WEST MIDLANDS ARCHAEOLOGY
33, 1990

CBA REGIONAL GROUP 8

Archaeology Department
Hereford and Worcester County Council
Tetbury Drive
Warndon
Worcester WR4 9LS
Tel: Worcester 58608

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33 1990

Edited by John Darlington and Rachel Edwards

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Council for British Archaeology Regional Group 8

ISSN 0955 - 3657

West Midlands Archaeology **33** was compiled at the Archaeology Section of Hereford and Worcester County Museum, on IBM compatible PCs using Wordstar 6 desk top publishing. Camera-ready copy was produced with a Hewlett-Packard LaserJet II.

The cover illustration, an intaglio found at Sidbury in Worcester, was drawn by Carolyn Hunt.

Contents

EDITORIAL

West Midlands Archaeology **33** contains reports and articles on the wide variety of archaeological fieldwork carried out within the region during 1990. This year environmental archaeology provides the main theme of the Forum and with it the call for regional environmental strategies and co-operation between units. There can be little doubt that such strategies would provide the much needed link between the work carried out at a range of levels within the west midlands area. With the rise of the field evaluation, the small scale excavation and the watching brief (noted in *West Midlands Archaeol* **32**) as the main form of archaeological fieldwork practised it is increasingly important that the results of those often disparate projects provide more than just feedback for the planning process. Regional research strategies whether period, monument category or artefact based are a solution which deserves to be explored in detail.

In this year's report section road schemes predominate: the Hereford Bypass, the M5 widening, the M40 survey, the A489 widening at Brompton, the Burslem relief road and the Shrewsbury A5/A49 Bypass archaeological project. With the prospect of the continued pressures to upgrade the existing transport network showing no signs of decreasing it is likely that reports on road schemes will continue to feature in *West Midlands Archaeology*. Indeed current proposals to widen the M6 ensure that this will be the case.

Other trends which are continuing to be illustrated by the reports received for WMA **33** is the demise of the large scale excavation, a reflection as much of the economic slump and contraction of the building industry as any change in legislation or source of funding. This years WMA **33** is also notable for the paucity of reports from the amateur groups - this is not a result of editorial action, all reports received have been included, so it must be concluded that either amateur groups are not carrying out fieldwork or that work is not being reporting. If the latter is the case then groups are urged to prepare for *West Midlands Archaeol* **34**.

1990 also saw the welcome publication of the DOE's Planning Policy Guidance Note 16 "Archaeology and Planning". The document sets out government policy and advice within the existing legislation. It is, in effect, a summary of various aspects of current best practise within the UK. Whereas before the information relevant to archaeological sites was scattered throughout the legislation, obscured amongst the General Development Orders, DOE circulars and hidden within the deepest corners of the Town and Country Planning Act, PPG 16 has now drawn everything together. However, for the reason that it is based on existing legislation it consequently says very little that is new. In it's own words it "...places no new duties on local authorities and should not place any significant additional burden on local authorities".

The main themes running throughout the document are that archaeological remains are important, fragile and finite; that there is a presumption in favour of their preservation and that this should be achieved through national legislation for scheduled sites and through Local Authority Development Plans for the remaining sites. The document stresses the need for early

consultation between developers and Planning Authorities and in particular the need for archaeological evaluations to be carried out on sites of archaeological potential before any decision on a planning application is taken.

The new PPG is undoubtedly a useful document. It does not solve all the problems posed by developers or even Local Authority planners, nor does it tackle the question of funding fully, but it does raise the profile and importance of archaeology and provide a clear statement of the value of archaeological sites, scheduled **and** unscheduled, which has been sorely needed.

Finally, on a separate note, CBA Group 8 is willing to consider making a small grant towards the cost of publishing articles which deal with aspects of the archaeology of the Group's region (Hereford & Worcester, Shropshire, Staffordshire, Warwickshire and West Midlands) in established national or regional periodicals.

Authors are warmly invited to send such articles to the Hon Editor of CBA Group 8 for consideration. They should be typed, double-spaced, on A4 paper using one side of the paper with ample margins. A copy of each intended illustration should be included (good photocopies of plates and of authors' rough versions of line drawings are acceptable).

Each article will be read by a referee who will report to the Officers and Committee of Group 8. An author may be asked to make revisions in the light of the referee's comments as a pre-condition of the making of a grant. Articles which have already been submitted to a publisher will not, therefore, be eligible for a publication grant.

THE FORUM

The first three papers in this years Forum are taken from the *Environmental Archaeology in the West Midlands* workshop organised by the IFA West Midlands Regional Group. Clare de Rouffignac reviews the state of the discipline in 1990, whilst Stephen Cracknell and Chris Currie detail the latest results of environmental work from two very different sites within the region and discuss the problems and needs of environmental research from a project based perspective. In the fourth paper James Dinn summarises the results of the Herefordshire Valleys Survey which was first reported in the County section of *West Midlands Archaeol* **32**, and outlines the need for future archaeological involvement in the area. The discovery of a medieval tile kiln in Worcester and a discussion on the late medieval tile industry in Worcestershire are the subjects of the next two papers by Hilary White and Duncan Brown. Finally, Philip Wise presents two papers on artefact studies in Warwickshire: the first on recent discoveries of medieval seal matrices and the second on the work of the Warwickshire Stone Axe Survey.

Environmental Archaeology in the West Midlands - A review and preview?

Clare de Rouffignac, Archaeology Section, Hereford and Worcester County Council

A previous paper on environmental archaeology in the region was given at the conference *Urban Archaeology in the West Midlands* and subsequently published in this journal (de Rouffignac 1989). At that time, environmental archaeology in the region was covered by two archaeobotanists at the University of Birmingham, no regional bone specialist, and one unit based, but project funded, environmentalist. Thus three people covered a region of nine counties, which included major urban centres as well as vast tracts of rural landscapes.

The reception given to the paper at the conference was positive, tempered with uncertainty as to how environmental archaeology could be improved in its relationship with excavators in the region. Certainly the awareness of people to environmental archaeology was increased - a most important first step. Obviously at that time not every unit could afford to employ an environmental archaeologist, but pooling of resources, or using a centralised environmental archaeology unit to coordinate environmental archaeology for the region seemed possible solutions.

With the structure of archaeological funding as it is a centralised organisation for the region would be very difficult to set up. This means that further specialist support such as a regionally

based bone specialist will have to remain "on ice" for the time being. Fortunately, L Moffett and J Grieg continue in their role as archaeobotanists based at Birmingham University. So what about the pooling of resources for environmental work to be carried out in the units? It is probable that there will be a major fall-off in large excavations, where most environmental sampling in the region has been carried out (with varying degrees of success) such as Deansway (Worcester), Bayley Lane (Coventry) and Upwich (Droitwich). Small scale excavation and evaluation are now the norm. It seems certain that many excavators think that evaluations are too small for environmental sampling.

Useful information can, however, be extracted from soil samples taken from small excavations. Thirty soil samples of various sizes were recovered from a $2m^2$ trench excavated in 1990 at Farrier Street (Worcester). These yielded valuable evidence from the Roman period, including charred plant remains and artefactual evidence relating to settlement and iron industry (Dinn, this volume).

Recent work in Hereford and Worcester has shown that the quality and quantity of environmental remains can be assessed quite easily from samples collected from evaluations - a useful tool for demonstrating the significance of archaeological sites or in preparing for further excavation. It is in this context that Hereford and Worcester County Council Archaeology Section began offering an "Environmental Archaeology Service" in 1990.

The presence of a unit-based environmentalist in the area generated interest from other excavators who required work to be carried out such as C Currie and S Cracknell (this volume). Other contract work has been carried out for other units in the region, including sites at Hereford, Stafford Castle and King's Newnham (Warwickshire). This work is carried out in collaboration with L Moffatt and J Grieg, who have been most helpful. It is less a pooling of resources than a diversion of resources to a single organisation. Progress so far has been encouraging, and as discussed before, the increased awareness of local excavators has enabled work to keep coming in. Even more encouragement has been gained from the sieving, sorting and bone analysis being carried out by R Heath for BUFAU.

What is more important for the future is for environmental archaeological sampling to be written into every excavation, no matter how small. We also need to encourage environmental research. For far too long, the units and academia have sat apart. There are many research projects which could be carried out in the units by students, and be beneficial to both field archaeologists and the students. The work of R Roseff in the Hereford Valleys is an excellent example of unit/university collaboration (Dinn and Roseff, this volume).

In the present climate of uncertainty surrounding archaeology as a whole, environmental archaeology is one discipline which stands out as a link with "green politics" and the ecological issues which seem to fill our lives. We need to exploit the relevance of the past to the present for all it's worth - otherwise where do our futures lie?

Reference

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Environmental studies in Alcester

Stephen Cracknell, Field Officer, Warwickshire County Council

There are few pre-Roman remains at Alcester but traces of the Roman town date from within a few years of the invasion. By the 4th century it covered an area of 29ha and was probably a sub-regional centre. Post-Roman remains are scarce and it is not until the 13th century that the town began to re-emerge as a substantial settlement.

Organised archaeological work started in the 1950s but, with one notable exception, it was not until the mid-1970s that serious environmental sampling began. The exception was the investigation of the "Leather Pit" by Peter Osborne of Birmingham University (Osborne 1971). He described what has now become recognised as the standard dung and rubbish pit fauna. Of particular interest was a grain-eating pest, *Oryzaephilus surinamensis*, which up to that time was thought to be a recent introduction into the country. There was also a single example of a Mediterranean wood-boring beetle, *Hesperophanes fasciculatus*, presumably indicating the presence of Mediterranean timber.

In the late 1970s, Paul Booth came to work in the town and Warwickshire Museum became more actively involved. A study of the marshes on the west side of Alcester began. Insect and snail remains complemented the pollen spectra. A decline in woodland pollen and the swampy nature of the area in the Iron Age and early Roman period was recognised. This tied in with work by Professor Shotton which suggested that the large quantities of reddish clays found on the banks of the Severn/Avon river systems were derived from rainwash following deforestation in the upper reaches of the system (Shotton 1978). The radiocarbon dates from the Alcester marsh suggested its creation at the end of the Bronze Age, and that it was drying up by the middle of the Roman period. Presumably the silting was sufficiently advanced by the end of the Bronze Age for the river at Alcester to force a new course. This created a gravel peninsula, which was an obvious area to defend when the time came, towards the end of the 2nd century AD.

The second significant result of environmental sampling in the 1970s came from the site at Coulters Garage. Here was a large stone building, measuring 10m by more than 40m, divided by a series of cross walls. Outside it was a large dump of charred grain. Booth suggested that the building was used as a storehouse for grain collected locally as part of the *annona* from about AD 300 (Booth 1985).

Charred plant remains are now collected on a "judgement" basis. This means that the main criterion for collection is the likelihood that the remains are in *in situ*. So samples are taken regularly from hearths, pits, and occupation deposits, but not normally from make-up layers, postholes, and demolition deposits. Usually there has to be visible charcoal for a sample to be taken. In recent years, pollen, insects, and waterlogged plants have only been recovered from the marsh area as no Roman wells have been identified.

The main reason for this unsophisticated approach is that most of the Roman sites excavated have been ordinary domestic structures or defensive works. Nevertheless, this judgement sampling has been effective. At Tibbet's Close (Cracknell 1985) and at Gas House Lane asparagus seeds have been recovered. These are the only examples known from Roman Britain and there is now growing evidence for gardening at Alcester with the discovery of beetroot to add to asparagus. Study of the pottery from the 1989 Gas House Lane site confirms that this part of the Roman town was not extensively occupied until about AD 200. That is after not before the first defensive circuit was built. The main implications of this are for defensive studies but it is looking increasingly possible that the "island" could have been partly used for crop production in the first two centuries of the Roman era.

There has been relatively little investigation of the post-Roman period in Alcester but one discovery has been rivet wheat, which was recognised for the first time at the 12/13th century kiln site at School Road (Cracknell and Jones 1985, 116). It is now known that rivet wheat was a common crop in the medieval West Midlands.

These are just some of the highlights of environmental research in Alcester. In the long term it may well prove that the apparently mundane environmental background to the Alcester sites is just as significant. Once this background is established the peculiarities of individual environmental assemblages will stand out much more clearly.

Future work

The advent of developer funding offers new possibilities and poses new problems for environmental archaeology. Archaeology in Alcester, as elsewhere, has moved from being University-based research, through central government-funded freelance operations, through more stable units, to the present situation, which is now increasingly developer funded. I believe developer funding is here to stay, whether we like it or not, and that competitive tendering will become the norm by 1993. The role of English Heritage is going to become more strategic. There are going to be fewer full-scale excavations and more evaluations. The one great gain of developer funding is that developers are taking seriously archaeologists' requests for preservation, because the price-tag on excavation is high.

The successes in environmental studies in Alcester have mainly resulted from a stable infrastructure and one of the dangers of developer funding is that it will break up this situation. There are two sides to the future organisation of environmental archaeology: curatorial and archaeological contracting. In this context, the role of consultants is not particularly crucial. Within Warwickshire at present there are only two candidates for the curatorial role - Warwickshire Museum and English Heritage - and it must be at the curatorial level that the environmental strategy is worked out. The problem is that strategy develops out of results. Since Warwickshire Museum no longer holds a monopoly on excavation, the environmental implications of new excavations will tend to take longer to filter back into excavation strategies.

There is a fear that, because environmental studies are a relatively new addition to archaeological practice, in any cost-cutting exercise they will be the first to go. This problem can be avoided. The level of environmental sampling and study ought to be determined by

curators advised by specialists in environmental studies, not by contractors. But in order to do this curators will need to be able to buy specialist time much more freely than they can do at present. Curators also need guidance on the wider issues of environmental archaeology, particularly with regard to preservation. Both of these issues - strategy and preservation - can be tackled within the context of the planning process and developer funding if the right information is made available to curators at the right time.

Archaeological contractors need to be able to buy environmental expertise for their developer-funded excavations. It seems that the Birmingham University lab is at present fully committed with English Heritage work. Unless English Heritage is prepared to be more flexible and allow developer funded contracts, conscientious contractors will be forced to look elsewhere for their pollen and charred plant remains, to the long-term detriment of research.

Another problem is that environmental studies will gain little from evaluations on well known sites such as Alcester, although where there has been no work before any information may be useful. The main aim of evaluations is to find out how much a particular site will cost to dig and write up, and how long the digging will take (*sic* - Eds). In order to do this the director needs to find out about the date, structure, and nature of the site. However, extensive trenching cannot be justified. Excavation is always destructive and damage to sites under investigation should be minimised, particularly since preservation is frequently the recommended outcome of the evaluation. A first report has to be produced within a few weeks of the end of the dig and again this reduces the possibilities of extensive environmental work. The aim is to discover the archaeological potential of a site not to conduct research.

Competitive tendering is likely to reduce the amount of communication between archaeologists and may well give rise to antagonism. What we need to do is to build bridges, where archaeologists co-operate, buying in skills from our competitors if necessary. In this context I would like to applaud Hereford and Worcester for setting up an environmental processing service for material from the West Midlands. Let's try to build more of these bridges which are to everyone's benefit.

Acknowledgements

The environmental results mentioned in this paper were largely the work of James Greig and Lisa Moffett, to whom many thanks are due.

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The role of environmental sampling in the interpretation of historic gardens

Christopher Currie, Leverhulme Research Fellow, Project Director

The Leverhulme Garden Archaeology Research Project was set up in May 1989 as a three year project based at Castle Bromwich Hall Gardens, West Midlands, and funded by the Leverhulme Foundation in conjunction with the Castle Bromwich Hall Gardens Trust. The project is researching the application of archaeological methods to the restoration of historic gardens. This has led to a thorough testing of a wide range of techniques including resistivity and magnetometer surveying, optical luminescence, excavation sampling strategies, and a wide range of environmental sampling techniques. With this help, the project is exploring a relatively new area of the historic past and seeks to transcend the basic goal of recovering a garden plan in favour of a more interdisciplinary approach.

Despite the lack of general awareness amongst excavators of what constitutes a garden "feature", archaeology in gardens is really little different from the excavation of settlement sites. Planting beds are like linear ditches on a much smaller scale and garden paths bear much resemblance to miniature Roman roads. Digging patterns in gardens are far less ephemeral than might be thought. The Leverhulme project at Castle Bromwich has revealed great detail of garden designs dating from *c* 1600, *c* 1700, *c* 1820, *c* 1850, making it the finest sequence of excavated gardens anywhere in Europe

Environmental archaeology has proved itself capable of adding an extra dimension to the emerging picture of what the garden and its environment was like during its various phases. The research design initially sought to explore three relatively well known avenues of environmental research: pollen, faunal and flora recovery from bulk soil samples, and soil analysis.

The methodologies used are well established. Pollen samples were taken from sections or deposits that appeared to offer potential. Sealed contexts were given a priority, as were buried soils, partly from their inherent interest, but mainly because it was thought that such contexts were more likely to retain pollen grains. Faunal and floral recovery from bulk samples were subjected to routine sieving by C de Rouffignac at Hereford and Worcester County Council Archaeology Section (de Rouffignac 1990a). Sample sites were selected giving priority to

sealed contexts and buried horizons, although a number of unusual contexts with high potential were identified and sampled.

Perhaps the most radical sampling policy was that adopted for soils by the project in conjunction with Stephen Gray. Early work on soil particle size analysis failed to recover any useful information. Initial tests also looked at factors such as soil pH and the translocation of phosphates. From these results a policy was adapted to examine samples for specific information geared to examine phenomena identified by the provisional sampling results. From the second year of the project, soil work concentrated on identifying the quantities of calcium, phosphate and magnesium present as well as the pH. Information on percentages of surviving organic material was also recovered.

The chemicals studied were singled out as those most likely to have been introduced by gardening activity. Phosphate is artificially introduced into the soil in a number of forms as a fertiliser; dung, ash/charcoal and bone meal being the most common phosphate-rich additives used. Calcium is introduced during liming, another common garden practice. The introduction of this substance to the acidic sandy soil at Castle Bromwich was an essential requirement. So much so that the absence of calcium in the soil came to be the best indicator that intensive gardening had not taken place in certain areas.

The presence of magnesium was more problematic in its interpretation. This substance is expected to be particularly high in areas where rotted wood and other vegetable matter were present. A certain level therefore will be present in all soils but higher than average readings suggest artificial introduction. The most common magnesium-high substance likely to be introduced to gardens is rotted-down compost. High readings are therefore likely to indicate the presence of plant beds and other intensively enhanced areas. Gridded sampling could perhaps be used to indicate the presence of wooden edging to beds. There is good reason to suspect this practice at Castle Bromwich but the acidic soils quickly rot wood and therefore no visible trace of wooden edges survive.

The sampling strategy concentrated on two areas: sampling specific soils that appeared to be of particular relevance to the garden such as archaeologically identified plant beds, and a pattern of sampling fixed points in all trenches excavated in the lower garden, where discernible features were seldom forthcoming. The first series of samples gave information about chosen contexts and compared the chemical constituents with samples taken from undisturbed horizons outside the garden. The most obvious choice for this was plant beds where high phosphate and calcium readings and the corresponding amounts of each indicated regulated enhancement geared to growing specific types of plant.

The second series of samples gave what might seem negative results in that most of the chemical levels were significantly lower. However, this reinforced the excavated results in that the readings showed that no identifiable enhancement had occurred to these soils. This positively identified areas within the garden where cultivation was of minimal intensity. One such area, the Upper Wilderness on the middle terrace, is an area of shrubs and trees where the environment would have been similar to natural woodland. The soil analysis confirmed that prior to this planting regime (*c* 1850), no enhancement had taken place. This was an extremely important conclusion because the garden restorers involved on the test site had been reluctant to believe that an area of intensive gardening in the form of a parterre had not existed prior to

the Wilderness. In spite of the excavation of a large number of sterile test trenches in the area, there was a tendency for these non-archaeologists to consider that something had been missed. The barren nature of the soil compared with areas sampled where parterres and other more intensive forms of gardening had existed was welcome confirmation of the more standard archaeological work.

Used together, soil analysis, environmental sampling and pollen analysis have contributed much to the understanding of pre-chemical horticulture and husbandry. Starting with horizons beneath the artificial garden terraces, these methods revealed much about medieval husbandry. Evidence has been recovered for the harvesting of field beans and peas alongside the more common crops of wheat, rye and barley. Further evidence for the presence of apple/pear suggest that Castle Bromwich Hall was on the site of a demesne food-processing unit in the Middle Ages.

Work on the garden horizons has revealed invaluable data on how an acidic hill-top site with poor sandy soils (seldom exceeding a pH of 4.5) was transformed into a fertile garden. The detail with which the archaeologists are able to reconstruct composting regimes used in plant beds is beyond all expectation; an analysis of the first year's tests is forthcoming (Currie and Locock 1991). Such information may have profound implications in a world worried about the consequences of the excessive use of chemical fertilisers, since the gardens were cultivated by the last generation of pre-chemical organic gardeners at the height of their skills.

This was demonstrated by the excavation of linear trenches beneath later Victorian buildings in an area traditionally known as the Melon Ground. The fill of these pits was a nondescript sandy loam with no visible inclusions other than occasional flecks of charcoal. Testing of the fill revealed interesting results. The pH of the soil was 8.2, an incredibly high reading in the area (natural soils outside the garden seldom exceed 4.0 and have been sampled as low as 2.7). The pollen analysis revealed 19.2% of an unidentified legume, possibly sweet pea or field bean, as well as significant quantities of cereal pollen and cereal related weeds. These readings were considered higher than would be expected from a wind-blown introduction. The sieving of the bulk sample revealed further cereal and cereal related weed seeds.

The unusually high concentrations of these ecofacts require an explanation. The most obvious are that they represent introductions brought in during enhancement of the fill, ie composting and manuring. The high pH suggests intensive, almost excessive, enhancement for a specialised purpose. It is suggested that the high legume pollen represents the rotting down of residues from a legume crop such as field bean or sweet pea as a compost. The presence of unusual quantities of cereal and cereal related ecofacts suggests large quantities of straw present, probably introduced with dung from the stables. This reinforces the belief that the trenches recovered were for hot beds, a technique of intensive gardening used to "force" exotic plants, such as the melon, cucumber and other vegetables and fruits, to grow in the British climate. The large quantities of rotting dung in the pit kept the temperature of the soil artificially high. This was just one example of how the environmental techniques practised by the project worked together to discover the usage of otherwise ubiquitous and uniform planting trenches.

The environmental work raises the question of how the researchers have managed to obtain detailed assemblages of seed and pollen from the same site; a site so sandy that water-logged

deposits were not recovered. The answer may be found in past soil enhancement practices.

Starting with a sub-soil of loamy sand with a pH of less than 4, negligible calcium content, and magnesium and phosphate levels that were generally low, the gardeners created soils with pHs in the range of 6 to 8.2, with generally high levels of calcium, phosphate and magnesium. Such readings indicate intense cultivation and enhancement with a balanced mixture of manures, composts, ash and lime. However, given that the garden was so sandy and that it had been abandoned since 1936, one would have expected large quantities of these elements to have leached out. That this was not the case argues that either the original levels were enhanced to an almost incredible degree or that our assumptions about rates of change in such soils needs rethinking. Likewise, leaching would be expected to have washed out most of the pollen grains within historic levels. Generally this was not the case and pollen survival was usually higher than expected.

In the case of seed recovery from the environmental samples taken, the results were outstanding. Acid soils generally destroy fragile items like seeds very quickly (Keepax 1977, 226). Although bone on the site was generally in poor condition, seeds survived remarkably well. Earthworm contamination of contexts was not considered to be a major factor (Keepax 1977, 225) as worms do not appear to be suited to the well-drained, acidic soils and are rare on the site. This again suggests we need to reappraise our expectations of sampling on acid soil sites. It might be expected that it was in heavily-limed plant beds that survival was highest, and although this was a contributing factor it was not always the case. Certainly, the liming does not seem to have had a significant effect on bone survival (although initial analysis suggests it may have been responsible for some retardation of the rate of decay). Both the environmentalist and pollen specialist were surprised at the absence of any significant signs of decay amongst their assemblages. Such information suggests that the survival mechanisms of ecofacts are assisted by a complex interaction of factors that is not as yet properly understood. The project is currently using specialist workers to try to unravel this problem. Whatever the end result this work indicates that it is no longer possible to prejudge the environmental potential of a site.

It has been possible to compare results of the techniques used at Castle Bromwich with another site. In the summer of 1990 the author was called on to use the same methods on a similar garden site under excavation at Tredegar House, Gwent. Despite markedly different soils (heavy clays) and excavation strategy (Tredegar was based on open area excavation whereas the Castle Bromwich results have been achieved by selective trenching), the environmental methods were shown to have worked, although not to the same high level as at Castle Bromwich (de Rouffignac 1990b).

As a conclusion, it is clear that many archaeologists must re-examine their preconceptions about sites, their environments, and the sampling strategies to apply to them. Although the results have direct implications for historic gardens, they can also be applied to any site in the past where the soil has been cultivated. As soon as the plough breaks the turf, an artificial landscape is created which man then maintains to his own advantage. It is suggested that if the enhancement of garden soils can have such a drastic effect on the expected survival of environmental artefacts, the prolonged cultivation of other types of land can be affected equally.

Appendix 1

The data gives examples of analysis of selected samples. The data are incomplete at the time of writing as certain results are still awaited. Nevertheless it is felt that the following gives some idea of the information that will be available.

