneous pieces, one and a half horseshoes, one piece of glass, a few oyster shells – and the coin of Allectus c. 295 AD."

Excavation began again on 17 March 1972 and two more pieces of Bellarmine jug were found on 15 April 1972, but no visits were made to the site between 7 May and 17 September 1972, during which time SOAG became actively involved in rescue archaeology at Lewknor in advance of the construction of the M40. Once work resumed, some more sandstone blocks were found and the ground plan of two structures was almost completely elucidated. The dig continued intermittently until it was closed for the winter on 10 December 1972. Only three further visits were made to the site the following year, two in early April and the last on 10 June 1973. Cyn includes only brief reports of these visits in her logbook, which suggest that the site was cleared for photography and little further excavation took place.

In *SOAG Bulletin* No. 20 for January 1973, Bill Fowler wrote: "A report [on Lilley Farm] will appear in the CBA9 Newsletter", and in the subsequent issue (*SOAG Bulletin* No. 21 for June 1973) he presented the following report: "Most of the structure foundations have now been cleared, showing two contrasted bases. The N. one is a solid, almost rectangular foundation, 4m by 1.5m by 60cm deep, of two layers of chalk blocks set in yellow clay, topped by 4/5 layers of mortared flints with some bricks. The S. structure is marked by wall

foundations only, mainly of flint, and these vary so much in width and depth, incorporating chalk blocks and some re-used sandstone pieces in some lengths, that it is difficult to envisage any substantial superstructure. At one point on the W. wall a m length of 3 courses of bricks appears to have slid outwards off the flint foundation; otherwise there is no evidence of walling above the bases. The surface within and outside this S. structure, which is 4.5 by 4m, divided unequally by an internal wall, is a hard compacted chalky clay. Finds, from the topsoil or immediately below, are meagre and provide no clear evidence of use and certainly none of habitation. This year a few sherds, a 17/18 C. key, an 18/19 C. candleholder and a small cache of oyster shells have been added to an assemblage which is puzzling and seems haphazard. The structures were probably of late 18/early 19 C. construction and seem to have been demolished and useful material removed long enough ago for substantial trees to have grown over and within them."

And here the story of the Lilley Farm dig ends, despite a comment in *SOAG Bulletin* No. 23 for January 1974 which stated: "Our own small excavation at Lilley Farm has lain fallow but will be completed this year", and again in No. 24 for May 1974: "Lilley Farm, after much work, has proved frustrating: it will be finished this season". Instead, SOAG became side-tracked by more exciting discoveries elsewhere, including an Anglo-Saxon cemetery near Dorchester threatened by gravel extraction that was being excavated as a rescue dig by David Miles. After all the work put into excavating at Lilley Farm, it must have been disappointing that the "medieval watch tower" speculated in the *Reading Evening Post* on 7 September 1970 turned out to be of "late 18/early 19 C. construction". We never were told the outcome of Ian Mason's investigation into the estate records which may have revealed the date and purpose of these buildings, and the original plans, drawings and photographs appear to have been lost. Nevertheless, the Lilley Farm dig represents a milestone in SOAG's history as it was the first dig to be properly recorded and the results published in two reports in the CBA9 newsletter for 1971 and 1972, better known to us now as *South Midlands Archaeology*.

NOTES FOR CONTRIBUTORS

Contributions are invited for the next issue of the *SOAG Bulletin*. Articles should preferably describe original field or documentary research undertaken by the author and priority will be given to items relevant to South Oxfordshire. Short reports of SOAG visits and other meetings and conferences, book reviews and correspondence are also invited.

Authors are reminded that copies of the *SOAG Bulletin* are sent to the six legal deposit libraries in the United Kingdom, to local libraries, Oxford Archaeology, the Institute of Archaeology (Oxford) and the Oxfordshire Museums Service. The reputation of SOAG therefore rests largely on the quality of the *SOAG Bulletin*.

In order to ease the burden on the editorial and production team, it would be appreciated if potential authors would also bear the following points in mind:

- Articles are accepted at the discretion of the Editor, who reserves the right to edit material prior to publication.
- Contributions should ideally be between 500 and 2000 words in length. With the agreement of the author, shorter articles may be published in the *SOAG Messenger*. Longer items will be accepted depending on the availability of space.
- Articles should not have been previously published elsewhere.
- Any quoted material should be inside quotation marks and sources, including material freely available on the internet should be given. If your information comes from a website you must cite the full www address and the date you consulted it.
- Articles should be submitted in Microsoft Word format, preferably by email. However, cleanly typed and/or clearly handwritten articles will be accepted. When sending copy by email, please ensure that you include 'SOAG Bulletin' in the email title and include a few lines of text in the message: unidentified attachments will not be opened.
- Please be as concise as possible, omit non-relevant material and avoid needless repetition.
- Illustrations are welcomed, if appropriate. Drawings and photographs are also invited for consideration for the front cover. Maps, drawings and photographs may be submitted in paper or electronic format as separate attachments. Photographs and original artwork will be returned to authors after publication if requested.

- The text should be single-spaced. Numbered figure captions should be provided and placed in the text to indicate the approximate position of illustrations.
- Metric units must be used where feasible. When imperial measurements are used, as in documentary studies, the metric equivalents should be added in square brackets if appropriate. For measurements, do not insert a space between the number and the dimension, e.g. 5.3m.
- Pounds, shillings and pence need not be converted into pounds and new pence.
- Numbers in the text (unless given as actual units of measurement) should be spelt out as words up to and including ten and given in numerals if more than ten.
- The Harvard System should be used for references whenever possible but the author's principles will be followed when items do not lend themselves to this system, subject to discussion.

e.g. Articles from journals and magazines:

Margary, I. D. (1943) Roman roads with small side ditches. *Antiquaries Journal*, 23: 7-8.

e.g. Books:

Henig, M. and Booth, P. (2000) *Roman Oxfordshire*. Stroud, Sutton.

e.g. Chapters from edited books:

Karali, L. (1996) Marine invertebrates and Minoan art. In: Reese, D. S. (ed.) *Pleistocene and Holocene fauna of Crete*. Wisconsin, Prehistory Press. pp.413-419.

- The use of footnotes is discouraged.

Please send all contributions to the SOAG Editor Susan Sandford (postal address inside front cover; email address: susansandford@mac.com) before 31 March for publication in that year.



Patron: Prof. Malcolm Airs

SOAG was established in 1969 and now has over 150 members. The aims of the Group are to promote an active interest in archaeology and its allied disciplines, particularly in South Oxfordshire. It works in close cooperation with the County Archaeologist and Oxford Archaeology, is a member of the Council for Independent Archaeology and is affiliated to the Council for British Archaeology South Midlands Group.

- Monthly meetings are held from September to April when lectures by professional speakers and members are given in an informal atmosphere
- There are opportunities for members to take part in excavations, fieldwalking, surveys and post-excavation work. Visits are made to places of interest in the summer – sometimes to sites not open to the public
- Members receive the annual *SOAG Bulletin*, which contains reports of the Group's activities and original articles focused on South Oxfordshire, and the monthly *SOAG Messenger*, which carries details of forthcoming events and brief news items
- Experts and complete beginners of all ages are warmly welcomed as new members.

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