Context 1263; fill of linear trench within an area known as the Melon Ground, probably a hot bed for forcing delicate plants by the use of decomposing materials placed in the pit creating a high soil temperature.

pH 8.2

Inorganic Phosphate 2205 mg/Kg (parts per million)

	Seeds present numbers	Pollen %
Wheat/rye	11	
Cerealia undiff		2.8
Triticum		2.0
Sambucus nigra	2	
Stellaria media	3	
Caryophyllaceae		1.2
Chenopodium/Atriplex sp		12
Chenopodiaceae		0.4
Anthemis cotula	1	
Centaurea nigra		2.4
Centaurea cyanus		0.4
Compositae Lig		22.0
Compositae Tub		1.6
Polygonum sp	10	
Polygonum persicaria		0.4
Rumex/Carex sp	6	
Rumex		2.0
Rubus sp	1	
Betula		0.4
Quercus		0.8
Alnus		1.2
Fraxinus		1.2
Corylus		1.2
Rosaceae		0.4
Umbelliferae		0.4
Rubiaceae		0.4
Trifolium-type		19.2
Ranunculaceae		0.4
Gramineae		32.8
Cruciferae		0.4
Plantago lanceolata		4.8
Filipendula		0.4
Cyperaceae		0.4
Pteridium		9.2
Indeterminate	18	nil

Context 1516; fill of medieval cess pit.

pH	Inorganic Phosphate	Magnesium	Calcium
	mg/Kg (parts per million)		
5.45	2405	7660	4713

Seeds recovered:

Triticum aestivum	50
Secale sp	3
Cereal indet	50
Wheat/rye	50
Chaff	1
Sambucus nigra	5
Spergula arvensis	12
Chrysanthemum segetum	>50
Anthemis cotula	6
Cirsium arvense	1
Centurea cyanus	3
Labiatae	3
Vicia/Lathyrus sp	30
Polygonum amphibium	1
Polygonum aviculare sp	1
Rumex acetosa	4
Rumex acetosella	25
Pyrus/Malus sp	1

Context 1725, fill of early 17th century plant bed

pH	Inorganic Phosphate	Magnesium	Calcium
	mg/Kg (parts per million)		
5.39	1861	6444	1976

Seeds recovered:

Cereal indet	1
Vicia fabia	1
Vicia/Lathyrus sp	1
Indeterminate seeds	14

Appendix 2

Comparison of intensively cultivated plant beds with non-intensively cultivated garden areas

Enriched plant beds in Best Garden

Context	Sample no	pH	Inorganic Phosphate	Magnesium	Calcium
1429	E093	6.07	1860	7597	3433
1687	E124	6.29	1653	1443	2226
1725	E134	5.39	1861	6444	1976
1731	E137	5.59	3060	1645	3529

Non-intensive areas:

a) Wilderness (Ornamental woodland)

1399	E065	3.33	1282	1262	61.2
1323	E038	3.10	1137	924	86
1335	E043	2.89	1565	575	12
1360	E050	2.90	1234	1703	86
1364	E052	2.91	1550	668	2.6

b) Archery Lawn (Grassed terrace)

1744	E140	5.01	955	1597	597.7

Acknowledgements

The author would like to thank the specialists workers for their contribution to this research: Clare de Rouffignac (Environmentalist, Hereford and Worcester County Council Archaeology Department), Dr Frank Chambers (Pollen analysis, University of Keele) and Stephen Gray (Soils). Thanks are also due to Martin Locock, the Leverhulme Field Archaeologist, for his comments and suggestions.

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The Herefordshire Valleys Survey - results and future work

James Dinn, Archaeology Section, Hereford and Worcester County Council

The presence of alluvium has important implications for the preservation of archaeological remains. In particular, archaeological sites and deposits under alluvium are protected from the effects of agriculture, especially deep ploughing and land drainage, which have caused such damage elsewhere. However, there may also be problems for the effective management of these sites. Because of the masking layer of alluvium, large areas of the river valleys are not susceptible to site prospection using aerial photography or other conventional archaeological fieldwork techniques. Most archaeological site detection techniques depend on the partial decay or degradation of the sites which are being surveyed. It has consequently been assumed in the past that these areas are of low archaeological potential. In practice, the reverse is often true: the alluvial "blanket" can result in a high degree of preservation of archaeological material such as only rarely occur elsewhere. In particular, buried topsoil layers must be singled out as of great importance, as their survival is rare in other conditions, and these layers will not otherwise be found over such extensive areas as may be present below alluvium. However, their very preservation ironically makes them more vulnerable to destruction by large-scale extractive industries, such as sand and gravel quarrying, or by major road construction and other building works.

Entire sites may be buried beneath alluvium, their presence totally unsuspected, or parts of a site on the edge of alluvium may be buried with consequent better preservation.

There is an urgent need for an integrated strategic approach to the management of valley bottom archaeology, with special reference to the two main threats of agriculture and mineral extraction. It is suggested here that this requires the establishment of four main components.

The first of these is an information gathering process, leading to a strengthening of the **archaeological database** for the county. Our knowledge of archaeological sites and landscapes, and, equally important, of the geographical and other factors which influenced the location and layout of settlement and land-use, is very poor for this county. For this reason it is very difficult, if not impossible, to predict the archaeological potential of areas under threat. This information gathering is essential if decisions on the management of the archaeological heritage are to be made on an informed basis. A regional and county **research framework** should be established (see for example English Heritage, *Developing Frameworks*), which will provide the academic background for management decisions. The third component is a clearly defined and explicit **protection framework** for sites and landscapes under threat. This will have its roots in existing legislation and planning guidance; these are summarised below. Finally, there should be a defined **procedure and set of methodologies** which can be applied to all threatened sites. In the past, individual development applications have of necessity been dealt with separately, without any attempt to impose such a methodology.

The work of the Herefordshire Valleys Survey has helped to reveal the richness and diversity of the known archaeological remains in large areas of Herefordshire. Many of the sites contained in the project database, in particular cropmark sites, were originally identified up to 40 years previously, but have found little place in studies published in the intervening period. In addition, the fieldwork element of the project has indicated that significant archaeological remains will often be encountered in areas where no archaeological sites were previously known, especially where they are concealed under alluvium.

The problems of archaeological prospection in river valleys are compounded by the lack of survey in these areas, due to their low perceived potential. The improvement of prospection techniques is a national priority which is being addressed. Of particular importance is the development of non-destructive techniques.

More survey is urgently needed, both in the valleys and in other parts of the region. This may be either threat-related, where mineral extraction or other landscape threats occur, or take the form of wider "landscape" surveys, with the aim of answering specific research questions. Present archaeological database structures do little to take advantage of recent developments in computer-based mapping. Object-oriented databases and Geographic Information Systems (GIS) are likely to revolutionise the way that archaeologists handle data within the short-term future, and this technology should be applied to SMRs.

A number of themes for further work may be suggested on present knowledge, both methodological and relating to period-based and other research. Some of these are incidental to river valley location, though the potential of archaeological sites directly associated with river use should be stressed. The examination of river valley sites is likely to provide information which would not be available from sites in other topographical locations.

The continued development of methodologies, and the monitoring of this process, are important, and will in the longer term allow an assessment of the extent and quality of buried landscapes to be made. Appreciation of the significance of sub-alluvial archaeology, in terms of the preservation of deposits and of environmental evidence, is still at an early stage. The palaeohydrological study of alluviation, including the stratification of archaeological deposits within alluvium, has an important part to play in the study of present-day geomorphological processes.

The earliest prehistoric periods (palaeolithic and mesolithic) are extremely poorly known. Much evidence for these periods is likely to be in the form of chance finds during work on sites of later date. Consideration should be given to the possibility that palaeolithic deposits may exist within the gravels, and quarry workers should be made aware of this and encouraged to report finds.

The increasing numbers of flint finds from the neolithic and Bronze Age, and of cropmark ring-ditches, are not reflected in our knowledge of settlement sites of those periods, or indeed of burial sites of the neolithic. Assessment of existing finds from museum and private collections, many of which are not closely dated, would be especially cost-effective for these periods, as a starting point for distributional analysis.

For the Iron Age, the enclosure sites which are known as cropmarks and earthworks may

represent the dimension of small-scale settlement, especially in the lowlands, which has been missing from earlier models of the settlement of this period. These enclosure sites may also have been current in the Roman period, for which evidence of smaller settlements is similarly scarce. Field systems for the Iron Age and Roman periods are not known in Herefordshire, although some have recently been found in neighbouring Shropshire.

The Herefordshire Valleys Survey has made a start to the research process, but it must be continued if we are not to lose much more of the archaeological heritage. New themes will develop out of those indicated above, as well as from the ideas of other workers.

The special nature of alluviated areas in the river valleys, in terms of their preservation and potential, should give them a favoured place in any preservation strategy. There is an urgent need for better knowledge and understanding of the quantity and diversity of the archaeological resource, through survey and through review of existing data.

The use of a Geographic Information System (GIS), based on digitised mapping of the county, would allow for the efficient development of the SMR, assist the grading of sites and landscapes, through the combination of archaeological and other data, and would facilitate the building and testing of complex predictive models for past human activity.

Responding adequately to threats to archaeology would be significantly assisted by such an increase in knowledge, so that such threats could be mitigated, but there will still be a need for a field response to threats, where the nature of a site's archaeology is unknown and unpredictable, or where destruction is inevitable. Where existing information is inadequate, as is very often the case, full archaeological evaluation should take place, even in areas of predicted low potential. A phased approach to evaluation will allow significant archaeological deposits to be recognised at the earliest possible stage, and where possible preserved *in situ* by removal from an application area. It will also make site evaluation more cost-effective, by cutting out unnecessary archaeological work. The possibility of preservation *in situ* of important archaeological remains should always remain open until the results of the evaluation are complete.

Interim report on a medieval tile kiln at Silver Street, Worcester, HWCM 1281 (SO 85205511)

Hilary A White and Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

An evaluation in advance of proposed development at County Furnishings, Silver Street, Worcester identified a medieval tile industry, including a particularly important group of decorated floor tile wasters.

The evaluation

The evaluation was located within an area known as Lowesmoor, which, as its name suggests, was originally an area of low marshy ground and was consequently an ideal extraction site for alluvial clay deposits. Clay-digging by tile and brick makers is reported in "Losemore" from the reign of Henry IV until the 17th century (Carver 1980b, 258). A tilehouse in the area owned by St Swithin's parish is first mentioned in 1455 and references exist also to a brick kiln in the Silver Street suburb in the early 17th century, although this may have been south of 18/20 Silver Street (Carver 1980a 285-6).

Large pits of 17th century and earlier date were found at *c* 1.0m below present ground surface (20.70m OD). These were interpreted as claypits associated with the documented tile and brick industries. However there was little sign of significant quantities of brick or tile in their fills, as might be expected if these were close enough to the kiln to have been used as waster dumps.

In trench 1 three structures built using roof tile fragments were identified. The westernmost of these (structure 1, fig 1) was "L" shaped, with western and southern arms and was constructed of several layers of flat-laid tiles. Some of these proved to be very badly overfired and were laminating badly, indicating that they were wasters. It is likely, from their overfired state, that lamination and cracking would have begun soon after removal from the kiln (Gary Taylor pers comm), suggesting that this structure was built soon after these tiles were fired. The south end of the stack of tiles appeared to have been burnt. However the structure was substantially truncated on the south-western side by a brick-lined well which had been backfilled with tile, and on the south and east sides by a large pit. In consequence relatively little of the surrounding deposits survived. The pit was only partially excavated, and only some of the distinctive uppermost fills, including dumps of tile and burnt clay were removed.

Structure 2 (fig 1) was built from smaller fragments, including a small piece of a decorated floor tile and continued past the former to be cut by a later pit.

The easternmost tile structure (fig 1) was built of complete or nearly complete roof tiles, in a similar overfired state to structure 1. It was approximately aligned with one side of the L-shaped structure. and appeared to come to an end *c* 0.4m from the other. However, no certain relationship between these features was demonstrable.

Evidence for the identification of the tile kiln itself is not secure, although it is unlikely to lie far from such a large concentration of wasters. Some of the undated tile structures in trench 1 may be interpreted as part of a kiln structure. Excavation did not reveal the bottom of any of these structures, so the known plan may not be the complete plan. Other interpretations may be put upon all these structures, since roof tiles were used or re-used for a variety of purposes. These include hearth bases and linings as at Bordesley Abbey (Grenville Astill pers comm), as building material for walls as in trench 2 and plinths or pads for timber framed buildings or lean-to structures as at Deansway (Gary Taylor pers comm).

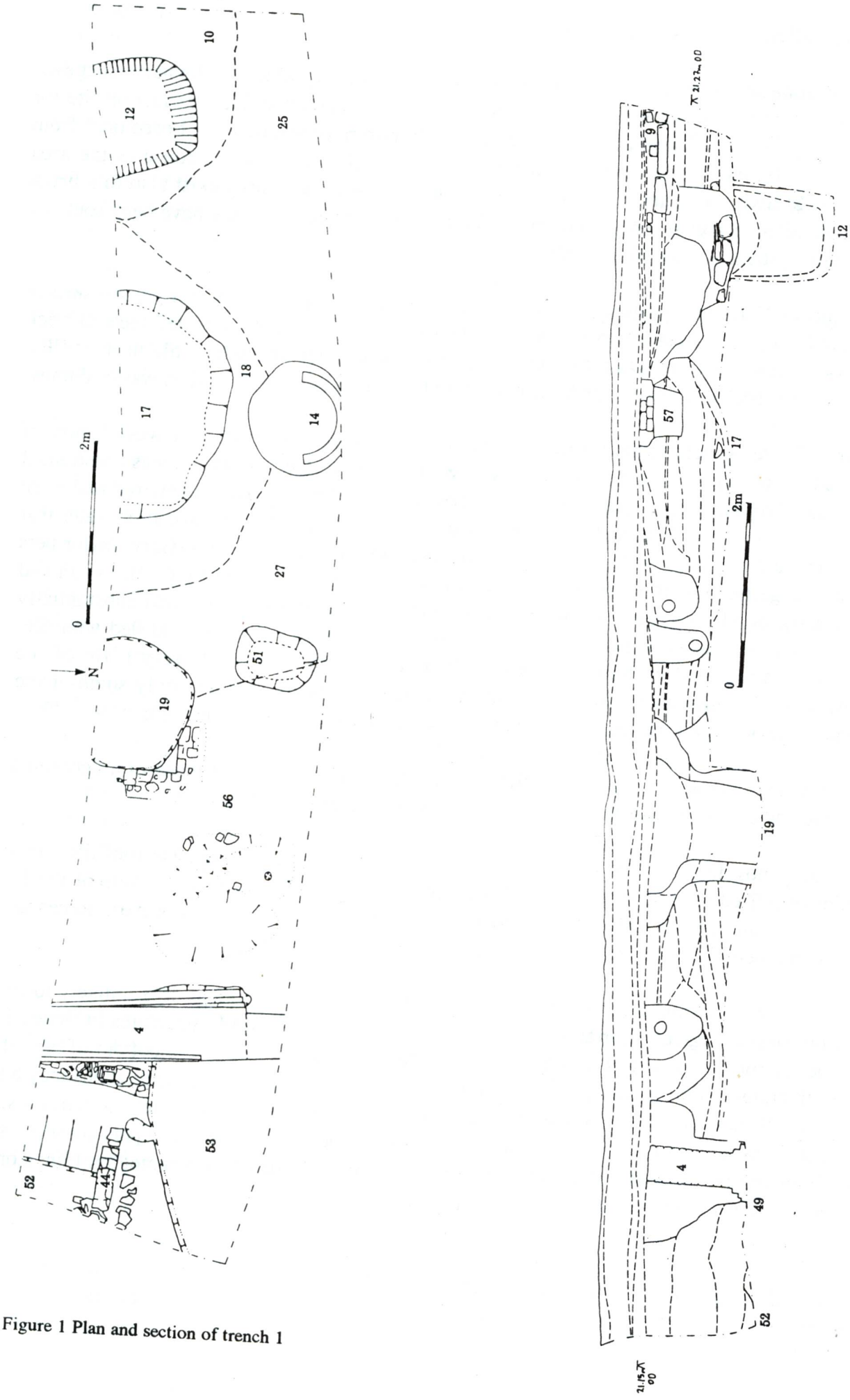

Figure 1 Plan and section of trench 1

The medieval tiles

Roof tiles

Sixty-nine sherds of medieval pottery were recovered, compared with 132 pieces of glazed and decorated floor tiles, a ratio of nearly 1:2. So great a quantity of roof tile wasters were present, that only samples were taken. Several of the roof tiles were buckled, laminating or badly discoloured, all signs of misfiring, in addition to those which were simply broken. The assemblage of glazed and decorated floor tiles included several indicating signs of discolouration and distortion, while others were bonded to each other, to small fragments of other tiles or to spacers by their glaze.

In consequence these were interpreted as tile waster deposits from a medieval tile kiln which could not be certainly identified within the trench. However, most of these deposits proved, from statigraphic or other finds evidence, to be post-medieval redeposition of medieval tile dumps. The lowest deposits revealed in a tile waster pit in the south-east corner of trench 1 remains the only area which has not produced evidence of a post-medieval date, although successive post medieval scoops had disturbed the upper layers of this deposit.

Roof tile manufacture appears to have been quite widespread in medieval towns, and in Worcester particularly (Carver 1980b, 259). In 1467 the city ordnances stated that

> "for the prevention of fire neither wooden chimneys nor thatched roofs should be allowed thenceforward; by midsummer day next coming the wooden chimneys should be replaced by brick or stone and the thatched roofs by tiles."

In consequence an already productive industry must have received a fresh impetus in the later 15th century and it is apparent that from about this time roof tile manufacture was not the preserve of specialists (Carver 1980b, 258). At the same date tilers were compelled to mark their tiles (see Carver 1980a, 213, fig 62, 228). From the larger fragments of tiles which were retained from the cellar wall a single tile stamp was recovered. This was similar to one found in a late 17th century tile dump on the Sidbury excavation (Carver 1980a, 213, fig 62 c).

Recorded roof-tile sizes of the flat, lugged variety that predominate include some from the cellar wall in trench 2 (317 x 175 x 17mm thick) and others from a tile structure in trench 1 (335 x 195 x 18mm). None of the loose and waster tiles provided a measurement of length, although widths and thicknesses were variants of those recorded here.

A well on the north side of trench 1 proved to have a lining of overfired, nearly vitrified, buckling bricks on its north side.

Floor tiles

Examination of the floor tiles from the site proved to be of particular interest, as they were wasters, ie tiles that were discarded at the point of production as being unfit for use/sale. Some of the tiles were warped (as indeed were the accompanying roof tiles); but the more specialist glazed floor tiles had produced additional problems, with tiles firing together and then breaking when attempts were made to separate them; tiles that were manufactured in groups and then intended to be broken down into smaller components, had not parted in the correct manner, and in some cases the firing of the glaze and hence the quality of the design

was considered inadequate.

The floor tiles fell into two specific categories: plain unglazed tiles and decorated glazed tiles. The plain tiles were 30-40mm thick and mostly square or rectangular, but a more unusual one appeared to be octagonal. Traces of glaze occurs on this, but this may well have accrued as they were fired with glazed tiles. It has been suggested that these tiles could have been part of a kiln structure, either from the floor or part of the stacks that made up the roof supports. Equally, and in this case more likely, they were made for sale, either as floor tiles or as bricks to line fireplaces, etc.

The decorated floor tiles were of particular interest, firstly because they were high status items and are therefore relatively rare and secondly because sufficient work has been done on them in the county to allow their date and significance to be commented on.

There were a large number of plain tiles, a few in yellow and a larger number in the green/brown spectrum. The tiles were either the full size or cut in half lengthwise; or halved and quartered diagonally. The larger proportion of tiles were green and would have been used as spacers between decorated tiles and would therefore be mainly 14th century in date. The rarer yellow tiles could be later and could be representative of plain two coloured floor tiles that came into fashion in this country in the 15th century.

There were also a substantial number of decorated two-coloured tiles, and most of the following comments will relate to these.

There are a number of designs represented: coats of arms (Beauchamp, De Warenne and Cornwall), foliage designs (individual tiles and sets of four, nine and sixteen), a number of rarer letter tiles in two sizes and a unique (so far) tile with arabic numerals on it. Most of the tiles fall within a 120mm^2 size range, but they are not necessarily all of one date.

One distinct group of tiles matches those published from the Worcester Cathedral Singing School (Keen 1978). Among the relatively small collection from this site not all the designs from the school are represented (about 19 of the 48). Interestingly another collection of tiles similar to those in the Singing School has recently been discovered at Netherwood, Thornbury, and this collection appears to carry a different selection of the published group. The Singing School collection has a documented date of 1370 so the excavated sample probably lies around this date. However, further research needs to be done on dating of tile collections generally to determine whether it is earlier or later.

There are a number of letter tiles, both two coloured and deeply stamped relief impressed tiles in yellow. These designs occur in two sizes. The more common tiles are letters which stamped diagonally would occur four to a 120mm^2 tile. One complete tile occurs with the four letters, and the others occur individually, having been cut down from square tiles or 60mm x 120mm rectangular tiles. This style of tile (but not all the letters themselves) have been paralleled at Bordesley Abbey and Fladbury Church; Lewis suggests that the letter tiles at Fladbury once made up an inscription dateable to 1371. The other size of letter tiles (ie 9 letters to a 120mm^2 tile) are rarer, and have only been parallelled in a single tile in Claines church and on one tile from the Deansway excavations. The Claines church collection (which has been remounted on the wall in the north porch) dates to the 15th century, but the letter tile does not appear to be

typical of the rest.

The number tile (fig 2) is so far unique and is particularly unusual in that it bears arabic numerals. This is the first representation of arabic numerals to be discovered on a design of a medieval floor tile. Arabic numerals start to appear in English religious books in the 12th century, but were not widely in use in this country until the 16th century. This may explain why the numbers have been transcribed in the wrong order, and with the "5" inverted. It also reinforces the belief that some designs for tiles were taken from religious drawings and other documents that no longer survive. This tile is also of slightly different manufacture to the other tiles, being roughly the same size, but thinner, and with flat not bevelled edges. However, it probably dates from the late 13th - 14th century.

Figure 2 Number tile (Scale 1:2)

There are also several other floor tiles, one of a 16 tile design not yet identified, that are of design styles usually attributed to the 15th century.

Worcester is known from documentary sources to have had a flourishing tile-making industry throughout the medieval period. Previously, apart from one documentary reference (Pat Hughes pers comm) of a will stating that a tiler bequeathed floor tiles blocks, there has been no evidence that decorated floor tiles were made in Worcester (although distribution patterns seemed to suggest this very strongly). The finding of decorated floor tiles with roof tile wasters suggesting the making of both in one kiln has been paralleled elsewhere, for example in Danbury (Eames 1985). But the making of decorated floor tiles must have been a particularly skilled process that would not necessarily have occurred in all tile kilns.

There has been much discussion about whether tiles were made in one place and then exported or whether there are migrant tilers who made tiles where they were required, or indeed whether there is a combination of both practises. The collection of tiles excavated here will fuel the debate, because some of the designs are paralleled in the collection of tiles (in Worcester Museum) that reputedly came from the floor tile kiln discovered at St Mary Witton,

Droitwich in the 19th century. Interestingly many of the designs are also repeated in the collection of earlier floor tiles from Great Malvern Priory, an area which has also produced evidence for floor tile kilns. There was a strong ceramic industry in the Malvern area in the medieval and early post medieval period. If floor tile blocks, particularly of the earlier period, are freely travelling around the county, it suggests that there were much closer links between the industries of Worcester and Malvern than has previously been thought.

Conclusions

The evaluation at Silver Street has clearly demonstrated the presence of a medieval tile industry including a particularly important group of decorated floor tile wasters. A tile-built cellar of the early or mid 17th century was also found, indicating the volume of roof tiles available on the site.

The 15th century tilehouse "opposite St Martin's Gate" referred to above (Carver 1980a, 285), may well be located within the evaluation area, and may have been producing both floor and roof tiles. Evidence for a 16th-17th century brick kiln further south on Silver Street (Carver 1980a, 286), may be represented by brick wasters used in the lining of a well. The large pits, apparently cutting into a clay soil in trench 3 may represent some of the 15th-17th century clay pits reported to have been excavated in "Losemore" (Carver 1980b, 258).

Eighteen sherds of Roman pottery and 64 pieces of iron smelting slag, which is a characteristic component of Roman deposits, in particular Roman roads in Worcester were found in later features close to the postulated line of the Roman road to Droitwich. In addition to this, earlier medieval industrial activity was identified close to Silver Street including a clay lined pit, possibly acting as a container for liquid.

A 17th century bell foundry established by a John Martin is recorded on Silver Street "on a site still known as Bellfounder's Yard" (Walters 1930, 34), located within the evaluation area. John Martin was one of the most prolific of local bell founders. In the known years of his career (1644-1693) he producing around 170 bells, including 94 (70%) of the 135 bells known to have been produced for churches in Worcestershire. These include three of the present bells of St Swithin's and two of those of St Peter's. Small quantities of slags and bell-mould fragments from this foundry were recovered.

A full report on this site is to be published in *Trans Worcestershire Archaeol Soc.*

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The late medieval tiling industry in Worcestershire - some documentary evidence

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Hilary A White, Archaeology Section, Hereford and Worcester County Council

As part of a wider study of medieval floor tiles in the county of Hereford and Worcester, a number of documentary references to tiling, either unpublished or not analysed, have come to light. Tile study is still very much in its infancy in most areas (if born at all) and is still normally done on a find spot, or site by site analysis. This means that if the evidence is not treated with sufficient caution, our view of the tiling industry of a region can be severely distorted. These, quite diverse, documentary references relating to the old county of Worcester, are offered here in an attempt to balance the picture. Derek Hurst (Hurst 1990) has already identified some earlier references to possible tilers in his search for potters. These indicate the broad base to the industry, but this has in no way been linked to the excavated material as yet.

Documentary references will in the main reflect two areas: the production of the tiles themselves, and the accounts relating to their purchase. They will, due to the poor survival of earlier documents, inevitably concentrate on predominantly late, less common tiles, for instance floor tiles (that would probably have been made on commission) are less likely to appear. In addition purchase documents will normally only reflect the higher status buildings, whose documents survive. This immediately excludes all parish church evidence before the mid 15th century and all the earlier evidence for the abbeys and priories whose records have in the main been totally destroyed. Many private properties such as manor houses will equally not be represented.

Apart from the already published reference (Keen 1978) to the laying of the floor of the Worcester Cathedral Singing School in 1377, which does not refer to the original provenance of the tiles, but which does lay down an important marker date for other comparative tile collections in the West Midlands, there is one other reference (Burton 1883) to floor tiles, for the tiles at Bewdley chapel and this interestingly gives the original provenance of the tiles as well.

The Chapel at Bewdley in north Worcestershire is known from documentary sources to have lain in Load St. It was a timber framed building that was pulled down and replaced in 1745. There are church wardens accounts covering the chapel for a number of years in the 16th century. The accounts for the year 1592 record the expenditure of £28.8/- on "tiles for paving the chapel" and 14/- paid "for the carriage of 4000 tile from Bristol". Basic mathematics show that the tiles at source were costing slightly under 1 penny three farthings each, compared with for instance "crestes" at a similar period (see below) costing 1 penny each. This would seem to indicate that the tiles were expensive and therefore likely to be decorative. Ironically Bewdley Chapel is one of the sites in the county that has not produced floor tiles, although the British Museum catalogue (Eames 1980) does refer to tiles from Bewdley Abbey (a non existent building). It is worth noting that the "paving which the reformadoes (Parliamentarians who had occupied the town) broke up" had to be repaired in 1643-5 and this raises the issue of what about this particular floor attracted their interest.

The statement that the tiles were transported from Bristol is also of extreme interest. Tiles of the "Malvernian" school, ie the predominant later floor tiles from (southern) Worcestershire are reported from all down the Severn and into south Wales, as well as into Staffordshire and Nottinghamshire, but no clear evidence of where the tilers were based has emerged. Bewdley, heavily financially dependent on its river borne trade traditionally had very good relations with the port and merchants of Bristol, possibly refelecting its poor relations with the port of Worcester with whom it was regarded as being in economic competition. Later accounts from the chapel show that as late as 1637, Richard Vickris, merchant and then chief sheriffe of the city of Bristol, made a donation of "a green cushion" to the chapel at Bewdley. Unfortunately the church wardens' accounts do not state whom the floor tiles were bought from and therefore we cannot tell whether the tiles are new and direct from a tiler, or whether they have been removed from an earlier building, possibly one of the by then defunct religious houses of that city. Most religious houses passed into private ownership after the dissolution and it is well recognised that they could then be stripped of reusable building material, as for example the hospital of St Oswald at Worcester (Edwards 1990). The good relations between Bewdley and key Bristol merchants may have made the aquisition of reused tiles from Bristol easier than those from Worcester and presumably the transport costs as a percentage of the total cost would not have been significantly larger, because in the absence of tiles manufactured in Bewdley any tiles would have had to be transhipped upriver from elsewhere.

Another building for which there are comprehensive building records in the 16th century is St Katherine's Hospital, Ledbury, Herefordshire (Morgan 1953). This was a group of almshouses founded in 1232 by the then Bishop of Hereford, Hugh Foliot. In 1581 there was an issue of new statutes regulating the hospital, shortly followed by a rebuilding programme. The statutes state that the master should be a canon residentiary, that he should enjoy the mansion house and the demesne, but that he should be responsible for this house, the houses of the brethren and the demesne, rendering an annual account to the Dean and Chapter of Hereford. Accounts survive for 1584-95 and cover this major period of rebuilding of the house, chapel and a number of other buildings. A number of medieval floor tiles still survive in the chapel of the hospital, but again unfortunately do not appear in the accounts for this period.

It appears on analysis of the accounts, that much of the paving and the roof tiles are of stone, much of it derived from hospital quarries in "Teddiswood". Unfortunately while stone paving and roof tiles are provenanced to the people who they are bought from (or indeed who work

them in the quarry), the brick and tile are costed with no reference to the source of purchase. And in addition there are no recorded transport costs either. There are a number of references to the buying of brick and "crestes" as they are needed. Crestes costing a penny a piece are bought singly or in small groups as they are needed. Bricks, which appear to be used only for lining ovens or "the furnace" are bought by the hundred at slightly over a shilling the hundred.

The item that stands out as being particularly noteworthy is for the 17th September 1587 " to Grundie [one of the "masons" but in fact a multi-skilled worker] for going to Hanley to bargayne for bricke and for half a days work 7d". The parish of Hanley Castle lies about 8 miles away but on the other side of the Malvern Hills to Ledbury. This would obviously have serious implications for the transport of heavy items like brick and tile. Work by Derek Hurst is increasingly showing that there was a tiling industry here in the late medieval/early post medieval period as well as the more recognised pottery industry. It has been recognised that the easiest form of distribution of these goods would be along the River Severn, which lies on the east side of the parish, but obviously in the absence of suitable supplies of alternativre goods, they are also being transferred by road to Herefordshire.

Documents that identify tile houses are not common. One obvious example identified is that at Bordesley Abbey, more fully discussed elsewhere (Rahtz and Hirst 1976) and a wider search of documents might well prove fruitful, particularly if then coupled with additional fieldwork as suggested by Hurst (1990). One potentially short route to discovering new evidence was the simple process of examining surviving wills of tilers. This proved to be the case for Worcestershire. Thanks are due to David Guyatt who transcribed the wills in question.

There were five wills of tilers for the old historic county. One, that of John Palmer, "tyler", of Stoke Prior for 1584 contained no useful details. But the other four turned up a number of details. Two wills related to Worcester or its immediate environs. That of Henry Marson "of Claynes" in 1584 and that of John Marson (almost certainly one of his sons referred to in the will above) "of St Martins, Tylemaker" in 1608. Pat Hughes (pers comm) who has been undertaking a documentary study of properties in Worcester thinks that they owned land immediately north of the city near the old nunnery of Whiteladies, which therefore lay in the parish of Claines. It is noteworthy that this is possibly one of the areas identified by Hurst (as Whitestones) as being linked to earlier tiling. No kiln site has been discovered in this area. It has been suggested that one tile fragment recovered from excavations on the nunnery site was possible a waster (although personally I think this is dubious). It was examined by the British Museum (Tim Bridges pers comm) and is supposed to be of the same fabric as the tiles from Canynges House, Bristol. It has been suggested (White 1990) that the large number of different style and date tiles (although none of them are wasters) coming from the relatively small trenches on the site of St Oswald's Hospital, immediately to the south of the nunnery, may not be derived from the hospital alone and the claims that there is a kiln in this area should be taken seriously.

Henry's will records in the inventory for the warehouse:

56 pavement mouldes	6/8d
3 dressinge formes and a bewell	10d

John's will, which incidentally shows him to be substantially well off, refers among other

things to a kiln:

13 planks which cover the bricke oven. All the bricke and tyle in the Bricke oven and all the rest of the Tyles Bricke Quarrells Crests Guttertyles and all the broken and raw stuffe about the house £20

All the boards joistes plankes and all the wood and other implements in and about the backe syde £5

It appears likely from the above that before his death Henry had already passed his tiling works on and therefore little manufacturing equipment is recorded in his will. This makes it especially interesting that floor tile blocks are recorded in his will as being stored in his warehouse. It would seem to indicate they may have been obsolete by this stage, although they obviously still have a value. It is worth noting that there are 56 of them. There are very few surviving single phase collections in Worcestershire. Worcester Cathedral Singing School a complete floor already cited has 43 from the primary collection. A number of other churches in the area, including Warndon and Cotheridge have respectively a few over and a few under 50 designs. Presumably this number gives adequate design diversity, without creating unneccessary costs of providing additional blocks. In addition if the tilers were to travel on commission to make tiles they would not want to carry round unnecessarily large amounts of equipment.

John's will does not give a value for the tile house itself, which may indicate that along with the rest of his property it is leased.

In addition there are two wills of tilers resident in Yardley, previously in the county of Worcester, but now subsumed under the city of Birmingham. The earliest is that of Thomas Walton, als Callow dated 1554. In addition to stock that indicates that he was engaged in agriculture there are more extensive references to the kilns etc:

At Nether Tylehouse

ward (wood?) and yddes (?) by estymacon	50/-
Tile ealed 4000 and half	33/4
Tile and bricke not ealed by estymacon 3000	6/-
Crestes 2 dozen and gutt 2 dozen ealed	3/-

At the over tyle house

Wood by estymacon	26/8d
tile in the oven not ealled 5000	
5500 of bricke and 12 dozen gutt	
5 dozen quarels 4 dozen crests	18/-
Tyle in the house not ealled 2000	
and gutt 10 dozen	5/8d

The will of Thomas Wayte, Tylemaker dated 1574, shows a man not quite so wealthy, although he also was engaged in farming in a small way as well. It is also stated that he leases

or rents his tylehouse rather than owns it outright.

> The commodities of my tylehouse during those years which I have [been] in it shall remayne to Letyce my wife and my two children.

The inventory includes

raw bricke and tyle	36/-
In wood and kyddes (?)	
5 dozen rawe gutt	
4 dozen of rawe crestes	
etc etc	£5

These two men do not appear to be related and it is not impossible that the kilns could have been operating at the same time. It appears that we have indications of previously unrecognised but significant local industry here. The will of Wayte (unless of course his industrial assets had already passed to his family) would seem to indicate a business that operated on a low level and appears to provide inadequate full time support for the family, perhaps reflected by the tile house being leased. The Walton business seems to be much better established with substantial assets and two tilehouses.

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Recent Discoveries of Medieval Seal-Matrices in Warwickshire

Philip J Wise, Warwickshire Museum

Among the more common classes of artefact brought into the Warwickshire Museum as enquiries are medieval seal-matrices. This year five specimens have been seen, one being of such historical importance that it was subsequently acquired for the museum collections.

1 Long Compton (SP 2833)

Pyramid type, triple neck roll on hexagonal stem, trilobe terminal with circular piercing (partially missing). No legend. Design of a central shield containing the Virgin and Child set against a cross-hatched background dotted with flowers; the central shield is surrounded by an architectural frame of tracery within an outer beaded ring. 14th century. Diameter of face 28mm, height 31mm.

The design of this matrix would suggest ownership by a religious house, but unfortunately it is not possible to identify an appropriate foundation in the Long Compton area.

2 Warwick Castle Park (SP 2863)

Pyramid type, hexagonal stem, loop terminal (broken). Legend reads "SOHOV-O---". Design of a hare riding on a lion or a dog and blowing a horn. 14th century. Diameter of face 16mm, height 17mm.

This seal was unfortunately in poor condition, the design being very difficult to decipher. "SOHOV" is a medieval hunting-cry. A similar example from London has "SOHOV ROBIN" while the British Museum has four other hare-huntsman seals with cries beginning "SOHOV" (Spencer 1984).

3 Studley (SP 0763)

"Pointed oval" type, unpierced tab at the upper point, reverse divided by a longitudinal ridge into two sloping faces, cast in lead. Legend reads "SIGILL:WILL:CLAR" (William Clare) and follows a cross pattee initial mark. Design of a (?) bird. 13th century. Length 38mm by width 19mm, thickness 4mm.

4 Studley (SP 0763)

"Pointed oval" type, unpierced tab at the upper point, flat reverse, cast in lead. Legend reads "SIGIL(L):RO(?)ISE" (Roise may be a woman's name) and follows a cross pattee initial mark. Design of a fleur de lis. 13th century. Length 32mm by width 18mm, thickness 3mm.

The lis design is one of the two main motifs on seals of this date, being equally popular among men and women (Rigold 1977).

5 Bidford-on-Avon (SP 1052)

"Pointed oval" type, reverse with a central longitudinal rib which incorporates a perforated lug near the upper point, cast in copper alloy. Legend in Lombardic lettering reads "S/IOHIS:D'ABETOT:" (seal of John d'Abetot) following a cross pattee initial mark. Design of a lion rampant. 1250-1350. Length 29mm by width 19.5 mm, thickness 8mm. (Warwickshire Museum A 7158).

This seal is in exceptionally good condition and is notable for its fine engraving, with considerable details of the lion, such as the claws and mane, being shown. The lion may have appeared in an early form of the arms of d'Abetot, although by the late medieval period these are recorded as "Ermine a chief bendy or and sable" (*VCH Worcs III*, 187). Alternatively the lion may have been adopted by John d'Abetot because of its association with the concept of strength or role as a sign of the zodiac. In this case the seal may have been mass produced, with the lion and cross mark combination as one of a standard series of seals. The owner's name was left blank and could be added later.

The d'Abetot family were predominately a Worcestershire family, although with Warwickshire connections. In the late 11th century the family held land in Acton Beauchamp (near Bromyard) and elsewhere in Worcestershire as well as in Warwickshire at Hillborough (near Bidford) and Binton (near Welford-on-Avon) (*VCH Worcs IV*, 225 and *VCH Warwks III*, 116). There are at least two individuals with the name John d'Abetot in the 13th century. John 1 died in c.1230 and is probably rather too early to have been the owner of the seal (*VCH Worcs III*, 398). John 2 appears in documentary sources from 1254 to 1265 and may be the same John referred to in a document of 1280. John 2 first appears in 1254 in a court case at Worcester where he was charged, but subsequently acquitted, of keeping a girl at his house at Harvington, near Evesham, against her will (*VCH Worcs III*, 389). In 1257-8 he is recorded as holding land at Weethley, near Alcester, while in 1262 he was fined at Worcester for enclosing part of the forest of Feckenham (*VCH Warwks III*, 187 and *VCH Worcs II*, 316). In 1265 he held lands in Severnstoke, south of Worcester (*VCH Worcs III*, 270).

Acknowledgments

The writer is very grateful to Wilfred Seaby (Warwickshire Museum), John Cherry (British Museum) and Mark Booth (Warwickshire County Record Office) for their help in the preparation of this note.

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VCH Warwks *Victoria County History of Warwickshire*, **III**

VCH Worcs *Victoria County History of Warwickshire*, **II-IV**

The Warwickshire Stone Axe survey - recent work

Philip J Wise, Warwickshire Museum

Since the publication of Stone Axe Studies II in 1988 a further sixteen implements have been recorded from Warwickshire. A few were found in the course of archaeological excavations, rather more were collected during fieldwalking by amateur archaeologists and several were chance finds by members of the public. Almost all have been recorded at the Warwickshire Museum and the details, including measured drawings, sent to the central archive of the CBA Implement Petrology Committee.

The late Professor Shotton writing in 1988, and reviewing the results of over forty years research, considered that ground stone implements of all types were rare in the West Midlands. Among the five counties the density was lowest in Warwickshire where there was one implement for every 33km^2. He argued that this scarcity was "related to a thinly scattered prehistoric population, concentrated in the main along the river valleys, whose terraces give well drained, sandy soils and good water supply (Shotton 1988, 50). The latest discoveries represent an increase of 20% in the total number of all specimens recorded, with a relatively larger increase in flint axes of 33% compared to axes and perforated implements, both up by 20%. Shotton's suggestion of riverine settlement is supported by finds from the Avon valley at Charlecote and Wasperton, the Anker valley at Burton Hastings, and close to the River Cole at Coleshill, the River Itchen at Long Itchington and a tributary of the River Tame at Nether Whitacre.

The petrology of the recent finds reflects the previous picture of Groups VI and VII being the two most common varieties in Warwickshire (Shotton 1988, 49). The new specimens include three Group VI Langdale axes, plus a further example from Burton Hastings in a tuff comparable with Westmorland Slate, and two group Group VII Graig Lwyd axes. The quartzite pebble-hammer from Baxterley joins a small group of five previously recorded from the county. Quartzite pebbles are readily available in the West Midlands, occurring not only in Triassic Bunter pebble beds, but also in the Pleistocene gravels. A carefully chosen pebble would require only to be perforated, admittedly a lengthy process, to become a usable implement (Shotton 1988, 51). Most unusual is the gneiss pebble-hammer from Nether Whitacre (fig 3). Gneiss is extremely rare among the rock types used for the manufacture of stone implements. The list of identifications in Stone Axe Studies II contains only three

specimens - two Class I axe-hammers from Craigie (Ayrshire 29) and Bishops Burn (Wigtonshire 152) and an axe from Harlington (London 127), this last being described as gneiss or hornblende granite. The source of the gneiss is almost certainly a glacial erratic and this supports the assertion made by Clough (1988, 6) and Shotton (1988, 51) that random exploitation of glacially distributed rocks occurred in the West Midlands. Opportunistic collection may also account for the micaceous sandstone used to fashion the Coleshill adze. This sandstone may be derived from Carboniferous rocks found in the local glacial drift (Rob Ixer, pers comm). The four flint axes reaffirm the relative abundance of this material in Warwickshire, compared to the more westerly Shropshire or Herefordshire (Shotton 1988, 51).

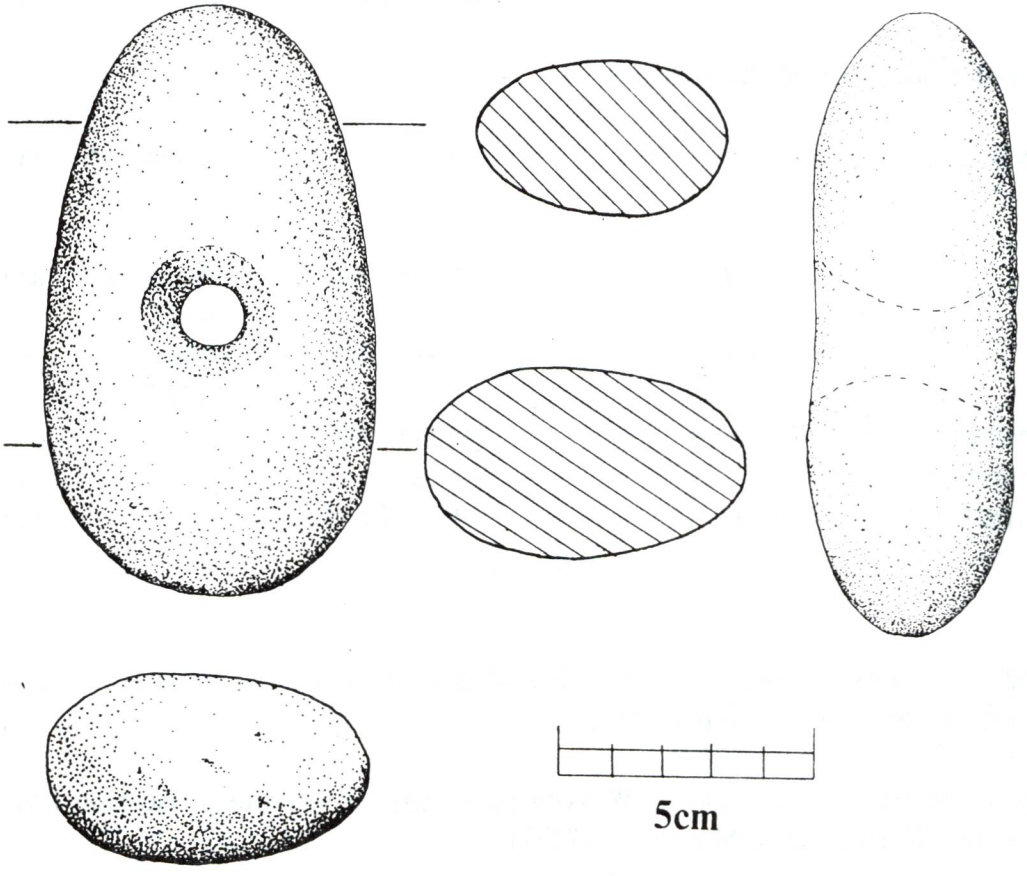

Figure 3 Pebble hammer from Nether Whitacre (drawn by Emma Bond)

Warwickshire axes

Implement	Locality	NGR	Accession	Petrology
axe	Charlecote	SP 2653 5594	pp	VII
axe	Berkswell	SP 243 791	pp	VI *1
axe	Maxstoke	SP 241 865	pp	unknown *2
axe	Burton Hastings	SP 4230 8830	pp	tuff
axe	Long Itchington	SP 3972 6465	Warwick A1141	VI
axe	Ratley	SP 382 475	Warwick A1721	VII
axe	Wasperton	SP 265 585	Warwick	VI

Warwickshire flint axes

Implement	Locality	NGR	Accession	Petrology
axe	Leamington	SP 310 662	Warwick A7250	flint
axe	Charlecote	SP 2709 5626	pp	flint
axe	Burton Hastings	SP 4235 8850	Warwick A7376	flint/ chert
axe	Bulkington	SP 4010 8770	pp	flint

Warwickshire perforated implements

Implement	Locality	N.G.R.	Accession	Petrology
adze	Coleshill	SP 195 906	Warwick A7251	sandstone
adze	Warwick	SP 313 627	Warwick A7249	dolerite
pebble-hammer	Nether Whitacre	SP 243 942	pp	gneiss
pebble-hammer	Baxterley	SP 28 97	pp	quartzite
adze, pt.perf	Copston Magna	SP 4515 8810	pp	granitic

Notes

1 Starred specimens recorded by Mr Philip Watson at Birmingham Museum to whom I am grateful for the details of these two axes.

2 Axe Wa 34c from Abbey Farm, Wolvey previously in private possession has now been donated to the Warwickshire Museum (A7377).

Acknowledgments

I am very grateful to the following for advice and assistance during my work on the Warwickshire Stone Axe Survey: Wilfred Seaby (Warwickshire Museum), John Crossling (Warwickshire Museum), Fiona Roe and THMcK Clough (Rutland County Museum). Thin sections of several implements have been taken at the School of Earth Sciences, University of Birmingham by Russell Coope and Rob Ixer. R Waite and C Welch kindly allowed me access to their collections.

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HEREFORD AND WORCESTER

The Herefordshire Valleys Survey

Work continued on the Herefordshire Valleys Survey through the year, with a draft report completed at the end of 1990. Publication will take a number of forms. A paper given at the *Archaeology Under Alluvium* conference in January 1991 summarised some of the results of this survey, as well as of Rebecca Roseff's research into the alluviation of the Lugg valley (Dinn and Roseff, forthcoming). The full project report is to be published as one of Hereford and Worcester County Council Archaeology Section's report series (Dinn, forthcoming). The conclusions of the report will form part of briefs for further work on threatened sites in the valley bottoms, and have already formed the basis for proposed changes to the County Minerals Local Plan. This will allow for more effective safeguarding of archaeological sites and deposits in these areas.

Fieldwork was concentrated in two valleys, the Frome and Lugg, both of them tributaries of the Wye. Cross-valley auger transects helped to define a topographical background into which sites identified from cropmarks, finds scatters and geophysical survey, as well as from augering, could be placed. Sites included a ditched enclosure at Castle Frome (Roman, but probably with an origin in the Iron Age), and enclosures at Kingsland, as well as deposits associated with the Roman settlement at Stretton Grandison (*West Midlands Archaeol* **32**, 31).

Dinn, J L, forthcoming *The Herefordshire valleys: an assessment of survey techniques and archaeological potential*, HWCC Archaeology Section report, Worcester

Dinn, J L, and Roseff, R, forthcoming Alluvium and archaeology in the Herefordshire valleys, in *Archaeology under alluvium* (eds S Needham and M Macklin)

James Dinn, Archaeology Section, Hereford and Worcester County Council

Aylton, Aylton Church, HWCM 6839 (SO 65843765)

A watching brief was carried out during excavation of trenches in advance of underpinning of wall foundations. No finds were recovered, but a record of medieval foundation design was made which indicated three phases of foundation construction.

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

Badsey near Evesham (SP O743)

B A Harris of West Heath, Birmingham, using a metal detector unearthed an Anglo-Saxon sceat here in November. It is *BMC* type 2(b), Rigold class C, having a debased radiate bust on one side with ERA in runes before the face. The reverse has a standard with TOT on it, again debased in form.

Keary, C F, 1887 *Catalogue of Anglo-Saxon Coins in the British Museum* **1**, 5

Rigold S E 1977 The Principal Series of

English Sceattas *British Numismatic Journal* **47**, 27

W A Seaby, Warwickshire Museum

Broadway, Abbot's Grange, HWCM 1292 (SP 09353745)

An evaluation was undertaken at Abbot's Grange, Broadway, prior to submission of a planning application for extension of the existing buildings. The grange now consists of a 14th century hall with adjacent chamber and a tiny oratory, to which two early 20th century wings have been added. Earthworks in the gardens surrounding the house and the field to the west suggested that extensive deposits relating to the medieval grange still survives. Geophysical survey was carried out, followed by excavation which revealed significant archaeological deposits close to the present ground surface in two of the seven trenches excavated. These consisted of substantial stone wall foundations and some associated stone-paved surfaces, all of probable medieval date. One of the walls excavated can be identified as belonging to a former building, perhaps the original grange kitchen, which is visible in an 18th century drawing.

Edwards, R E, and Woodiwiss, S G, 1990 *Evaluation at Abbot's Grange, Broadway, HWCM 1292* HWCC Report 40

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Brockhampton-by-Ross, Holy Trinity Church (SO 597317)

Although still not de-consecrated, Holy Trinity Church has been abandoned since the early 20th century and is now a roofless shell. Following the fall of a section of the inner face of the nave wall, English Heritage funded a small scale survey of the adjacent portions of the wall to provide a detailed record in case of further collapse. The work demonstrated that the nave and chancel, hitherto considered to be of one build, are in fact of separate dates. It also showed that the early 15th century nave windows, used as dating evidence for the church, are inserted. Despite the very limited nature of the project, it is now clear that Holy Trinity is a much more complex, and older, structure than had previously been thought.

Richard K Morriss, City of Hereford Archaeology Unit

Bromsgrove, local plan survey

Bromsgrove District Council commissioned the Archaeology Section of Hereford and Worcester County Council to develop a series of archaeological policies for their local plan (Darlington and Woodiwiss 1991). The policies were based upon broad guidelines of the DoE's then draft planning policy guidance note 16, "Archaeology and Planning". In order to develop the policies a rapid assessment of the archaeological resource within the district was undertaken involving examination of the SMR, cartographic sources, listed building information, aerial photographs and historical sources, together with selective site visits.

The rapid assessment and in particular the examination of a collection of aerial photographs taken in 1989 revealed a total of 47 previously unrecorded sites. These included 10 groups of ring ditches, 13 enclosures and 2 buildings showing as cropmarks. Despite the fact that the aerial photographs were taken at a high altitude (1:8000) and at the wrong time of year the potential for the detection of further new

sites by aerial photography in the area is high.

The final stage of the project involved the designation of mapped zones of archaeological constraint, based upon the rapid assessment, which would provide the local authority planners with an early warning system when receiving applications for development within areas of potential archaeological sensitivity. In addition the project contributed a series of policies for inclusion into the Local Plan to ensure that archaeology becomes a material consideration within the planning process.

Darlington, J, and Woodiwiss, S G, 1991 *Archaeology and Planning in Bromsgrove District* HWCC Report 56

John Darlington, Stafford Borough Council

Bronsil Castle (SO 749372)

Bronsil Castle, near Ledbury was built by Richard Beachamp in the mid-15th century. Until recently, the only upstanding portion was one of the polygonal towers of the former gatehouse. This was beginning to show obvious signs of imminent collapse at the start of 1990 and in March shallow excavations were carried out in readiness for supporting scaffolding; no significant archaeological levels were encountered. A photographic record was made at the same time. Unfortunately, most of the tower fell into the moat before the scaffolding was completed. A detailed survey of the surviving masonry was undertaken and in the future it is hoped that some of the fallen stones will be retrieved from the moat.

Richard K Morriss, City of Hereford Archaeology Unit

Childswickham, Romano-British Brooch (SP 0738)

A very rare "Spoked Disc Brooch" has been found at Childswickham, near Broadway by R Evans (fig 4). The brooch appears to consist of two pieces - a combined spindle and wheel and a back plate. The central spindle is ornamented with a boss, while the wheel has five spokes of claw form. The front of the brooch has traces of gilding while the rear of the back plate is silvered, now largely black. The brooch originally would have had a hinged pin. It has a diameter of 28mm and is a native British design of the 2nd century AD.

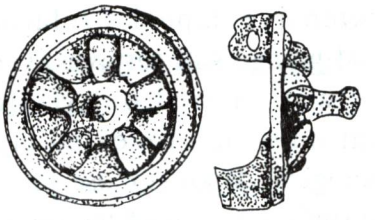


Figure 4 "Spoked Disc" brooch (Scale 1:1)

Philip J Wise, Warwickshire Museum

Cleeve Prior, Romano-British Brooches (SP 0747 and SP 0849)

Metal detector surveys during 1990 by R J Laight, L Phillips and B Wright across two sites on Cleeve Hill have produced a total of 54 brooches, including several unusual examples. At Cleeve Prior New Site 45 brooches have been recovered, of which 19 are of Polden Hill type, with the remainder represented by nine types - Dolphin (3), Aucissa (1), Trumpet (9), Headstud (2), Hod Hill (3), Langton Down (3), Colchester (2), Thistle (1), Bow-and-Fantail (1) - and a single unclassified miniature brooch. Especially interesting are an early Hod Hill (Collingwood Group L), which has been tinned, an unusual Trumpet-Head variant (Collingwood Group

Sii) which has a bow decorated with a pelta-shaped plate and a miniature brooch, with a Polden Hill spring gear, which was perhaps for a child's toy doll.

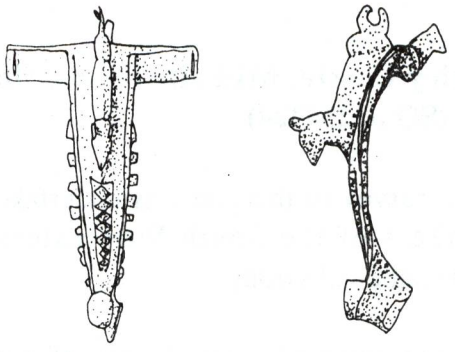


Figure 5 "Sawfish" type brooch (Scale 1:1)

From Cleeve Prior Old Site, among a small collection of nine of the standard 1st-2nd century brooch types, is a notable T-shape brooch of mature "Sawfish" type (fig 5). The brooch has an overall length of 46mm. The bow is decorated with a crest in the form of a crouching animal, usually taken to be a dog. The modelling is of some skill and the snout, ears, a possible collar around the neck, hind quarters and tail are shown. The lower part of the bow is decorated with a conventional lozenge pattern with traces of yellow or green enamel surviving in four cells. The entire brooch was once silvered (or tinned) and this coating has survived in good condition. The brooch is dated to the late 1st - early 2nd century and is a good example of a rare, but widespread brooch.

Collingwood, R G, and Richmond, I, 1969 *The Archaeology of Roman Britain* 293, 298

Philip J Wise, Warwickshire Museum

Cleeve Prior, Roman sites (SP 0849 and 0850)

Three Celtic coins have turned up among a quantity of Roman material at these relatively newly recorded sites, metal detected by Laight and Phillips. Two are billon units or quarter staters of Van Arsdell 1042-1 and 1135-1 class. The third is a cast bronze piece of "Thurrock hoard type", dating perhaps as early as 100-90 BC. and shows on the obverse degraded head of Apollo left, apparently wearing a helmet and on the reverse a bull charging right. It is believed these coins may be the first series produced by the Trinovantes/Catuvellauni and have been found mostly in the Counties of Kent and Essex and a few in the Thames. Thus this piece is likely to be a stray and probably the furthest west of any yet recorded.

Van Arsdell, R D, 1989 *Celtic Coinage of Britain*

W A Seaby Warwickshire Museum

Droitwich urban appraisal

A synthesis of the archaeological and historical evidence for the town was undertaken with the support of English Heritage. The aims of the project were:

a) to locate and define the character, quality, and quantity of archaeological deposits
b) to develop appraisal criteria
c) to establish archaeological research aims

Data collection on each site was based on the County SMR, and this information was transferred into dBase, and then upgraded for the appraisal analysis. Data were presented graphically in AutoCAD (computer aided design) format using a digitised base map. This study forms part of the development stage of a computerised system for interrelating map and SMR-type data. Additional contour modelling and perspectives, as sections will be generated using digital ground modelling software.

J D Hurst, Archaeology Section, Hereford and Worcester County Council

Eardisland, Court House Farm, HWCM 1683 (SO 420586)

Eardisland Castle, a Norman motte 45m in diameter and just under 5m in height, surrounded by a moat, is situated close by the parish church of St Mary in the village of Eardisland. There are today no clear indications of a bailey, but the location of a former causeway across the moat and other topographic features suggested that the site of the bailey, if such ever existed, was most likely to lie within the farmyard of Court House Farm. Proposals for a housing development within this farmyard prompted an archaeological evaluation. Five trial trenches were excavated, but the results were largely negative. Only two of the trenches revealed features of potential archaeological significance, and no features or finds which could definitely be attributed to a bailey were located, although the frequently ephemeral nature of such features and the limited scope of the evaluation should be borne in mind.

Buteux, S, 1990 *Court House Farm, Eardisland: An Archaeological Evaluation* BUFAU

Simon Buteux, Birmingham University Field Archaeology Unit

Goodrich Castle (SO 577200)

The City of Hereford Unit's long term survey work at Goodrich Castle continued in 1990 and included a detailed survey of a portion of the Keep and a re-assessment of its structural development. A new analytical survey of the Great Hall, based mainly on a photogrammetric survey, was also undertaken and reconstruction drawings prepared.

Richard K Morriss, City of Hereford Archaeology Unit

Hanley Castle, Mill site near Gilberts End (SO 83254224)

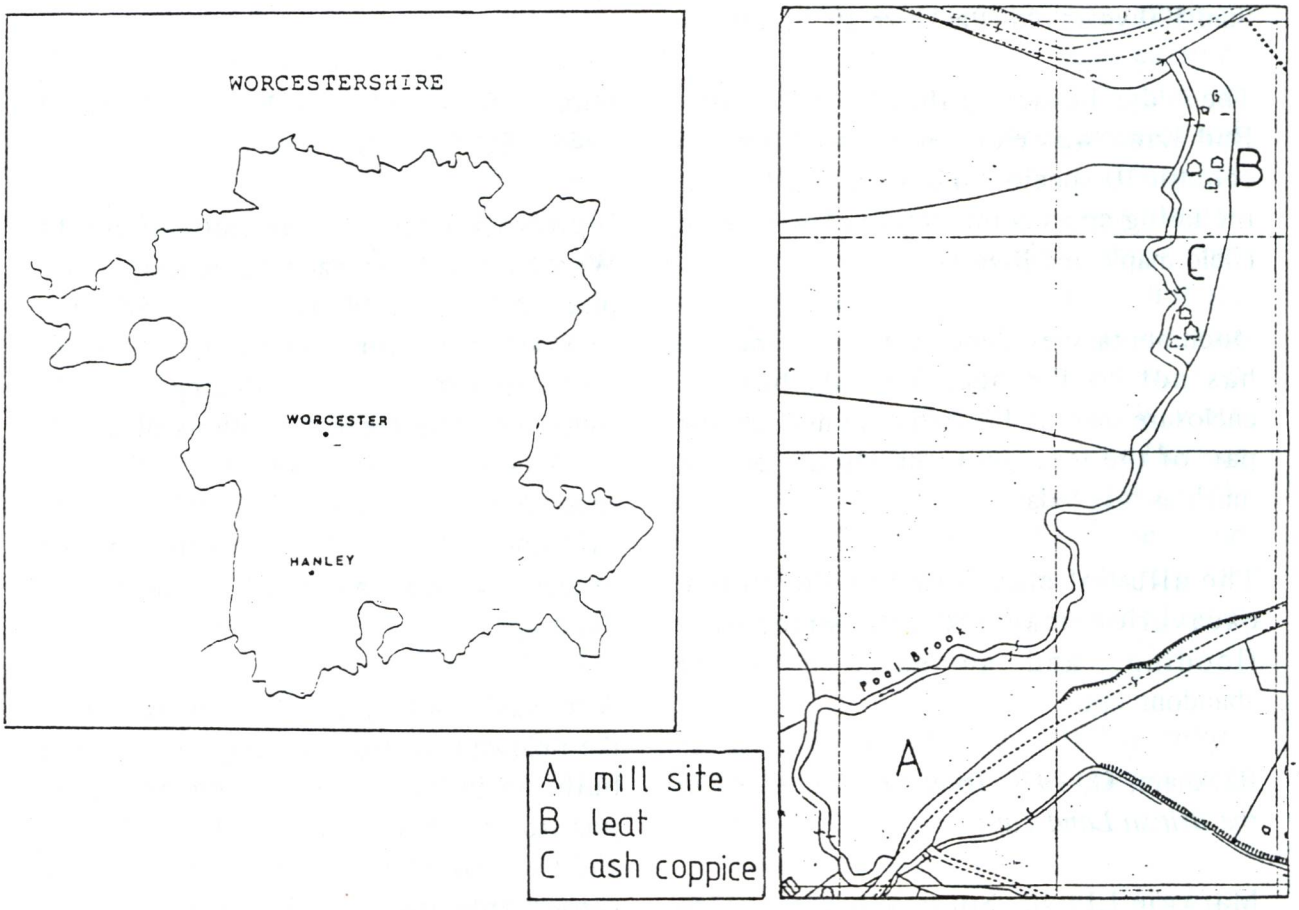
A full survey of this site was undertaken by members of the South Worcestershire Archaeological Group.

The site covered a small area of pasture between the Poolbrook stream and Gilberts End Lane. Upstream and north of the site the shallow and narrow remains of a leat are visible, issuing from the stream near the bridge at Roberts End street and continuing for about 180 metres, at which point it joins the stream. The presence of an old stream bed in the adjacent field to the west indicates that the modern stream course at this point follows the line of the mill leat.

At the eastern end of the site surveyed, the leat appeared to have flowed into an area rather lower than the rest; this had the appearance of a mill pond. The mill race continued through the site, reaching the stream at a point near the bridge. Resistivity survey showed the race to be up to 5m wide.

A trench was excavated across the mill race into the slightly raised area on the northern side. Three sherds of Malvern Chase ware cooking pot were found, and an extensive layer of grey alluvial clay.

Upstream, where the leat remains visible, an area of disused ash coppice filled the space between leat and stream. Clearly this had been an area inaccessible to browsing animals. The coppice stools measured between 0.9m and 1.2m across, perhaps indicating an age of 200 - 300 years. A few at the northern end were much greater,



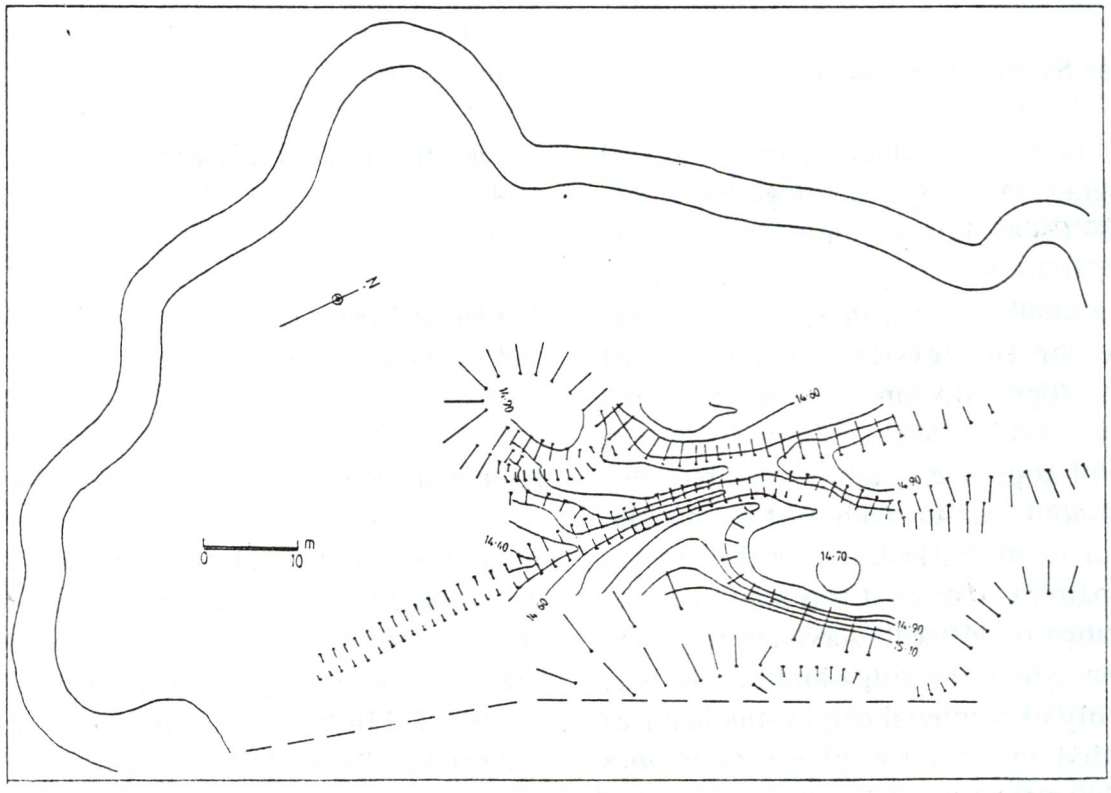


Figure 6 A mill site near Gilberts End

one being 4m by 2.7m and perhaps more than 500 years old (Rackham 1976, 29).

The hedge bordering the site and Gilbert End Lane was examined and found to contain 10 species in a 90 metre length, including species indicative of woodland (field maple and hazel).

Documentary evidence for use of the site has not so far been traced, but the enclosure map of 1797 shows only the first part of the leat, with the stream course much as it is today.

The alluvial clay found in the trench excavation may indicate successive flooding, and an early date for abandonment.

Rackham, O, 1976 *Trees and Woodland in the British Landscape*

Marjorie LLoyd, South Worcestershire Archaeological Group

Hanley Swan (SO 820426)

Cropmarks identified from an aerial photograph taken by Cambridge University in 1984 (CQG 42) were investigated during March 1991. Resistivity survey was carried out on 4000 m^2 area in association with Leicester University Department of Archaeology with support from the South Worcestershire Archaeology Group. A series of large linear features was recorded with a north-east to south-west orientation. This differed markedly from the present field pattern, though it was similar to the orientation of adjacent surviving ridge and furrow. Since the ridge and furrow was probably of medieval origin, the features recorded on the aerial photograph were probably also of this date.

J D Hurst, Archaeology Section, Hereford and Worcester County Council

Hanley Swan, Horton Manor, HWCM 10489 (SO 827428)

Fieldwalking, with the help of South Worcestershire Archaeology Group, took place in March 1990 over an area adjacent to Horton Manor farmhouse. A large spread of pottery sherds including some tile fragments with clear indications of use as kiln spacers, and some pottery wasters were recorded. A circuit of infilled clay pits surrounded this area. Investigation of one of these by augering showed it to be at least 3m deep.

A resistivity survey was also carried out on the fieldwalking area, locating the site of a building in the south-west corner. The position of this building, shown on the 1797 enclosure map, coincided with the densest area of pottery distribution. Some of the infilled clay pits also showed as areas of high resistance suggesting that they may have been deliberately infilled rather than naturally silting up.

Further fieldwork is intended in this area in 1991-2 funded as part of a Leverhulme research project.

J D Hurst, Archaeology Section, Hereford and Worcester County Council

Hereford Bypass (SO 479377-SO 505436)

An archaeological evaluation of the line of the proposed Hereford eastern bypass was commissioned by the Department of Transport as part of their evaluation of the route. Fieldwork included artefact collection, augering and trial trenching.

Little concrete evidence of prehistoric activity was revealed by the evaluation.

Finds of flintwork were made almost everywhere, but there were generally fewer than five finds per field. Two scatters were more substantial (HWCM 8465 and HWCM 6026). Of these HWCM 8465 produced large quantities of flints of probable Bronze Age date. Over 100 flakes were found during fieldwalking, as well as 14 flaked lumps, four blades, four small round scrapers, and two possible scrapers. There were no cores, and proportionally few blades were present. The assemblage from HWCM 6026 was smaller, and mostly neolithic in character, although there was some Bronze Age material here also. A single polished flint axe fragment was also recovered from this site; it had been broken and reworked into a tool. The source of the material for this axe may have been in Wiltshire. Both sites were examined by trial trench, but neither produced evidence of buried features.

Most of the fields walked produced some Roman pottery, though none of the scatters was dense or extensive enough to indicate the presence of settlement. Most of the Roman pottery was very abraded, and the largest assemblage, from HWCM 6026, consisted of no more than 60 sherds from an area of 1.6ha.

Finds of pottery and other materials from the medieval period were widely scattered, though in no case in sufficient quantities to suggest the presence of settlement rather than manuring of fields. A possible stone cannonball from HWCM 8619 may have been either medieval or post-medieval in date.

At Rotherwas, a deserted medieval village close to the route, part of which is scheduled, there are slight earthworks (HWCM 9438), and a pond (HWCM 9439), adjacent to the road line.

The pattern of land-use on the Lugg Meadows (HWCM 9216) is thought to have survived unchanged or little changed since the medieval period or perhaps earlier. Hampton Bishop contained 28 acres of meadow in Domesday Book, one of the largest areas in the county. It is hard to evaluate the significance of this area in archaeological terms, as this pattern is not reflected by physical features, but its survival as a pattern of land-use and landholding is of considerable interest. Two small areas of ridge and furrow were recorded in the eastern part of the Holmer section (HWCM 8531 and HWCM 8534). A more substantial survival may be found further west in Holmer parish, where many of the field boundaries preserve the layout of medieval strip-fields.

Dinn, J, and Hughes, J, 1990 *Hereford Bypass: archaeological evaluation* HWCC Report 45

James Dinn and Justin Hughes, Archaeology Section, Hereford and Worcester County Council

Hereford, 20 Church Street (SO 511398)

This building had been surveyed by the Hereford Unit in 1987. Further stripping-out work in 1990, in advance of renovation, meant that a resurvey and re-assessment of the fabric was needed. This was funded by the new owners, Elgar Estates of Hereford. Although now mainly encased in Georgian brick, 20 Church Street is one of the most important medieval buildings in the county.

It was built as a two storey, three bay timber-framed structure consisting of a first floor hall over a large ground floor chamber too tall to be a simple undercroft. Both chambers were heated by fireplaces in a large external stack in the south wall. The building was attached to another

timber-framed building, probably a service cross-wing, at its western end, but evidence of a matching wing to the east is lacking as most of the end frame has been removed. There are traces of an early timber-framed structure in the extruded angle between the site of the now missing west range and the north wall of the main building. This was probably an oriel containing the main stairs.

Much of the framework survives and the roof is almost intact. This is a rare example of a crown post roof in Herefordshire. The design of the roof combines the two basic regional types of bracing design. The intermediate trusses have curved up-braces rising from the crown posts to both collar purlin and rafter collars, typical of examples in the south-eastern half of Britain. However, the rafter collars in the two end trusses have no brace support and instead, straight down braces descend from crown post to tie-beam. This bracing pattern is more typical of the rare crown posts found in the north-western region of the country, including neighbouring Shropshire. Although the roof would have been open to the apex, its timbers are fairly plain. The main decoration is confined to a moulded fascia board that ran round the interior of the building at wall-plate height.

The original framing was of typical large medieval panels with semi-structural staves providing the support for the wattle and daub infill. Two doorways, of different sizes but both with ogee arched heads, survive on either side of a probable first floor cross-passage at the west of the main hall. The western bay is longer than the other two and it would have been fairly normal to have had a moveable screen between the passage and the main body of the hall. At the opposite end of the hall an ornate four-light window was exposed, each light having an ogee trefoiled head. A less ornate window lit the room below. The combination of ogee arches and crown post roof suggest a mid-14th century date for the building. Given its close proximity to the cathedral and the fact that it was owned by the Dean and Chapter until this century, it is likely to have been a canonical house.

Later alterations included the replacement of the original oriel with a later timber-framed stair tower, probably in the late 16th or early 17th centuries; the reconstruction of the east gable in brick in the 1720's; the refacing of the north wall nearly a century later; the partitioning of the interior and the creation of a loft in the roof space. For most people, its main claim to fame is that Elgar was a frequent visitor to the house when it was the home of cathedral organists and that he composed some of his Enigma Variations in a downstairs room. The plans for the building involve the stripping out of most of the later internal partitions so the scale of the important first floor hall will once again be visible.

Richard K Morriss, City of Hereford Archaeology Unit

Hereford, 20 Church Street gardens (SO 511398)

The development of 20 Church Street also involves the construction of a small office block in the gardens of the medieval house. Excavations were undertaken to assess the archaeological implications of the new building. Medieval walls, floors and destruction levels were apparent. Raft foundations were recommended, and have been incorporated into the building design. Further excavations will take place before the building work starts and a fuller interpretation of the site will then be possible.

Alan Thomas, City of Hereford Archaeology Unit

Hereford, 77 East Street (SO 512398)

East Street runs along the approximate northern line of the Saxon defences. 77 East Street is a small 18th century cottage which is due to be demolished to allow the construction of new buildings by the Cathedral School. Three trenches were excavated to establish the depth of significant archaeological levels in the development area. These were found at a depth of approximately 1.5m and were sealed by a thick layer of soil. This is associated with the gardens of 1 Castle Street, an imposing 18th century house to the south in whose curtilage No 77 was built. The plans for the new buildings have been modified to protect the important levels as far as practicable by the use of pile foundations.

Alan Thomas, City of Hereford Archaeology Unit

Hereford, 14 Greyfriars Avenue (SO 506396)

A small excavation was carried out to assess the archaeological implications of a proposed house extension. Archaeological levels were uncovered at about 0.6m below present ground level in an area believed to be within the area of the nave of the Church of the Franciscan Friary. Recommendations were made concerning the protection or excavation of these important remains.

Alan Thomas, City of Hereford Archaeology Unit

Hereford, 50A St Owen's Street (SO 514397)

This is one of several commercial properties in an unimportant looking range of buildings just within the site of St Owen's Gate. Attention was drawn to the survival of timber-framing in 1988 and the building was then listed. In 1990 work on the property led to Hereford City Council funding an outline survey of the building. This established that 50A was, in fact, just one part of a very large and high status timber-framed building, substantially intact. It was of two storeys, jettied, with dormered attics and stone-lined cellars, and had four bays with a total street frontage of 15m.

On each floor a principal two-bay room was flanked by single bay chambers. The rooms would have been lit by very large windows and the ovolo-moulded wall-plate surviving in an adjacent roof space, shows that a rear first floor window was full bay-width and of eight lights. The floors appear to have been reached by an extruding stair tower to the rear of the property, parts of the framing of which survives. Later alterations, re-fronting and property sub-divisions have obscured the true scale of this important building, the basic framework of which is intact. It probably dates to the late 16th or early 17th centuries.

Richard K Morriss, City of Hereford Archaeology Unit

Kidderminster, Callow Lane/Mill St, HWCM 9814 (SO 830767)

An evaluation was carried out on the corner of Callow Lane and Mill Street in advance of a planning application for the construction of a new doctors' surgery. The evaluation demonstrated the survival of late

medieval and post-medieval buildings, pits and postholes, and the potential survival of earlier structures below those excavated. The remains are best interpreted as a sequence of buildings and gardens or work areas dating from the medieval period to the present day. The accumulated evidence from the medieval period suggests the presence of at least one high status house, possibly that of a wealthy Burgess.

Hemingway, J, 1990 *Evaluation at Callow Lane/Mill Street, Kidderminster (HWCM 9814)* HWCC Report 50

Rachel Edwards and John Hemingway, Archaeology Section, Hereford and Worcester County Council

Kidderminster, Fire Station, HWCM 278 (SO 830762)

An evaluation excavation was carried out on land adjacent to the fire station at Kidderminster, south of Caldwall Tower, an octagonal sandstone building which once formed part of a medieval manor. Excavations in the 1960s in the area adjacent to the tower proved the existence of substantial remains relating to the series of buildings once linked to the tower. The area of the evaluation, however, showed no evidence of buildings. A deep and extensive deposit of furnace ash and slag covered the southern part of the trench, and probably represented a backfilled 19th century mill pool which appears on a map dated 1835. The only other feature of note was an undated ditch cut into the natural clay, which was interpreted as a boundary marker.

Edwards, R E, 1990 *Evaluation at the fire station, Kidderminster, HWCM 278* HWCC Report 42

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Lower Bullingham, Sevin Close Orchard, HWCM 8521 (SO 519382)

An evaluation was carried out in an area of earthworks in Sevin Close Orchard, Lower Bullingham in advance of a decision on a planning application submitted for housing development. The evaluation demonstrated that in addition to the visible earthworks on the north of the site, buried archaeological deposits survive. These consisted of a number of medieval cut features including pits, possible beam slots, and post holes. All had been truncated by later cultivation, and were covered by a substantial depth of topsoil.

Hemingway, J, 1990 *Evaluation at Sevin Close Orchard, Lower Bullingham, (HWCM 8521)* HWCC Report 46

Rachel Edwards and John Hemingway, Archaeology Section, Hereford and Worcester County Council

M5 Widening, Warndon to Strensham

Evaluation of a number of known sites threatened by the motorway widening was funded by English Heritage. Deposits and structural features relating to medieval settlement (HWCM 10176) were sealed below ridge and furrow at Whittington. Limited evidence for Bronze Age activity at Kempsey came from the eastern edge of a field in which a cropmark complex (HWCM 2120) was located. The Roman road from Worcester to Gloucester (HWCM 1150) was sectioned where it is crossed by the motorway at Napleton, Kempsey. The results of this work are summarised below:

1 Whittington, evaluation east of Crookbarrow Hill, HWCM 10176 (SO 876523)

The results of the evaluation suggested that extensive medieval deposits and structural features of the 13th and perhaps 14th centuries survive in a good state of preservation beneath the ridge and furrow. The existence of abandoned medieval settlements under ridge and furrow may not be unusual; however, such sites will have very low visibility unless the overlying ridge and furrow has been ploughed, and in such cases the integrity of the settlement deposits is likely to be damaged. This site is the first in Hereford and Worcester where a succession from rural settlement to arable farming can be stratigraphically demonstrated for the medieval period.

English Heritage subsequently agreed to fund further work on this site prior to the road construction.

2 Kempsey, Roman road, HWCM 1150 (SO 86334793)

The approximate line of the Roman road from Worcester to Gloucester has long been known from field boundaries. An opportunity to establish this archaeologically was presented by the motorway widening. The evaluation was intended to check for the presence of settlement or other activity associated with the road, though none was identified. The Roman road was not exactly on the alignment predicted, but lay some 20m to the east (centre to centre) of the Green Lane which succeeded it.

Two shallow ditches underlay the main road construction, and may represent "marking out" of the road line. An alternative hypothesis is that initially the road was to have been narrower and that after construction had begun it was widened. The road appears to have consisted of no more than a pebble surface on a built-up low *agger* of sandy clay. The main part of the road, which lies on a depth of *agger* of up to 0.3m, appears to be 7.6m wide, although it is possible that it may have extended further to the west. The road surface can be traced for a further 3m to the east of the agger, and 6m to the west. A roadside ditch associated with this phase of the road was located on the eastern side, but none was found to the west. The spread of *agger* material to the east was probably related to the construction of the road and ditch.

In a later phase, the eastern part of the road was resurfaced, and the eastern roadside ditch was filled during a later phase of use. The resurfacing was to a lower standard than the original build of the road, with no pebble surface. No evidence for resurfacing survives on the western side of the road.

No finds were recovered from the road construction or from surfaces of either phase, or from the excavated features, and the construction phases are therefore not dated.

A probable medieval trackway lies over the western part of the Roman road, beneath the trackway which survives today. It consists of a build-up of soil, upon which a thin pebble layer has been spread.

3 Kempsey, Kerswell Green, HWCM 2120 (SO 864468)

A complex of cropmarks in a field east of Kerswell Green were first photographed by Arnold Baker in July 1956. They appear to represent small ditched enclosures and field boundaries. The evaluation area lay to the east of the recorded extent of the cropmarks.

A machine trench revealed no features

which could be associated with the cropmarks. The few finds included a small round scraper made from pebble flint, and five sherds of Bronze Age pottery including a small sherd of coarse fabric with cord impressed decoration (possible whipped cord maggots) which was perhaps from a Collared Urn.

Dinn, J, and Edwards, R E, 1990 *M5 Widening (Warndon to Strensham): an evaluation* HWCC Report 65

James Dinn and Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Redditch, site of the proposed visitor centre for Bordesley Abbey, HWCM 3915 (SP 04636860)

An evaluation excavation was carried out at the site of the proposed visitor centre at Bordesley Abbey, Redditch. The site is located to the north-east of the Forge Mill Museum, in a low-lying area believed to be outside the Abbey precinct. Immediately below the turf, excavation revealed a depth of *c* 0.5m of material derived from the recent dredging of the mill pond to the south of the site. Buried beneath this was a well-developed soil profile, and natural river gravels were encountered at a depth below ground surface of *c* 1.1m. A thin spread of pebbles was located in one trench, perhaps the remains of a path, and engineers trial pits had located a layer described as compacted stone hardcore. No date could be assigned to either feature, nor was there any evidence to indicate whether or not the site had been part of the Abbey precinct, the boundary of which has not been identified in this area.

Edwards, R E, 1990 *Evaluation for the proposed visitors' centre, Bordesley Abbey, Redditch, HWCM 3915* HWCC Report 37

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Ripple, Ryall House Farm, HWCM 8770 (SO 865400)

An evaluation was carried out at Ryall House Farm, near Upton-on-Severn, in advance of a proposed mineral extraction scheme. Evidence of prehistoric, Roman, medieval and post-medieval activity was apparent across much of the site, in the form of artefacts, but all archaeological deposits encountered were post-medieval in date.

Hughes, J, 1990 *Evaluation at Ryall House Farm, Ripple (HWCM 8770)* HWCC Report 48

Rachel Edwards and Justin Hughes, Archaeology Section, Hereford and Worcester County Council

Roman road, Worcester to Tewkesbury

A recent project of the South Worcestershire Archaeological Group aims to establish the previously unrecorded section of the Roman road between Tewkesbury and Worcester.

An aerial photograph showing crop marks provided a starting point and parch marks and stone scatter (of limestone - not a local stone) were found in fields to the south of the A4104, SO 7504190. A very clear straight line of stone scatter, about 5m wide, was seen in a recently ploughed and rolled field, SO 87564100, and one piece of Severn Valley ware was found. This line, bearing S12'E, was traced further south to Green Street, SO 870804032.

Investigation to the north of the A4104 on the same bearing found similar stone at

field boundaries (ditches) and some scatter in the field SO 87324235. Some Severn Valley pottery was also found in this field at Earl's Croome.

June Hebden, South Worcester Archaeology Group

Sites and Monuments Record

1990 saw continued growth and development of the SMR, the number of records now climbing to over 10,000. Development covered many areas: bibliographic, cartographic, fieldwork, museum searches etc. One of the most important has been analysis of aerial photographic collections. New sites are too numerous to mention individually, but private collections covering Bromsgrove district, Broadway area, Weston under Penyard and the M5 route from Strensham to Warndon were all checked for sites. Jim Pickering has donated copies of hundreds of his photos taken over the last decade in the county. In addition the majority of the archaeology section's AP collection (curently standing at over 4000 photos) has now been checked and added to the SMR, including the new 1990 flights by Musson and Pickering which produced substantial numbers of previously unidentified sites. New sites discovered in 1990 of particular importance are: a small "hillfort" at Rowlstone (HWCM 10360) an interesting series of enclosures at Broadway (HWCM 9986-9995); a possible Roman fort/marching camp at Cradley (HWCM 10470) and another at Ivington (HWCM 10377); further features passing under Rowe Ditch at Pembridge (HWCM 10418-9); earlier features under Goodrich Castle, (HWCM 349, 10475); substantial stone buildings at Sutton (HWCM 10000); a ringwork at Severn Stoke (HWCM 10474); a new motte site inside an earlier enclosure at Grafton (Herefordshire) (HWCM 10467); indications that the motte at Newton Tump, Clifford lies inside Roman earthworks; and cropmarks at Castle Frome (HWCM 9999) that it is suggested are civil war defences. In addition large numbers of assorted enclosures, ring ditches and other cropmarks over large areas of the county have been recorded.

A small number of metal detecting finds have been identified by the SMR, the more important were Romano-British finds in the area of the Roman settlement at Hinton on the Green (HWCM 2704, 4051, 10171), RB metalwork from Murcott, Childswickham (HWCM 9916), parts of a Bronze Age axe and blade from Murcott (HWCM 9915), early Roman metalwork of military type at Childwickham (HWCM 9985) and a large collection of late medieval and early post medieval metalwork from the DMV at Kington (Worcs). Large numbers of reported finds seemingly are still not coming in to any museum or the SMR for identification.

Hilary White, Archaeology Section, Hereford and Worcester County Council

Upper Strensham, Mammoth Remains, HWCM 9966 (SO 904392)

Following the discovery by staff working on a major construction project for Severn Trent Water of a number of large bones about 4m below modern ground surface, archaeologists and Quaternary specialists were called in to record the finds.

The trench had been excavated by machine through alternating deposits chiefly of gravel, but near to the base of the section a layer of grey silty clay was found with a number of large animal bones embedded within it. In total 128 bone fragments were recovered. These were identified by Professor Russell Coope as the

disarticulated remains of an sub-adult mammoth and the antler of a red deer. Samples were taken from the surrounding clay which contained molluscs together with preserved seeds, insects and pollen.

The assemblage is dated to 200,000 years BP making it of considerable antiquity (although, 2,000,000 year old mammoth remains have been recorded in Siberia). A similar date was obtained from an assemblage found at Tring near Aylesbury.

The fragments included rib bones, limb bones, part of the vertebrae and some fragments of tusk. The tusk was a minimum of 140mm in diameter and the animal stood approximately 3.00m to the shoulder.

The majority of mammoths found in this country have been identified from isolated bones, teeth and tusks, thus the recovery of identifiable skeletal bone is of some significance. One limb bone (fibula) was twisted, suggesting the animal had a limp. The presence of both mammoth and red deer indicated an open forest environment adjacent to the River Avon.

The presence of the disarticulated bones within the silty clay deposit suggests that the mammoth died in a river, and following decay of the flesh, the assemblage was washed a short distance downstream. The eventual place of deposition would be where bones were trapped or where water movement was not sufficient to move them further. Deposition in a meander with other material and silty clay is likely.

The association of large mammal remains with environmental indicators makes the site of added significance as this is unique for deposits of this terrace in the Avon-Severn system. Study of the samples have enabled a previously unknown interglacial climatic phase to be identified in this area.

Darlington, J, de Rouffignac, C and Woodiwiss, S, 1990 *Mammoth remains from Upper Strensham: initial statement* HWCC Report 62

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Urishay, The King's Arms (SO 314367)

Reputedly once a tavern, the King's Arms is now an isolated barn on Urishay Common in the parish of Michaelchurch Escley. It consists of a two-bay timber-framed northern portion attached to an older, single bay remnant of a cruck building to the south. The owners, Mr and Mrs Pritchard of nearby Clothiers Farm, wish to convert the building into a house, extending it in the process. They funded an archaeological evaluation of the site to assess the likely extent of the cruck building.

The surviving bay is 6m wide and 3.25m long. The crucks have been repaired several times over the years but seem to have had two collars above the knee. The timber-framed side walls have been rebuilt in rubblestone. The south gable wall has evidence of a plank and muntin partition indicating that the original cruck building continued to the south. The excavation exposed the stone wall footings of this continuation and its gable end lying just below the ground surface. At the corner of the footings were the typical large pad stones for the feet of the cruck frame, and there was a gable stack. The original building was 12m longer than the surviving portion and probably consisted of two 6m long bays. The surviving bay could have been a narrower cross-passage. The building was probably built towards the end of the cruck tradition, possibly in the 16th century. Despite its fragmentary state, it is a rare survival of its type in this part of

Herefordshire.

Richard K Morriss, City of Hereford Archaeology Unit

Warndon, St Nicholas' Church, HWCM 388 (SO 88785688)

Building recording of the exterior fabric was carried out at St Nicholas' Church, in advance of restoration works. This involved the photographic survey of all external walls following the removal of the external rendering, and sampling of the various mortars used in the building.

Warndon is a particularly interesting single-celled church which has been relatively little examined in the past due to the presence of render and pebble-dash. It has a combination of architectural elements dateable to the 12th, 14th, 15th and 16th centuries, a variety of fixtures and fittings, and has not suffered a damaging Victorian "restoration". The decorated medieval floor tiles of the Malvern School are a remarkable group for such a small church, while the medieval stained glass was used in the "Age of Chivalry" exhibition held in London in 1987.

Although St Nicholas' has its origins in Anglo-Saxon times as a chapel of St Helen's Church in Worcester, it is unlikely that any of the surviving remains are of this date. The earliest phase in the building is likely to be late 11th or 12th century (fig 7), and was substantially rebuilt in the late 12th, and again in the late 14th or early 15th centuries. The first rebuilding may be linked to a documented patron, while the second may be linked to a period of local prosperity indicated by the rebuilding or refurbishment of other local churches, including Claines, Huddington, Oddingley, Martin Hussingtree.

Brown, D L, 1990 *Building recording at St Nicholas' church, Warndon, HWCM 388* HWCC Report 64

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

Wellington, Wellington Quarry, HWCM 5522 (SO 508479)

Further extensive salvage recording was carried out at Wellington gravel quarry during removal of alluvial overburden in advance of gravel extraction. Evidence for prehistoric activity in the area was present, as was noted in previous years (*West Midlands Archaeol* **30**, 11-12, **32**, 48-49) but no stratified and dateable deposits were found. In the south-eastern part of the area a waterlogged peaty deposit indicated the presence of a lake or marsh probably dating to the mesolithic period. There was further evidence of Roman activity in the form of boundary ditches, which in this area were on a different alignment than those recorded to the north in previous years. Two human skeletons were also recovered, probably Roman in date. These were crouched inhumations, which did not appear to form part of a larger cemetery. Finally, there was evidence for a Dark Age or Saxon field system which in some cases followed the same lines as modern hedges, and at other points diverged from them. This was separated from modern deposits by the alluvium immediately underlying the topsoil.

Edwards, R E, 1990 *Salvage recording III at Wellington Quarry, Marden Lane, HWCM 5522* HWCC Report 49

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

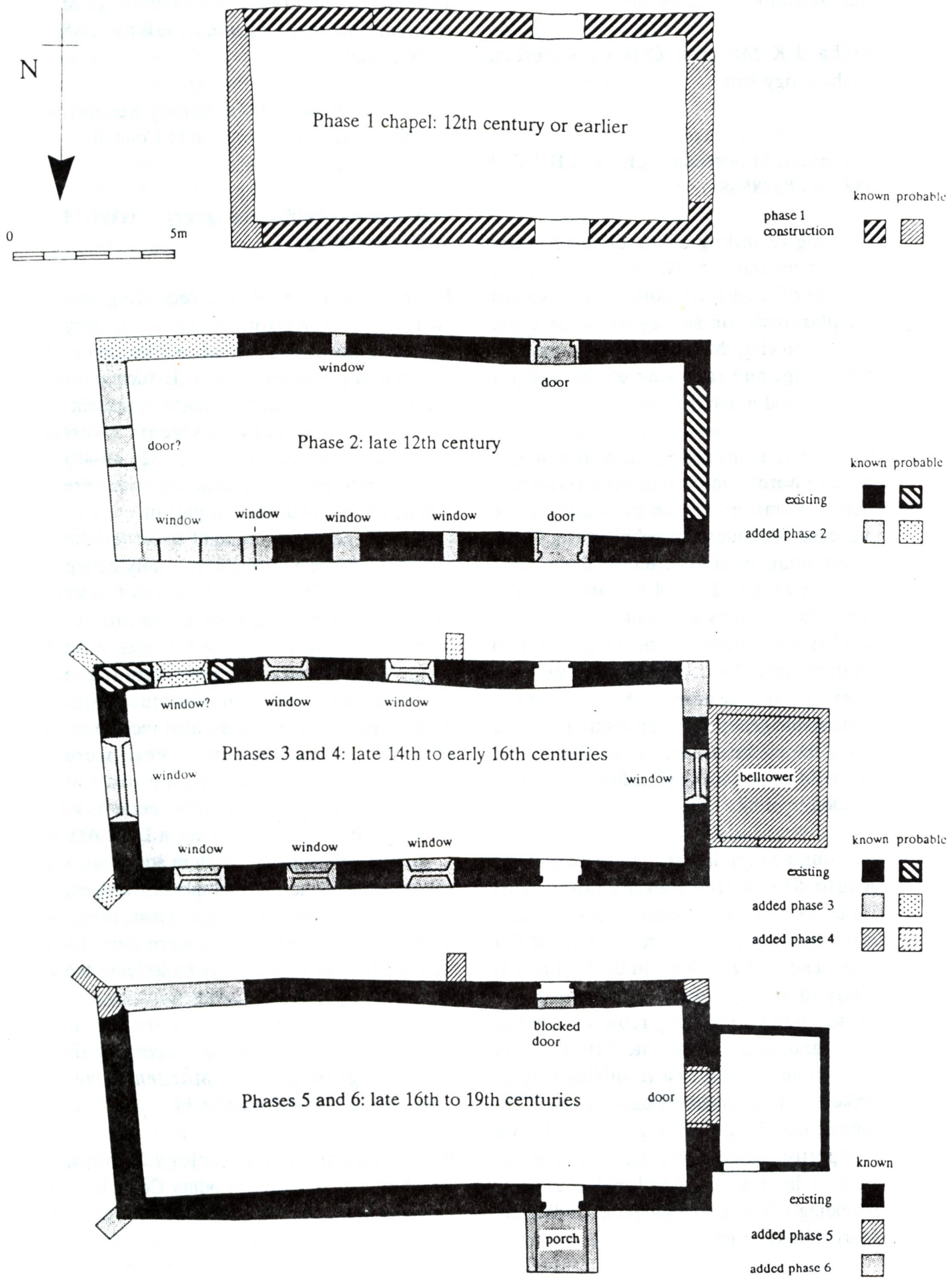


Figure 7 St Nicholas Church Warndon Phase plans

Witley Court (SO 769649)

Witley Court, a ruined mansion a few miles to the north-west of Worcester, was once one of the grandest houses in Britain. Despite its mid-19th century Italianate appearance the brick core of the house dates to the mid-17th century. That in turn is built on the site of a medieval manor house and a substantial portion of its undercroft survives more or less intact (fig 8). This part of the building has largely been overlooked in the past, but English Heritage commissioned an analytical survey of its remains.

Although it has lost virtually all its plain rib-vaulting, enough remains to give an impression of its original design. It is of two and a half bays, the narrow half bay containing a small vice (now blocked) to the floor above. The two main bays are each 2.6m long, the half-bay just 0.8m in length. The original north wall is obscured by a later masonry skim but the width of the undercroft would have been approximately 4.1m. The original floor to vault apex height was about 2.9m.

The medieval masonry consists of large and well-coursed blocks of ashlar. The long south wall is visible and in each of the two main bays contains a two centred arch springing from small stone corbels half-octagonal in plan. These arches project slightly from the wall plane to support the vault infill and the voussoirs are plain chamfered. The north wall would have had the same design and the two end walls each have the remnants of a single arch of the same pattern.

The vaulting of the east bay was of the standard quadripartite type with plain chamfered diagonal ribs meeting at a plain boss. The two-centred arch in the east

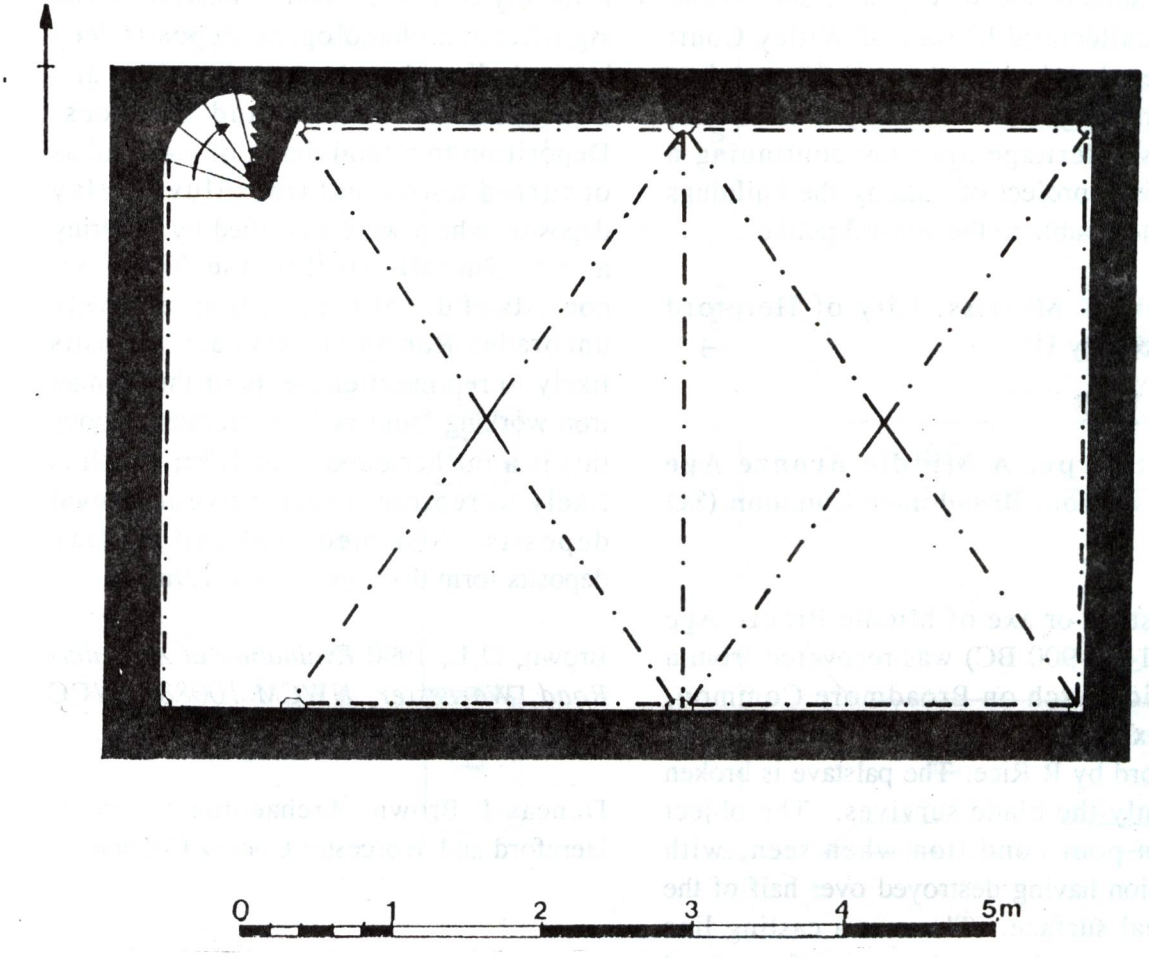


Figure 8 Witley Court - original undercroft layout

gable wall and a transverse rib of the same design separating this bay from that to the west completed the pattern. The remainder of the vaulting was slightly unusual. The western main bay had an almost identical pattern, but lacked a transverse arch between it and the narrow stair bay to its west. Instead, the missing quarter of vault infill had to spring from the end arch of the undercroft. This odd design was probably to allow sufficient headroom for those using the vice.

The undercroft had been dated to the 15th century but the survey clearly indicated that it was considerably earlier, especially as a doorway inserted into the west gable has an ogee head typical of the first half of the 14th century. It is suggested that the undercroft belongs to a 13th century solar block associated with a lost medieval hall. The results of the survey have shown that the architectural history of Witley Court can be taken back at least two centuries. After many years of making the ruins safe, English Heritage are now continuing a long-term project of making the buildings more accessible to the general public.

Richard K Morriss, City of Hereford Archaeology Unit

Woolthorpe, A Middle Bronze Age palstave from Broadmoor Common (SO 6036)

A palstave or axe of Middle Bronze Age date (1400-900 BC) was recovered from a roadside ditch on Broadmore Common, approximately eight miles south-east of Hereford by R Rice. The palstave is broken and only the blade survives. The object was in poor condition when seen, with corrosion having destroyed over half of the original surface. There is a casting line along one edge and on one face (and probably the other) there is a mid rib which extends up to the point where the blade thins down to the cutting edge. The blade itself is crescent-shaped with flaring ends. The axe has the following dimensions - length 52mm, thickness (max) 14mm, width 55mm (across blade) and weight 130g.

Philip J Wise, Warwickshire Museum

Worcester, All Saints Road, HWCM 10088 (SO 84735491)

An evaluation in advance of proposed development at All Saints Road, demonstrated that considerable episodes of dumping have taken place in order to raise the present ground level to that of the river terrace to the east. This has resulted in a considerable build up of "made ground" of a variety of dates, which has preserved significant archaeological deposits deep beneath disturbance caused by 19th and 20th century cellars and services. Deposition to a total depth of *c* 4.5m has occurred above natural alluvial clay deposits, which were identified by augering at *c* 13.7m OD. Of this, the first 1.3m consists of deposits including relatively unabraded Roman pottery, and deposits likely to represent elements of the Roman iron-working industry in Worcester. Above this is a further deposit of 1.3m which is likely to represent successive medieval deposits. Post-medieval and modern deposits form the uppermost *c* 1.9m.

Brown, D L, 1990 *Evaluation at All Saints Road, Worcester, HWCM 10088* HWCC Report 66

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

WORCESTER CATHEDRAL Deanery Terrace

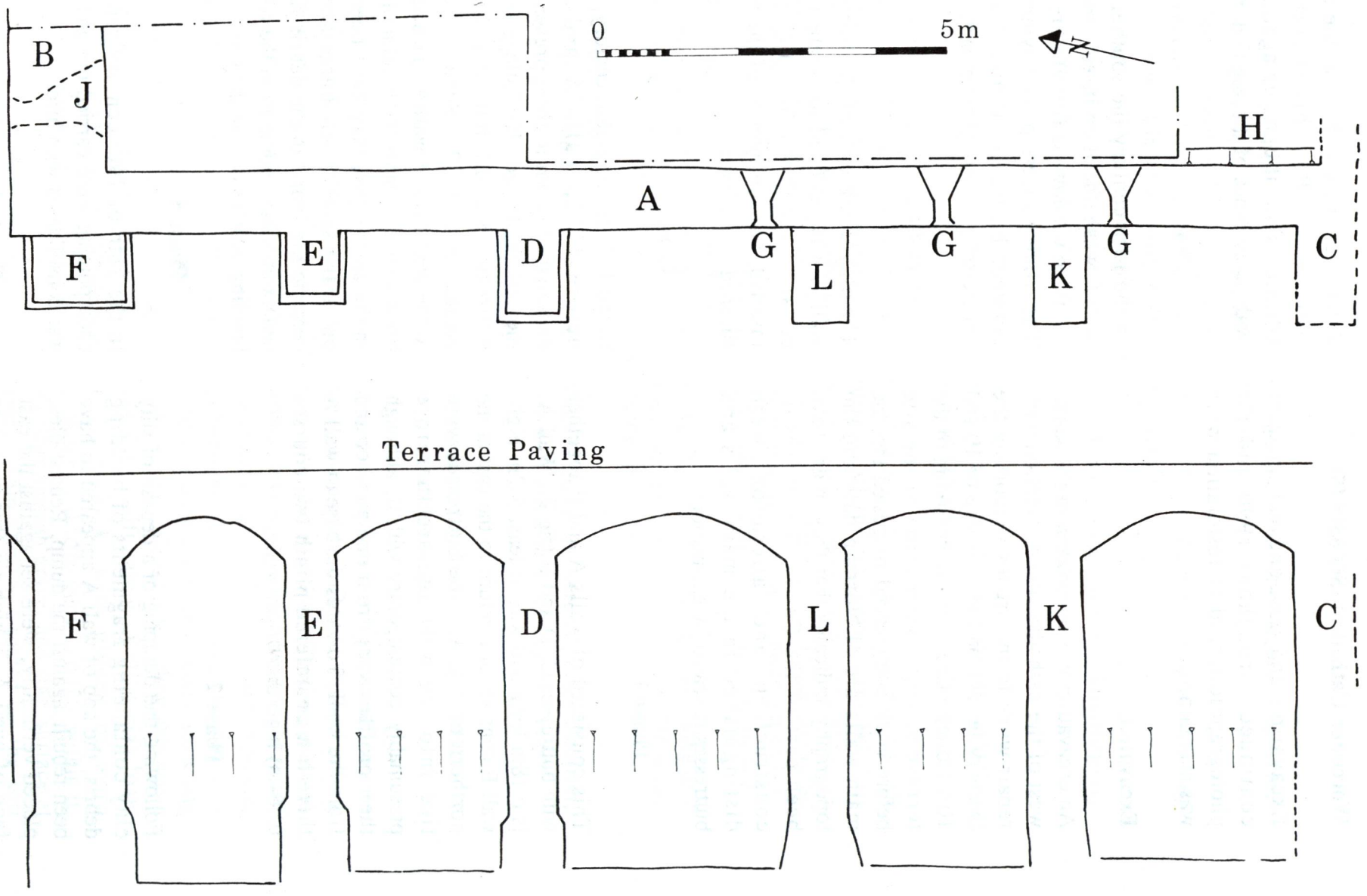


Figure 9 Plan and elevation of the Deanery Terrace

Worcester Cathedral (SO 850545)

Excavation and post-excavation work continued throughout 1990 and the photographic record of restoration work was maintained.

Excavation

An excavation was undertaken to the south-west of the cathedral in conjunction with repair work to the arches supporting the Deanery terrace on the west side of 10 and 10A College Green and the relaying of the terrace paving. Inspection of the site before work commenced suggested that the main walls are of Norman date and the topography indicates that they might have been part of the Castle. Six phases of construction and alteration were distinguished in the main walls and buttresses revealed by excavation:

Phase 1

This consisted of walls A and B together with buttresses C, D and E (fig 9). Wall A, is *c* 18m long and was at least 5.2m high; wall B consists of a return to the east at the northern end of A. The buttresses were tied into the wall and are therefore presumably contemporary with it, although their profiles vary from one another and from the wall. Towards the base of wall A there is a chamfered plinth two courses (0.64m) high and 0.15m wide.

Phase 2

Following the dumping of a deposit of silty clay containing fragments of building debris, the top of wall A appeared to have been rebuilt against the dump. Reused tiles, placed vertically, were set against the east face of wall A, which on this side was constructed of rubble, although the west face was ashlar.

A buttress, F, was built at the corner of walls A and B. This is certainly an addition since it butts up against wall A with no evidence of it being tied in.

Phase 3

In the 15th century the southern half of wall A was refaced on its eastern side and the three windows G (fig 9) were inserted. The windows were placed symmetrically between buttresses C and D and were double-splayed with glazing bars.

Phase 4

The clay dump east of the north part of wall A was removed to create a room or cellar. A rough window, J (fig 9), was inserted, and the interior of the room was finished with plaster.

Phase 5

In the 17th or early 18th century, certainly before 1732, walls A and B were demolished down to their present height, the cellars infilled, 10 College Green and buttresses K and L built and the terrace created (Buck 1732). Some of the repairs to the west face of wall A, particularly the brick course towards the bottom of the wall in the centre bay, may have been carried out at the same time. Large amounts of ceramic tile found in the debris filling the cellars may have come from the roof of the building which stood on the site.

Phase 6

In the 18th or 19th century repairs and underpinning were carried out and the wall was consolidated with brick.

Conclusion

Although the walls as seen in the excavation are not very thick, their height

and the large size of the blocks of which they are built would imply that they are not merely retaining walls and that they may well represent the base of the keep of Worcester Castle. It is also possible that they are the remains of the strong fort near the castle referred to by Florence of Worcester (Beardsmore, 1980, 55).

Post-excavation work

The majority of the post-excavation work undertaken during the year concentrated on the excavations carried out in the crypt from 1982-87. Detailed archive reports of the excavations have been compiled and a booklet is in preparation. The wall plaster and mortar from the crypt excavations were examined by specialists from the Courtauld Institute and Leicester University, who visited the Cathedral during the year.

The booklet by Helen Lubin on the Worcester Pilgrim, whose grave was found during the excavation of the south-east tower pier in 1987, was published during the year.

Restoration and photography

Three major restoration projects have taken place during the year, on the north porch, the north-west pinnacle of the tower and the tower piers. A detailed photographic record of the projects before, during and after they took place has been made, Work on the tower piers and the pinnacles of the tower is continuing. Recording of minor damage and areas where work is proposed for future years, both within and around the Cathedral, has also been carried out.

Beardsmore, C, 1980 Documentary Evidence for the History of Worcester City Defences, in Carver, M O H, (ed) Medieval Worcester, An Archaeological Framework *Trans Worc Archaeol Soc* 3 ser 7 53-65

Buck, 1732 *SW Prospect of the City of Worcester*

C J Guy, Assistant Archaeologist, Worcester Cathedral

Worcester, 4 Charles Street, HWCM 4882 (SO 85185473)

Salvage recording took place on a small portion of the medieval City Wall of Worcester which was revealed by contractors prior to the construction of an inspection chamber to a sewer which runs alongside the City Wall on its eastern side.

Edwards, R E, 1990 *Salvage recording at 4 Charles St, Worcester, HWCM 4882* HWCC Report 53

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Worcester, 3 College Precincts, HWCM 9616 (SO 85105452)

This watching brief, in a lift shaft close to the east end of the cathedral, proved to be a very valuable and cost-effective piece of work. Three short visits revealed a series of metalled surfaces *c* 2.2m below the present ground surface. The uppermost was represented by a surface of compacted slag and gravel *c* 0.08m thick. Below this was a deposit of soft pale grey silty clay loam *c* 0.2m thick, with pieces of worn limestone *c* 0.05m thick laid flat within it. Another smooth gravel and slag surface at least 0.15m thick was sealed by the soft grey layer *c* 2.45m below the surface. Although no dating material came from any of these deposits, the depth of these metalled surfaces and the use of slag in

their makeup indicated that these may well be Roman in construction. Roman roads elsewhere in Worcester have been known to employ varying quantities of slag as metalling. In the lower deposit the fused mass of slag had formed a uniform surface around the pebbles and stone chips also present. The uppermost deposit was less easy to examine, but appeared to be less coherent.

The extent and alignment of these roads could not be established since they only appeared in the south side of the excavated lift shaft, cut by a well to the east, and the cellar wall of 3 College Precincts to the west. It is therefore probable that the alignment of these roads was broadly east to west, perhaps passing beneath, or close to the eastern end of the Cathedral.

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

Worcester, Deansway, HWCM 3899 (SO 849548)

The Deansway excavations were completed in November 1989, and since then an extensive post-excavation programme has been underway. Previous reports in *West Midlands Archaeology* have outlined the Roman and medieval sequences (Cooper *et al* 1988, Dalwood *et al* 1989), and further detail appears in an Interim Report (Deansway Archaeology Project 1989).

Following the completion of the excavations, important new evidence has come to light for the late Saxon occupation. During the course of the excavations no certain evidence was found for occupation between the 4th and 10th centuries AD, except for dark earth deposits.

Similar dark earth deposits have been encountered on many urban sites (Yule 1990), and although sometimes regarded as devoid of information or simply as evidence for "abandonment", they have been a major source of evidence for urban sites occupied in both the Roman and medieval periods. The dark earths at the Deansway excavations were subjected to an extensive sampling programme and micromorphological analysis. Initial results have indicated that these deposits represent a complex sequence of activity over an extended chronological period, including periods of building decay and abandonment, stock herding, and cultivation (R Macphail pers comm). Although these interpretations of soil micromorhological data are not independently datable, other evidence may be used to form a dating framework.

The most important new evidence has come from a watching brief in the area to the north of the excavated area. A narrow trench was excavated revealing an east/west earth and clay bank with a robbed stone revetment, immediately overlying dark earth deposits. The southern lip of a ditch was found 2m to the north of the bank, separated by a berm. The nature of these features, their relationship to the dark earth, and their location in relation to the street plan, suggest that they formed part of Worcester's Saxon *burh* defences. Although it is known from documentary sources that these were constructed between AD 890 and 905, their precise location has been the subject of much debate (Carver 1980, 5-7). While most scholars agreed that Broad Street represented the northern line of the defences, it can now be shown that these were to the south of that street, which probably originated as an extra-mural street in the late Saxon period.

Other new evidence includes two radiocarbon samples from spreads of ash and lime from Site 2 (Dalwood *et al* 1989, 55), which produced the following

calibrated dates (cf Stuiver and Pearson 1986):

GU-5008 cal AD 778-980
GU-5010 cal AD 904-1146

These results show calibrated age band-widths (Pearson 1987) and are taken as evidence for limeburning in a period when such activity might plausibly be associated with the construction of the *burh*, or related building works.

The limeburning post-dated an earlier occupation phase, represented by a timber building, other postholes, and three cess pits. This phase of activity is at present imprecisely dated, pending reconsideration of the pottery assemblage from these features. This was initially dated to no earlier than the late 9th century (on the basis of previous studies), and this dating can still be supported by the calibrated radiocarbon date bands.

There is, however, some evidence to suggest that there was a phase of occupation at Deansway predating the late 9th/early 10th century burh. There was single Series J *sceat* of *c* AD 715 (M Metcalf pers comm) and an archaeomagnetic date from a small isolated hearth of AD 717-792 (P Linford pers comm). This is the only direct evidence for Middle Saxon occupation at Deansway.

A last and debateable piece of evidence is a fragmentary inscription on a sherd of samian. The inscription appears to be in runic letters, which can be transliterated (fig 10) but not readily translated, and furthermore its context (on a Samian vessel and as far west as Worcester) is extremely unusual (R Page pers comm). The inscribed sherd was a find from a medieval pit and therefore not a reliable piece of evidence, but it may be significant.

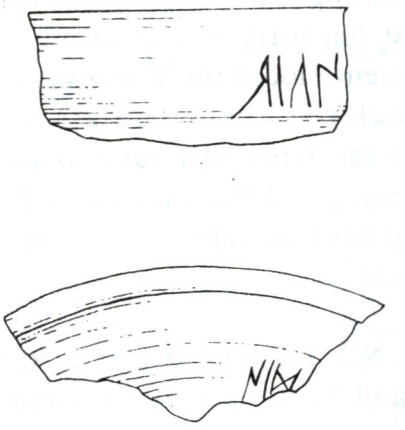


Figure 10 Samian sherd with Runic inscription

Recent work by N Baker and R Holt of Birmingham University has provided a possible context for this evidence for pre-10th century activity. Analysis of the medieval plan of Worcester has reconstructed the planned development of the town and identified the area of the excavations as partly within one of the "unplanned" areas of the town. Some of the boundaries in the excavated area have been shown to coincide with Roman boundaries and alignments (Baker *et al* forthcoming).

From this evidence, a partial site model can be suggested: Roman boundaries remained as relict features through the post-Roman period, and were later incorporated as property boundaries in the urban settlement. No physical evidence for this survival was found on the excavations, as all the Roman deposits were obscured by a 300mm thick layer of dark earth. Therefore these boundaries were actively maintained through periods of relative abandonment and cultivation - the simplest explanation being the maintenance of hedged boundaries. This provisional explanation clearly implies continuity of land ownership in the area of the former Roman small town. Planned development from the late 9th century imposed new boundaries on part of the excavated area, but isolated an

area where boundaries of Roman origin survived until the modern period.

The full implications of this evidence have yet to be fully assimilated into the settlement model for Worcester, and the particular evidence relating to the Deansway sites will have to await full analysis of all the excavated data, but current work demonstrates the potential of this study.

Baker, N J, Dalwood, H, Holt, R, Mundy, C F, and Taylor, G, forthcoming From Roman to medieval Worcester: development and planning in the Anglo-Saxon city, *Antiquity*

Carver, M O H, 1980 An Archaeology for the City of Worcester *Trans Worc Archaeol Soc* **3 ser 7**, 1-12

Cooper, M, Dalwood, H, Mundy, C F, and Taylor, G, 1988 The Deansway Archaeology Project (HWCM 3899) *West Midlands Archaeol* **31**, 9-12

Dalwood, H, Mundy, C F, and Taylor, G, 1989 Worcester, Deansway, HWCM 3899 *West Midlands Archaeol* **32**, 51-56

Deansway Archaeology Project, 1989 *Interim Excavation Report*, HWCC Internal Report

Pearson, G W, 1987 How to cope with radiocarbon *Antiquity* **61** 98-103

Stuiver, M, and Becker, B, 1986 High-precision decadal calibration of radiocarbon time scale *Radiocarbon* **28** 863-910

Yule, B, 1990 The "dark earth" and late Roman London *Antiquity* **64**, 620-28

Hal Dalwood, Robin Jackson and Charles Mundy, Archaeology Section, Hereford and Worcester County Council

Worcester, Diglis Hotel/Mill Street, HWCM 10096 (SO 84905424)

Four trenches were excavated in an attempt to locate deposits of archaeological importance in the grounds of the Diglis Hotel. Although no deposits earlier than the 18th century could be identified, information has been recovered about the nature of the Severn river-cliff and post-medieval terracing in the Diglis area.

Brown, D L, 1990 *Evaluation at Diglis Hotel/Mill St, Worcester, HWCM 10096* HWCC Report 59

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

Worcester, Farrier Street, HWCM 8229 (SO 84805515)

A small excavation and watching brief at Farrier Street, just outside the northern city wall, followed the evaluation reported in *West Midlands Archaeol* (**32**, 56-7). As a result of recommendations arising from that evaluation, the design of the proposed new office building for Worcester City Council was revised to reduce its impact on the archaeological deposits. The underground car park was removed from the plans, and the building has been constructed using hammered pile foundations. Earthmoving was confined to three deep lift shafts, and a number of service trenches.

The slag road encountered in the evaluation was cut by one of the service trenches, and its full width recorded. One of the lift shafts was excavated by hand. The earliest activity consisted of a number of shallow pits, possibly quarry pits; the few finds these produced were Roman. These were succeeded by a series of gullies, which appear to have been associated with the main phase of Roman ironworking. The

gullies were sealed by a "dark earth" deposit, probably of post-Roman date, which was cut by a ditch dated to the late medieval period.

A report is being prepared for publication in *Trans Worcestershire Archaeol Soc.*

James Dinn, Archaeology Section, Hereford and Worcester County Council

Worcester, King's School (St Albans), HWCM 8817 (SO 84955426)

Evaluation excavation and subsequent salvage recording was undertaken at King's School (St Alban's), Worcester. The evaluation revealed a layer of post-medieval soil overlying a ground surface of redeposited sand and gravel sloping down to the east and west. Three medieval ovens were cut through a layer sealing a ditch running east to west which was probably Roman in date. Significant quantities of late Saxon pottery were recovered as residual material.

Salvage recording during the course of initial groundworks revealed the presence of a heavily truncated inhumation cemetery including at least nine individuals and a dog. This is interpreted as of Roman date and may be related to an earlier find of a Roman cremation cemetery nearby (Carver 1980, 255).

Brown, D L, 1991 *Evaluation at King's School (St Albans), Worcester, HWCM 8817* HWCC Report 41

Carver, M O H, 1980 A Kiln found in Diglis in 1860: documentary evidence for potting and tiling in Medieval Worcester, *Trans Worcestershire Archaeol Soc* **3 ser 7**, 255-60

Duncan L Brown, Archaeology Section, Hereford and Worcester County Council

Worcester, Love's Grove, HWCM 9552 (SO 84745544)

An evaluation excavation was carried out in the Love's Grove Car Park in advance of proposed development. The site lies to the north of the Roman and medieval centre of Worcester, on the conjectured line of the Roman road leading to Greensforge. A Roman cobbled surface and a layer of agricultural soil were located in the eastern part of the site, but all other deposits were post-medieval in date. The cobbled surface may have represented the continuation of the road recorded in Blackfriars (Mundy 1985) and Farrier St (Darlington 1989), but it was not possible to confirm this on the evidence of such a small trench.

Darlington, J, 1989 *Evaluation at Farrier Street, Worcester, HWCM 8229* HWCC Report 19

Edwards, R E, 1990 *Evaluation at Love's Grove, Worcester, HWCM 9552* HWCC Report 43

Mundy, C F, 1985 *Trial excavations in Worcester 1985. HWCM 378 Dolday/Blackfriars, HWCM 3899 Deansway/Bull Entry* HWCC Report

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Worcester, St Oswald's Almshouses, HWCM 9931 (SO 84815565)

An evaluation excavation in advance of proposed development revealed new information about the history of St Oswald's Almshouses. Although much is known about the site in the post-medieval

period from documentary sources, the previous history of the site was obscure. The evaluation indicated that there were probably two phases of buildings prior to the Dissolution, the later of which included a 15th century church in the area of the excavation.

The findings of the evaluation corresponded well with the documentary evidence relating to the later use of the site. In particular a reference to the robbing of medieval floor tiles from the site was confirmed in the archaeological record, and was found to correspond with other documentary evidence relating to tiles found in Holt castle, which in the 16th century was owned by Sir John Bourne, who held St Oswald's as well. The use of the area in the 17th and 18th centuries as a burial ground for the hospital, as it was then called, was confirmed. In the 19th century the present buildings were constructed, and little change has taken place since then.

Edwards, R E, 1990 *Evaluation at St Oswald's Almshouses, Worcester, HWCM 9931* HWCC Report 55

Rachel Edwards, Archaeology Section, Hereford and Worcester County Council

Worcester, Rea's Timber Yard, HWCM 9550 (SO 84715557)

An evaluation excavation was carried out in the former Rea's Timber Yard in advance of development proposals. The site lies to the north of the Roman and medieval centre of Worcester. A Roman ditch and kiln and a layer of post-medieval agricultural soil were located in the western part of the site, but all other deposits were late post-medieval in date.

Wichbold, D, 1990 *Evaluation at Rea's Timber Yard, Worcester (HWCM 9550)* HWCC Report 44

Rachel Edwards and David Wichbold, Archaeology Section, Hereford and Worcester County Council

Worcester, Silver Street, HWCM 1281 (SO 85205511)

An account of the medieval tile kiln discovered during the evaluation of this site is given in the Forum.

Duncan Brown, Archaeology Section, Hereford and Worcester County Council

SHROPSHIRE

Albrighton, Albrighton Moat (SJ 814049)

A series of trenches were excavated through the upper fills of the moat ditch at Albrighton Moat. The objectives were to determine the depth of archaeologically significant deposits to assist with planning proposals to reflood the moat. The work was commissioned by W Jukes, who wishes to create a fishing amenity for the handicapped.

Three transverse sections had been previously excavated in 1988 (Cane 1988). It was felt that an additional seven were required, together with a longitudinal section to clarify the existence of a possible causeway. In addition to the trenches a geophysical survey was carried out over the central platform.

The primary fills of the moat proved to consist of waterlogged, grey silts and were contacted at a greater depth on the western side of the ditch where considerable quantities of modern brick rubble had accumulated. The rubble was banked over a ridge of silt across the moat providing a further indication of the possible existence of a causeway on west side of the feature.

The geophysical survey provided evidence for a rectangular building, 25m long and 10m wide, on the western side of the platform near to the suggested causeway. There are no surface indications for any structures.

Cane, J, 1988 *Excavations at Albrighton Moat* BUFAU.

Hughes, E G, 1990 *Further Excavations at Albrighton Moat,* BUFAU.

E G Hughes, Birmingham University Field Archaeology Unit

Brompton, A489 widening (SO 245933)

Excavation was undertaken in advance of a road widening scheme which will affect a length of the existing A489 Newtown to Bishop's Castle road (fig 11). The road improvements involve widening on either side of the existing carriageway, which bisects a Roman fort at Pentrehyling (Allen 1986 and 1988), two marching camps, and a stretch of Offa's Dyke south of Brompton Hall. The excavation followed a joint BUFAU and Central Marches Archaeological Research Group (CMARG) evaluation in 1989 (Cane and Allen 1989).

Two circular pits, 1m in diameter, sealed beneath the southern fort rampart, produced a quantity of decorated late neolithic pottery. A small ring ditch, identified as a cropmark, 10m to the north was located beyond the area of excavation.

The western ditches of the two marching camps (SA 1211, SA 1212) were V-shaped in profile and survived to a depth of 1m and 2m respectively.

Within the fort interior, parts of at least four rectangular timber buildings, provisionally identified as barrack-blocks or stores were excavated.

The southern defensive ditch terminated 40m east of the south-west corner of the

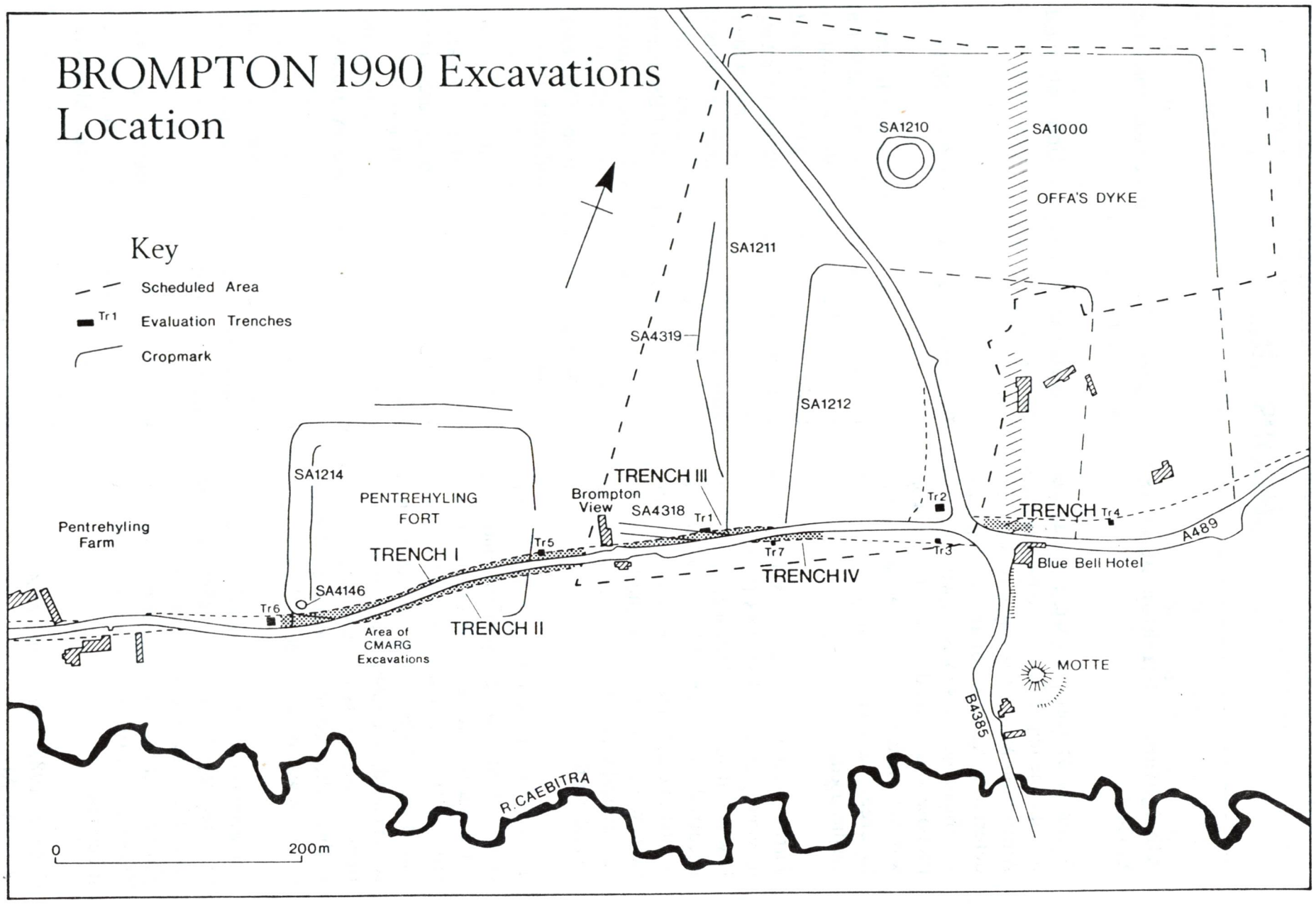


Figure 11 Brompton excavations location plan

fort; it was re-cut along at least part of its length, during the later 3rd or earlier 4th century. A quantity of debris from this reoccupation, including a silver spoon inscribed with the words *VTERE FELIX VIVAS*, was dumped within the recut. A complete defensive circuit along the southern side may have been rendered unnecessary by a possibly contemporary southern annexe, previously identified as a cropmark. Several large pits, possibly associated with metal processing, were dug within the fort during this later period.

East of the fort, the eastward extent of a *vicus* was defined. This settlement was characterised by a dense concentration of industrial pits and associated gullies containing quantities of hearth base, charcoal, and lead- and iron-smithing slag which have been sampled for metallic residue analysis.

A 2m-wide trench was cut across the line of Offa's Dyke, immediately north of the Blue Bell Inn. This revealed large post-medieval quarry pits which had extensivly disturbed the earlier ditch fills.

A site narrative and post excavation research design are in preparation.

Allen, J H, 1986 The Roman Fort at Pentrehyling, Shropshire *Archaeology in Wales* CBA Group 2 **26**

Allen, J H, 1988 Pentrehyling, Shropshire *Archaeology in Wales* CBA Group 2 **28**

Cane, J, and Allen, J H, 1989 *The Archaeological Evaluation of a Cropmark Complex at Brompton, Shropshire* BUFAU

A E Jones, Birmingham University Field Archaeology Unit

Clun, Clun Castle (SO 299809)

English Heritage have recently taken Clun Castle into guardianship and a long-term programme of recording and renovation is due to start in 1991. In advance of this work, some recording was carried out on an isolated fragment of masonry that had suffered collapse during an earth tremor in 1990. In addition, a start was made on recording the more accessible sections of the keep.

Richard K Morriss, City of Hereford Archaeology Unit

Cound, Cound Hall (SJ 561053)

A documentary and archaeological appraisal was undertaken of the grounds of Cound Hall, an impressive 18th century house, in advance of the proposed conversion and extension of the hall for use as a hotel and golf club house, and the construction of a golf course within its grounds. The appraisal comprised documentary research, fieldwalking on the possible site of a deserted medieval village, and measured earthwork survey, principally of features relating to an 18th century formal garden. While the results were not entirely conclusive, a model for the development of the historical landscape, including location of the sites of the medieval village and early manor house, was proposed, and recommendations were made to enable protection of archaeologically sensitive areas during redevelopment.

Litherland, S, 1990 *Cound Hall: an Archaeological Appraisal* BUFAU

Simon Buteux, Birmingham University Field Archaeology Unit

Lilleshall, The Abbey (SJ 738142)

A third season of interpretative survey work at Lilleshall Abbey was undertaken on behalf of English Heritage (*West Midlands Archaeol* **30-31**), concentrating on the recording of the claustral ranges. A small evaluation trench was excavated to the east end of the slype, ahead of a new drainage arrangement, and a burial located but not excavated.

Iain Ferris, Birmingham University Field Archaeology Unit

Ludlow, Ludlow Castle (SO 508745)

Towards the end of 1989 work started on renovating the medieval curtain wall of the outer bailey of Ludlow Castle. Detailed survey work of the areas of stonework to be replaced was carried out in advance of each phase of the operation. Unfortunately, in February 1990 a large part of the wall yet to be recorded collapsed in dramatic fashion. It was decided to rebuild the section of wall and to try and retain its pre-collapse appearance as far as was practically possible. To this end, a close watching brief was kept on the clearance of the debris and any articulated fragments of masonry were drawn in detail. Wherever possible, the drawings of these fragments were plotted onto an outline of the pre-collapse wall using information gleaned from close study of earlier photographic surveys. It was possible through this work to at least suggest the different outline patterns in the masonry.

Within the castle itself, a variety of shallow excavations were required as part of a programme of improving access to the various buildings. Few features of any archaeological significance were discovered and it became clear that considerable landscaping had taken place, probably in the 19th century. The work at Ludlow is funded both by the owners, the Powis Estate, and by English Heritage.

Richard K Morriss, City of Hereford Archaeology Unit

Ludlow, Ludlow College Sports Hall (SO 511742)

An archaeological evaluation was carried out prior to the construction of a sports hall for Ludlow College.

The site was located to the rear of the frontage of Lower Mill Street within an area identified by Conzen (1968 and 1988) as belonging to a central and southern plan unit dating from the beginning of the 13th century.

Three adjoining trenches were excavated, measuring a total of 66.8m^2. Following the removal of modern deposits, several stone structures and associated deposits were identified and recorded. These included the remains of a north/south wall constructed of limestone blocks with a rectangular stone structure butting its southern end and a possible rebuild at its northern end. Associated pottery appeared to largely date to the 14th-15th centuries with some residual 12th-13th century pieces, although most of the sherds were abraded.

The walls appear to have been located in the vicinity of the western frontage of the projected former extention to Lower Raven Lane. It was not possible to determine whether the walls formed a component of a larger building, and they may have simply formed part of a boundary fronting onto the lane.

Fortunately, the structures should not be threatened by the proposed development.

Conzen, M R G, 1968 The use of town plans in the study of urban history in Dyos, H J (ed) *The study of urban history*

Conzen, M R G, 1988 Morphogenesis, morphological regions and secular human agency in the historic townscape, as exemplified by Ludlow in Denecke D and Shaw G (eds) *Urban historical geography: recent progress in Britain and Germany*

Hughes, E G, 1990 *Ludlow College Sports Hall, Ludlow: An Archaeological Evaluation* BUFAU

E G Hughes, Birmingham University Field Archaeology Unit

Oswestry, Old Oswestry hillfort (SJ 296310)

A project is underway to prepare the surviving records of excavations on this outstanding hillfort for publication. The excavations were undertaken by the late W.J.Varley in 1939 and 1940. A site narrative and archive assessment is nearing completion.

E G Hughes, Birmingham University Field Archaeology Unit

Shrewsbury, A5/A49 Bypass Archaeological Project

The archaeological rescue excavation begun in September 1989 (*West Midlands Archaeol* **32** 71) continued in 1990 with the full-scale excavation of four sites along the bypass route (fig 12, SA 4237; SA 2; SA 20 and SA 46; Ellis, Hughes and Jones, 1990). This work was undertaken by BUFAU on behalf of Shropshire County Council, and funded by a grant from English Heritage.

The Ironbridge Institute also conducted a smaller-scale excavation (Clark, 1990) on the site of a post-medieval mill and possible ironworking complex (fig 12, SA 4230). Further smaller-scale excavations, watching briefs, and salvage recording exercises have been carried out on over 25 other sites by the County Council's A5 Field Archaeologist with the help of local volunteers. This programme of work is still in progress.

The excavations

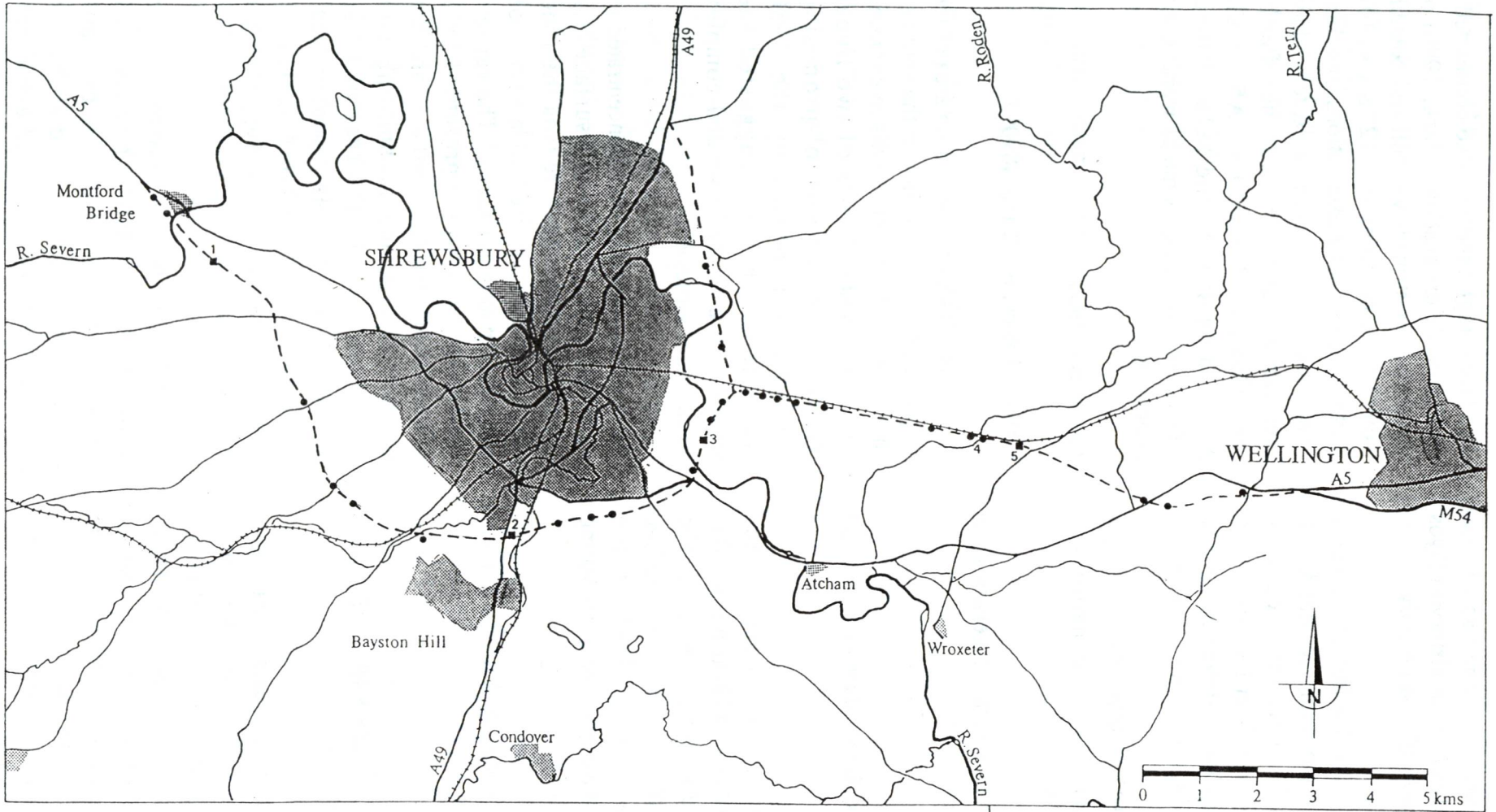
1 Meole Brace, SA 2 (SJ 489097)

Excavation was carried out in an area of the proposed road corridor just to the south of Shrewsbury. Its purpose was to examine the threatened sections of two linear cropmarks and an area of promising stratigraphy indicated by the 1988 evaluation. This had suggested the presence of a fairly large and complex Roman rural settlement.

The stratified deposits were concentrated to either side of a pebble road surface (fig 13). The earliest feature was the road which was constructed of a series of compacted pebble surfaces. The earliest roadside activity was represented by a series of stone-packed postholes and the remnants of a rectangular building with stone footings. To the rear of these structures was a well-laid pebble path. These early features were sealed by extensive deposits of silt suggesting a period of contraction.

In several areas the silts were overlain or cut by a series of features which appeared to represent a subsequent phase of small-scale industrial activity. Several shallow pits, backfilled with clay and associated with postholes, may have been small kilns or ovens. These were associated with spreads of rounded cobbles and a large

Figure 12 Shrewsbury A5/A49 bypass location plan



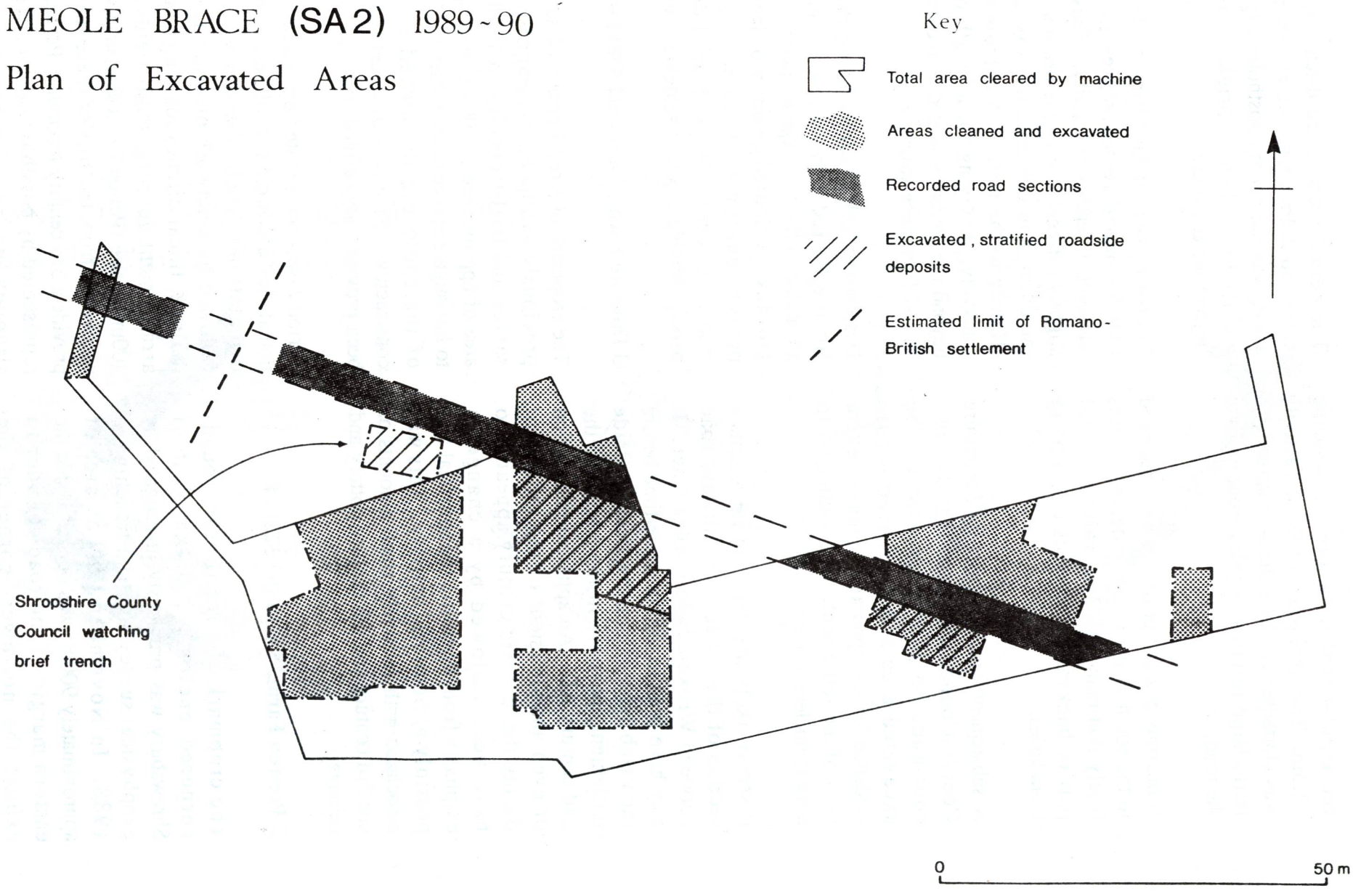


Figure 13 Meole Brace

rectangular timber building, measuring 12.5m. The final phase of Roman activity was characterised by extensive spreads of fairly large rounded cobbles fronting onto the road.

Numerous pits and postholes were recorded to the south of the roadside deposits. It is likely that many of these features formed part of backyard structures or property boundaries.

A subsequent watching brief by Shropshire County Council indicated that the road continued to the north-west of the excavated area and confirmed earlier evidence for the approximate north-western limit of the settlement. The south-eastern limit is unclear at the present time.

It seems likely that the road represents a section of the 1st century military road between Wroxeter and Forden Gaer. It may have been in use for some time before the establishment of the first roadside settlement, possibly in the middle of the 2nd century AD. An apparent contraction or even abandonment of the settlement during the mid-3rd century appeared to have been followed by a change in emphasis from domestic to industrial and possibly agricultural activity. This was associated with relatively small amounts of late 3rd century and 4th century pottery and coinage.

2 Preston Farm, SA 20 (SJ 522114)

The cropmark of a rectilinear, round-cornered enclosure, 0.4km east of Shrewsbury was previously investigated by geophysical survey and trial trenching in 1988. In November 1989 an area of approximately 900m^2 was opened inside the eastern margin of the road corridor to expose the northwest corner of the enclosure. Three periods of activity have been provisionally defined.

The Period 1 enclosure ditch was steep-sided and 2.2m deep. An entrance, 3.2m wide, was flanked by postholes suggesting a complex of timber uprights extending beyond the enclosure.

Following the partial silting of the ditch, two V-shaped recuts represented two subsequent periods of activity. These were slightly off-centre from the original line of the ditch, and the entrance was re-sited slightly to the north. A narrow pebble trackway, surviving for a length of 10m beyond the entrance, sealed elements of the Period 1 entrance structure.

Despite the lack of direct dating evidence for the Period 1 enclosure, it may be attributed to the Iron Age on morphological grounds. A limited quantity of Iron Age pottery, burnt clay, daub and slag was recovered from the Period 2 and 3 ditches, perhaps hinting at a first settlement within.

3 Duncote Farm, SA 46 (SJ 578113)

The cropmark of a rectilinear enclosure was previously evaluated by magnetometer survey and trial-trenching in 1988. An area of approximately 1,000m^2 was opened to investigate approximately half of the area of the enclosure threatened by road construction. Five periods of activity have been provisionally defined (fig 14).

Period 1 was represented by shallow field boundaries which did not follow a common orientation. Their abandonment was followed by a network of a small, well-defined, linear ditches forming a lattice arrangement defining small fields 200-400m^2 in size (Period 2). The coarse wares recovered from the fills of these features provide a 3rd century *terminus*. Period 3 is represented by possible field boundaries, although no relationship could be established between these and later features.

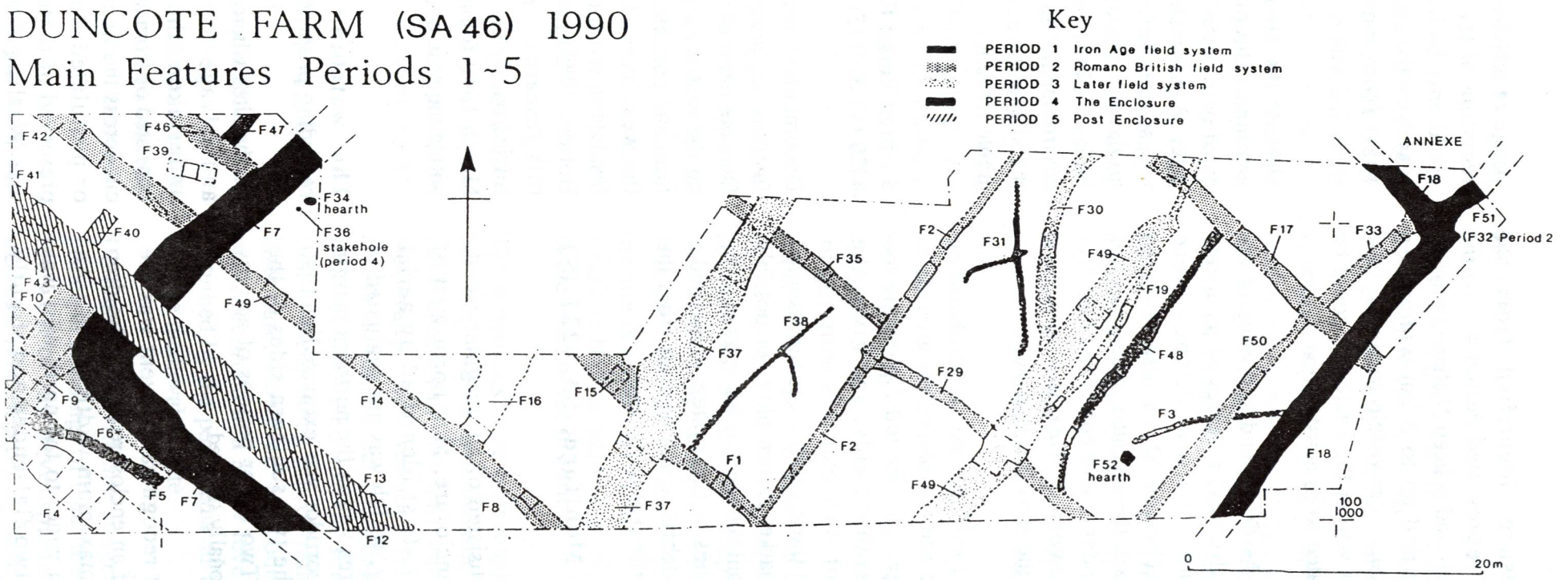


Figure 14 Duncote Farm

An enclosure, identified from the cropmark, represented Period 4. To the west its ditch had a steep V-shaped profile, 1.5m deep and up to 3.2m wide and a series of recuts were visible within the fills. No features within the enclosure could be directly related to its construction or use.

Following the disuse and silting-up of the enclosure ditches, a series of parallel, intercutting, shallow ditches were excavated (Period 5). These features probably mark the repeated re-statement of a field boundary, and contained heavily-abraded Severn Valley wares with a *terminus* in the early 3rd century.

The Period 1 evidence may be attributed on stratigraphic and morphological grounds to the Iron Age. The Period 2 plots are too small for arable fields, and given the proximity of Wroxeter it is tempting to suggest that these small units represented individual market-garden plots, or possibly the pens of animals reared for market. The eastern ditches of this system contained a quantity of debris which derived from the presumed settlement to the east.

4 Preston Montford, SA 4237 (SJ 437143)

This site consisted of an irregular-sided, hexagonal enclosure, 5km north-west of Shrewsbury, first identified by aerial photography, which was not evaluated in 1988. An area within the northern margin of the road corridor was excavated in 1990 to expose the two southern sides of the enclosure. Two major periods of activity were provisionally defined.

The earliest recognisable event was the excavation of an enclosure ditch 1.3m deep and with a maximum width of 3m. An entrance, 6m wide, to the north-west was defined by two flat-ended and slightly inturned ditch terminals. A second distinct period of activity was marked by the partial recutting of the earlier ditch. The recut could only be identified along part of the length of the earlier ditch. No features, apart from modern field drains, were identified within the enclosures.

Despite the almost total lack of datable artefacts, the primary enclosure can be dated on morphological grounds to the Iron Age. A protracted period of abandonment is suspected before the ditch was recut but no datable artefacts were recovered. The lack of plant remains recovered from environmental sampling may indicate that the site was not directly connected with arable farming.

5 Upton Forge Farm/Duncote Farm, SA 4320 (SJ 570115)

Documentary research by the Ironbridge Institute suggested the former presence at Duncote Farm of a post-medieval watermill on the east bank of the River Tern, and a farm and possible ironworking complex on the west bank. Evaluation work by the Institute in the summer of 1989 (Clark and Horton, 1989) lent supporting evidence to this research. However, excavations carried out by the Institute in February and March 1990 found no trace of either site within the road corridor (Clark 1990).

The watching brief and salvage recording programme

Of the sites where smaller-scale excavation and salvage recording work has been undertaken, the largest single group consisted of Roman roads. The new bypass cut across the line of at least seven known or postulated Roman roads. The best preserved of these, as one might expect, was Watling Street East, (SA 99, SJ 61801059) which was sectioned about 1 km

to the east of Overley Hill, near Wellington.

A section across the northern defences of a large Roman marching camp with annexe at Uffington (SA 124, SJ 52571312) also revealed evidence of previously unsuspected prehistoric activity. Another previously unknown site which came to light during the preparation of a road contractor's spoil tip was a small 19th century ironworking site at Pulley Common (SJ 47320957), probably a smithy servicing the documented coalmining industry in the surrounding area.

Other sites monitored during the road construction have ranged from prehistoric field systems to sections of the Shrewsbury branch of the Shropshire Union Canal.

Conclusion

The evidence gathered by the excavation programme should throw further light on many of the questions posed in the original research design for the A5 Project (Watson, 1989) regarding rural economy and land use in the Wroxeter region in the later prehistoric and Romano-British periods.

The project organisers would like to take this opportunity to thank the many organisations and individuals whose efforts have contributed to the success of the A5 Project.

Cane, J, and Watson, M D, 1988 *The A5/A49 Shrewsbury Bypass: An Archaeological Evaluation* BUFAU

Clark, C, and Horton M, 1989 Duncote F Farm, Atcham: An Archaeological Evaluation *Ironbridge Institute Research Paper* **41**

Clark, C, 1990 Duncote Farm Atcham: Site Narrative *Ironbridge Institute Research Paper* **52**

Ellis, P, Hughes, E G, and Jones, A E, *A5/A49 Shrewsbury Bypass Archaeological project 1989/1990: Site Narratives* BUFAU

Watson, M D, 1989 *The Wroxeter Hinterland - a research design with specific reference to the proposed A5 Shrewsbury bypass archaeological project* unpublished

Hugh R Hannaford, Leisure Services Department, Shropshire County Council

Gwilym Hughes and Alex Jones, Birmingham University Field Archaeology Unit

Shrewsbury, 17 Market Street (SJ 490124)

An archaeological evaluation was carried out at 17 Market Street, Shrewsbury in advance of a proposed development which would entail the demolition of the existing 19th and 20th century buildings. However, the site is on, or very close to, the site of Charlton Hall, a major medieval residence in the heart of the historic town.

Three trenches were excavated within the building prior to its demolition. Numerous post-medieval pits and one probable medieval pit were recorded.The evaluation also demonstrated that a length of sandstone wall incorporated into the southernmost wall of the building was of 18th century or later date. However, a second sandstone wall, recorded at a lower level, had been disturbed by the post-medieval features and may be medieval in date.

Documentary evidence suggests that the principal buildings of Charlton Hall lay to the west of the development site. The medieval rubbish pits may have been dug at the rear of documented tenements fronting

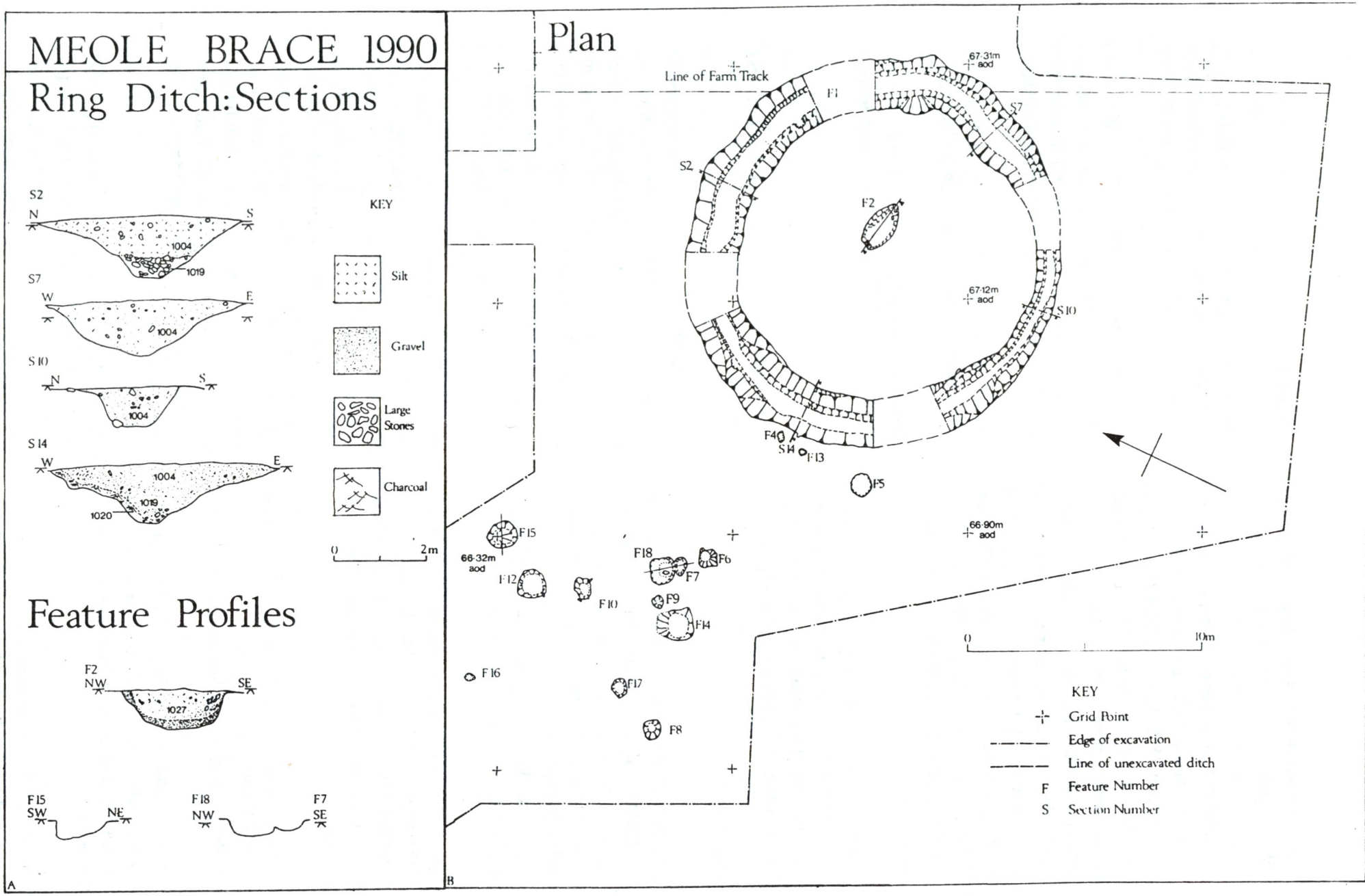


Figure 15 Meole Brace plan and sections

onto Market Street and the short length of wall may be the surviving fragment of a boundary wall separating two medieval properties.

Baker, N J, Buteux, S, and Hughes, E G, 1990 *17 Market Street, Shrewsbury: An Archaeological Evaluation* BUFAU

E G Hughes, Birmingham University Field Archaeology Unit

Shrewsbury, Meole Brace (SJ 492103)

The excavation of a Bronze Age ring-ditch and cremation cemetery at Meole Brace was carried out as a response to the threat posed by the construction of a retail shopping complex. Two possible ring ditches were originally identified from aerial photographs. However, the northernmost could not be identified and the cropmark is presumed to have been of natural origin.

The excavated ring ditch (fig 15) was 16m in diameter and up to 2.5m wide. It had a V-shaped profile with a surviving depth of up to 0.75m. The irregular plan of the ditch suggested that it had originally been excavated in a series of sections. Similar chordal plans have been identified at Bromfield also in Shropshire (Stanford 1982 and Leach 1989). An oval pit in the approximate centre of the feature did not contain any evidence for a burial, although it is possible that robbing has taken place. No evidence for a central mound was recovered. If one originally existed it would appear to have been destroyed by subsequent ploughing.

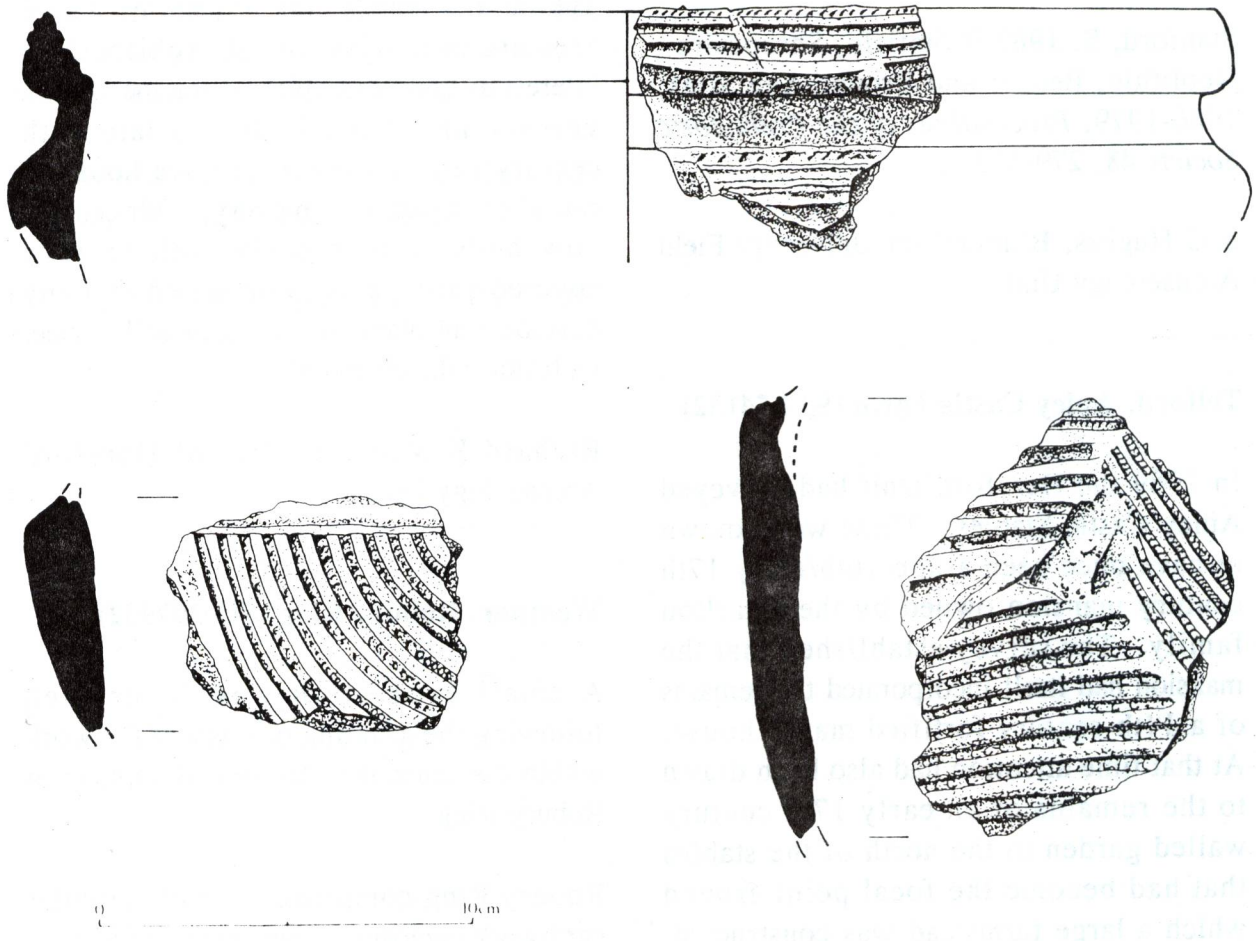


Figure 16 Meole Brace ring ditch - pottery

Fourteen small subcircular pits were identified and excavated to the west of the ring ditch. They had an average diameter of 0.7m and depth of 0.16m. Eight contained fragments of pottery and two contained small fragments of cremated bone. The pottery (fig 16) represents at least 6 food vessels and 1 or 2 biconical urns, although only one pit produced more than just a few fragments. The burnt character of the fills of many of these features suggested that they may represent redeposited material from fires, possibly funerary pyres.

Cooper, M, and Leach, P J, 1990 *The Excavation of a Bronze Age Ring Ditch and Cremation Cemetery at Meole Brace, Shrewsbury* BUFAU

Leach, P J, 1989 *Bromfield, the excavation of Ring-Ditch B8, 1989: An Interim Report* BUFAU

Stanford, S, 1982 Bromfield, Shropshire - Neolithic, Beaker and Bronze Age Sites, 1966-1979, *Proceedings of the Prehistoric Society* **48**, 279-320

E G Hughes, Birmingham University Field Archaeology Unit

Telford, Apley Castle Farm (SJ 654132)

In 1989 the Hereford Unit had surveyed Apley Castle Stables. These were known to have once been a late 16th/early 17th century mansion owned by the Charlton family. The survey established that the mansion had itself incorporated the remains of a 14th century fortified manor house. At that time attention had also been drawn to the remains of an early 17th century walled garden to the north of the stables that had become the focal point around which a large farmstead was constructed. In 1990 Telford Development Corporation funded a survey of the farmstead so that an understanding of its development could be obtained prior to any development proposals.

The survey established that a substantial amount of the original garden wall survived, some sections still free-standing, others incorporated into the fabric of later buildings. The walled garden would have been square in plan, each side being approximately 47m long. The wall itself was built of fairly small hand-made bricks in a three-leaf "English Garden Wall" bond. It was topped by a triangular sectioned stone coping and would have been at least 2.8m high. A single blocked door survives in one corner. This has chamfered stone jambs and a square head, identical to those used in the nearby mansion. The position of one other doorway was also found.

The farm buildings built around the walled area are in themselves of architectural interest as good examples of the local brick vernacular. They include a late 18th century barn, a dovecot, an ice house, a cart shed, a stable, a piggery, 19th century cowsheds, and an early 20th century covered yard. It is to be hoped that any development plans for the farm will respect its historic development.

Richard K Morriss, City of Hereford Archaeology Unit

Wentnor, Robury Ring (SO 397932)

A small excavation was undertaken following the granting of consent for work within the scheduled Ancient Monument at Robury Ring.

Robury Ring comprises a small, circular earthwork enclosure, approximately 90m in diameter, and is believed to be of late prehistoric date.

A 7m^2 area was threatened by the proposed extension to the main farmhouse building, which appears to have been constructed on the line of the south-west corner of the inner ditch and rampart. Very little remains of these features apart from slight changes in slope.

Following the removal of the topsoil from the threatened area, a ridge of blocky yellow clay was visible corresponding with the suggested position of the rampart. Several fragments of soft, coarse-tempered pottery were recovered from the base of the topsoil. Although they were all undecorated body sherds, it is thought that they are from a medium-sized Bronze Age cremation urn rather than from an Iron Age storage jar (Woodward 1990) suggesting a relatively early occupation of Robury Ring.

Hughes, E G, and Jones, L, 1990 *An Archaeological Field Survey and Excavation at Robury Ring, Shropshire, 1989-90* BUFAU

Woodward, A B, 1990 The Pottery in Hughes, E G, and Jones, L, 1990

E G Hughes, Birmingham University Field Archaeology Unit

STAFFORDSHIRE

Barton-under-Needwood, Tucklesholme Farm (SK 210188)

An archaeological evaluation involving a geophysical survey and the excavation of several trial trenches was undertaken at Tucklesholme Farm approximately 2km east of Barton-under-Needwood.

Several cropmarks had been identified on aerial photographs including those of two possible ring ditches, one of which had been previously investigated by the Trent Valley Archaeological Rescue Committee in 1975.

A series of intersecting evaluation trenches were excavated in the area of the plotted cropmarks and anomalies detected during the geophysical survey. No features corresponding to the suggested northern ring ditch were identified. However, the previously investigated feature was relocated and a further four sections were partially or fully excavated through its fills. The ring ditch had a diameter of 30m and was up to 3m wide. The ditch had a V-shaped profile and was cut to a depth of 1.7m below the surface of the natural gravel. Two inner concentric ditches were identified. These were shallow features approximately 0.15m deep and 0.6m wide. A possible post setting within one of these features suggested that they may have held rings of posts. A central feature was identified but was found to have been previously investigated. It is possible that this originally held a primary burial. There was little or no trace of a central mound. If one originally existed it would appear to have been destroyed by subsequent ploughing.

Although no datable artefacts were recovered, it is thought that the ring ditch represents the quarry ditch for a Bronze Age round barrow. It is expected that a further investigation of the feature will be carried out before its destruction by the propsed gravel extraction.

Hughes, E G, 1990 *An Archaeological Evaluation of a Ring Ditch at Tucklesholme Farm, Staffordshire 1990* BUFAU

E G Hughes, Birmingham University Field Archaeology Unit

Burslem relief road (SJ 866497)

A watching brief has been undertaken during the course of the construction of the Burslem relief road. Post-medieval pottery finds in the vicinity of Wycliffe Street have included Blackwares, Slipwares, Stonewares and Yellow Wares, dated from 1680-1720. These finds are close to the Woodbank Street Site excavated in 1975 (Greaves 1976).

A separate application for an access road close to these areas has resulted in the developers funding an excavation in advance of development. This work is currently on-going.

Greaves, S J, 1976 *City of Stoke-on-Trent Museum Archaeological Society Report* **10**

W D Klemperer, Stoke-on-Trent Museums, Arts and Heritage Department

Hulton Abbey (SJ 90534916)

The fourth season's excavation at Hulton Abbey concentrated on the nave, and the north transept. The church site is not deeply stratified; medieval layers representing silting, patching, floor preparations and destructions have been recorded. These layers tend not to be extensive due to a degree of truncation. Fragmentary evidence of multiple floor surfaces has been recorded in the north transept and nave.

No graves have yet been discovered in the nave or aisles, although some have been excavated in the north transept and crossing. At least four out of these 23 skeletons had accompanying staffs and one had leather shoes and a badge or seal. When fully reported, these graves will add to our knowledge of the "pilgrim" tradition of burial, established in the Midlands at Sandwell (Hodder 1987, 14) and at Worcester (Lubin 1990).

Work on a tile report is underway, and specialist work continues including skeletal analysis, archaeobotany, pollen analysis, and landscape structure.

The excavation of the church will continue in 1991/2 season.

Hodder, M, 1987 *Sandwell Valley Report* **5**

Lubin, H, 1990 *The Worcester Pilgrim* Worcester Cathedral Publication **1**

W D Klemperer, Stoke-on-Trent Museums, Arts and Heritage Department

Kings Bromley (SK 134166)

A small evaluation was carried out prior to the widening of a section of the A513, 0.5km to the east of Kings Bromley.

The work was prompted by cropmark evidence which suggested that sections of three pit alignments were threatened by the road widening scheme. Geophysical surveys also produced anomalies suggesting the presence of buried features.

Two trenches were excavated across the projected line of the features. However, despite careful cleaning, no features corresponding to the shape and dimensions of the pits suggested by the cropmarks and the geophysical surveys could be identified. It seems likely that the alignments are interrupted just before reaching the area of the evaluation and do not actually cross the area under threat.

Hughes, E G, 1990 *King's Bromley, Staffordshire: An Archaeological Evaluation Alongside the A513* BUFAU

E G Hughes, Birmingham University Field Archaeology Unit

Lichfield, Cathedral Close (SK 116097)

The evaluation, originally reported in *West Midlands Archaeol* **32**, was completed in spring 1990. Both faces of the mortared medieval sandstone "garden" wall to the rear of 19 Cathedral Close have been excavated to foundation level, and the exposed dressed stone and original architectural features have been drawn and recorded. Further trenches were excavated perpendicular to the wall to provide an understanding of the sequence of archaeological deposits both to the north and south of the standing wall.

Following an initial appraisal of the results, the sequence may be summarised as follows:

Period 1: Prehistoric
A charcoal-rich horizon, containing a quantity of worked flint flakes, immediately overlying natural sandstone, may parallel more extensive neolithic activity to the west (Carver 1980-1).

Period 2: Early medieval
The earliest definable activity was the repeated dumping of quantities of sand into the northern edge of the Minster Pool. This land reclamation may be dated to the early 12th century by reference to historical parallels. Domestic rubbish was dumped over water-lain silts accumulating at the edge of the pool.

Period 3: Later medieval
A massive sandstone ashlar building was constructed in the 14th-15th century, jutting out into the marshy area bordering the Minster Pool to the south. The south wall of this imposing structure, which had partly survived as a garden boundary wall, was excavated and recorded during the evaluation. The building extended to the modern Dam Street frontage to the east, but the northern and western walls were not located. The structure was divided internally by a wattle-and-daub partition keyed into, and perpendicular to, the south wall. A garderobe chamber and double garderobe shaft in an intra-mural passage were exposed in the south (internal) elevation. This passage was unusually long, and may suggest a ground-floor layout determined by first floor arrangements, possibly including a garderobe shaft immediately above on the upper floor. The provision of a number of toilets, and the quality of the internal architectural features suggests a possible use of this structure as a sub-divided lodging for clerical visitors. This interpretation is consistent with the location of the structure close to the Cathedral itself, and adjacent to one of the medieval gateways to the Close.

Period 4: 17th century
The building was ruined in, or by the 17th century. The south elevation collapsed outwards and was rebuilt, and a possibly contemporary brick structure was built, overlying the levelled-down intra-mural passage.

Period 5: Later post-medieval
The upper levels of medieval stratigraphy, including floors, were scoured-out and replaced by up to 2m of imported soils, not later than the 18th century. Small brick outhouses were constructed, overlying the medieval wall, and a formal garden was laid out to the rear of 19 The Close.

Carver, M O H, 1980-1 "Excavations south of Lichfield Cathedral" *Trans South Staffs Arch and Hist Soc* **XXII** 35-69

Jones, A E, 1990 *Lichfield Cathedral Close Archaeological Evaluation (Stages 1-4) 1989-1990* BUFAU

A E Jones, Birmingham University Field Archaeology Unit

Rocester, Orton's Pasture (SK 110394)

Geophysical survey, field inspection and trial trenching was undertaken at Orton's Pasture ahead of a proposed housing development. To the north of the site was located a substantial complex of Romano-British features, probably representing two phases of enclosure, which may represent an annexe to this fort. The pottery would indicate a date broadly contemporary with, or slightly later than, the latest Roman military activity further to the north (*West Midlands Archaeol* **28-30**).

Ferris, I M, and Jones, A E, 1990 *An Archaeological Evaluation at Orton's Pasture, Mill Street, Rocester, Staffordshire* BUFAU

Iain Ferris, Birmingham University Field Archaeology Unit

Stafford, Stafford Castle (SJ 901223)

Further excavation was carried out on site B in the castle inner bailey, previously excavated between 1979 and 1988 (Gale J. 1988, 23-24).

19th century landscaping activity appeared to have destroyed the front of the rampart, large quantities of 19th century peg-tile were found in the backfilled cut which may have been intended for tree planting.

A significant sequence of late 11th to early 12th century domestic refuse pits were recorded and sampled. The fills contained large quantities of animal and fish bone as well as Stamford ware and local coarse pottery.

The pit sequence was partly contemporary with a large timber structure located at the south-western terminal of the rampart which overlooked both the motte and bailey ditches. The structure, which is interpreted as a tower base measured approximately 5.5m by 7.0m the large square timber uprights measured 0.35m by 0.20m and lay in post pits approx 1.5m square. The south west corner of the structure had been disturbed by the 19th century landscaping. A single line of posts lay south of and parallel to the timber tower. This may have belonged to the palisade timber defences, since it also lay parallel to the motte ditch. A ro robbed wall terminal and buttress were found east of the tower and north of the postline but parallel to both. The backfilled debris in the robbed trench included masonry and mortar fragments and 12th century pottery, including 35 sherds from a single developed Stamford ware pitcher.

A section cut across the rampart proved it to have originated as a simple bank which had been thickened by two subsequent additions against its internal face. This effectively decreased the internal area of the bailey but created a terraced rampart platform. Construction of the primary bank was shown to have been started some way around the circumference of the circuit - not at the terminal. No evidence for timber lacing or other internal structures was found.

Beneath the rampart a truncated buried ground surface was revealed. This produced well-preserved bone and coprolites, probably of scavenging animals, together with both Roman and Norman pottery. It was interpreted as scattered midden of the late 11th century construction phase of the castle.

Gale, J, 1988 Stafford Castle, *West Midlands Archaeol* **31**

Simon J N Tomson, Archaeology Section, Stafford Borough Council

Stafford, Roman site adjacent to Stafford Castle (SJ 898226)

Fieldwalking was undertaken in fields to the north and north-east of Stafford Castle. One site proved to be of particular interest, producing approximately 1,000 sherds of Roman pottery dating from *c* 280AD to 350AD. A late first century "Dolphin" type brooch may suggest earlier occupation. Less than 1kg of Roman building materials was found on the 150m^2 site.

A small number of prehistoric flint artefacts were also recovered; these included a finely flaked neolithic leaf-shaped arrowhead, a late neolithic/early Bronze Age scraper, along with a blade core and a few flakes.

Nick Thomas, Stafford Borough Council

Stoke Town Hall (SJ 879454)

A watching brief on the site of the new Town Hall noted up to 4m of build-up as a result of dumping by the Spode factory. Marked pots only were recovered which are now the subject of continuing specialist work.

W D Klemperer, Stoke-on-Trent Museums, Arts and Heritage Department

WARWICKSHIRE

M40 Survey

The M40 motorway linking London and Oxford with the M42 near Birmingham became fully operational early in 1991. The route crosses Warwickshire from the parish of Shotteswell near Banbury in the south-east, to the parish of Tanworth in Arden in the north-west, a distance of 41.5km, passing just to the south-west of Warwick (fig 17).

A fieldwalking survey was undertaken in advance of construction work over the route of the M40 through Warwickshire (*West Midlands Archaeol* **30**, 55), together with a short stretch of approximately 135m which runs through the Oxfordshire parish of Mollington (and is included here for completeness). As well as the initial examination, all stretches of the motorway route were visited three times during topsoil stripping and earthmoving operations, with some areas being examined repeatedly. Most of the fieldwalking was carried out in combination with a metal detector to locate metal finds, with some discrimination against iron objects.

A number of rescue excavations were carried out which have yet to be published in full and some of these have relevance to this survey. These include the investigation of a number of lengths of the Hobditch linear earthwork; excavation at Lapworth of three Roman pottery kilns and other structures (*West Midlands Archaeol* **31**, 33); the excavation of a prehistoric settlement enclosure at Park Farm, Barford (*West Midlands Archaeol* **31**, 26); a section through the Fosse Way Roman road near Chesterton (*West Midlands Archaeol* **32**, 87) and a major excavation of the threatened part of the deserted medieval market village at Burton Dasset Southend (*West Midlands Archaeol* **31**, 28-32).

Summary of results and interpretation:

Several artefact concentrations and find spots have been identified (fig ?). These can be summarised as follows:

1 Lapworth parish (SP 185697)
(*West Midlands Archaeol* **30**, 46-7)

Celtic and Roman finds consisted of pottery, coins, metalwork and a Roman glass bead and ranged in date from 1st century AD to the 4th century AD. This was a known site of Roman tile and pottery kilns which as a result of the fieldwalking surveys has been found to be a larger industrial complex than was previously thought. The kilns probably served local sites in the Avon Valley. An Iron Age presence was indicated, but it is not clear whether this represented earlier occupation or native craftsmen working within a Roman manufacturing centre. The prehistoric flints point to some earlier activity on the site, but any settlement probably lies off the course of the motorway.

2 Shrewley parish (SP 214665)

Three neolithic or Bronze Age flints.

3 Shrewley and Hatton parishes (SP 226655)

Find spot of a single Neolithic or Bronze

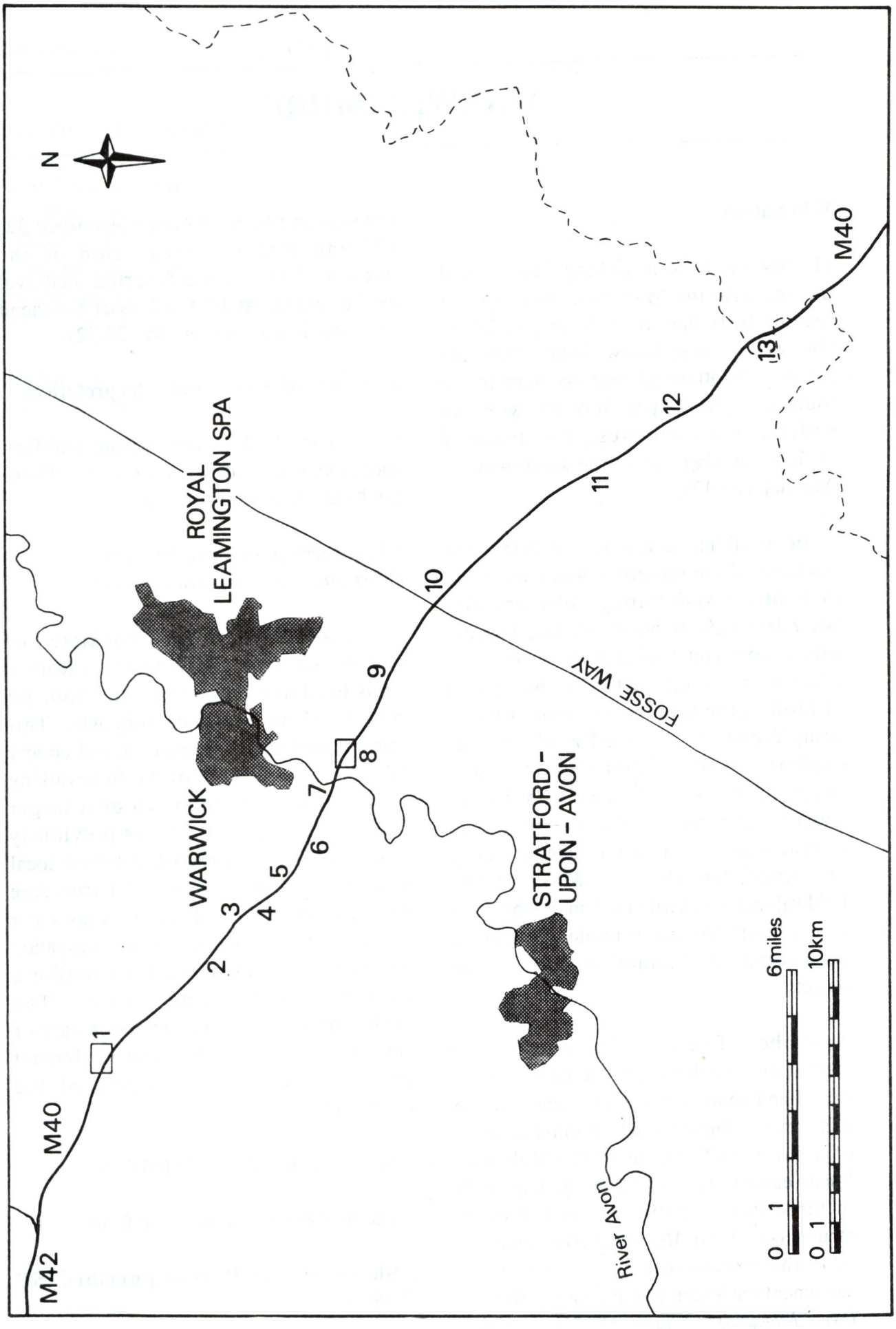


Figure 17 Location of sites

Age flint, Roman pottery, post-medieval and undated pottery.

4 Budbrooke parish (SP 231650)

Finds included eight prehistoric flints; a 14th or 15th century pewter pilgrim's badge and a post-medieval decorative pewter spoon terminal.

5 Budbrooke parish (SP 235642)

Small numbers of Iron Age (four probable sherds) and Roman (eight sherds) pottery, suggest settlements of those periods not very far from the find spot.

6 Budbrooke parish (SP 247633)

Find spot of 10 neolithic to Bronze Age flints and undated pottery. A deserted medieval settlement (WA 1766) is known from a field adjacent to the site at SP 242635.

7 Sherbourne and Warwick parishes (SP 262626)

Roman finds dating from the 1st century AD to possibly the late 4th century AD. It seems likely that the M40 passes through the edge of a previously unknown Roman domestic site.

8 Barford, Bishop's Tachbrook parish (SP 289618)

Finds from an area immediately adjacent to the Park Farm late Bronze Age to early Roman enclosed settlement (SP 292616, WA 700) included 120 prehistoric flints, together with Iron Age and Roman pottery. Given that there were no structural features observed in association with this major concentration of finds it is possible that this site represents a peripheral flint-working area or dump contemporary with one of the phases of the settlement site. The Roman pottery could represent later activity on the site or possibly continued Romano-British occupation of the homestead enclosure. A prehistoric ritual and settlement complex is also known in the Barford area; the M40 excavations and fieldwalking surveys have considerably enlarged the known extent of this focus of activity.

9 Bishop's Tachbrook parish (SP 310600)

Two neolithic or Bronze Age flints.

10 Chesterton and Kingston parish (SP 335583)

A site located just to the south of a suspected Romano-British building on Barn Hill (WA 4527 at SP 338581), close to the Romano-British small town on the Fosse Way at Chesterton (WA 798). Finds included ten prehistoric flints and 35 sherds of Roman Severn Valley ware, greyware and oxidised pottery, dating from the early 3rd century AD to the mid-4th century AD. There were no features observed at site 10 and the domestic nature of the pottery suggested that it derived from the settlement in the vicinity of Barn Hill, or possibly from other buildings associated with ribbon development along the Fosse Way.

11 Burton Dassett parish (SP 385521)

Fieldwalking in the area to the north-west of the medieval settlement at Burton Dassett Southend produced finds including two sherds of Roman greyware and a Roman coin. From the area of the 1986-88 excavations there was a medieval coin, a late medieval horseshoe and a possibly medieval bronze strap-end hook or clothes fastener. The medieval finds date from the late 13th to early 16th centuries. The Roman finds, together with others from the excavation, indicate a site in the vicinity.

12 Avon Dassett parish (SP 402496)

Two Late Neolithic or Bronze Age flints and a rim sherd of 14th or 15th century pottery.

13 Mollington parish, Oxfordshire (SP 427471)

Find spot of eight flints, 39 pieces of medieval pottery, five pieces of post-medieval pottery and three fragments of tile. The comparatively large collection of medieval pottery indicated that a medieval site probably lies close by, whilst the Roman pottery can be interpreted as manuring scatter. Reports of further Roman pottery at SP 424471, comprising samian, colour coated wares, *mortaria* and greyware may represent a Roman domestic site or be more evidence of manuring. The flint finds (eight flints) from site 13 and the late Bronze Age hoard found approximately 150-200m away at Lower Farm indicated a possible prehistoric site in the area.

Conclusions

The survey has produced evidence for four important sites: at Lapworth (1, fig ?), Warwick (7), Barford (8), and Chesterton (10). Of these, the site at Warwick was previously unknown. The remaining nine sites could be more accurately described as find spots rather than conventional sites as the numbers of finds are fairly low. Flint tools indicate prehistoric activity rather than settlement sites and pottery scatters are more suggestive of manuring of agricultural land during the Roman, medieval and post-medieval periods.

The M40 survey has demonstrated a relatively uniform level of prehistoric activity in Warwickshire as evidenced by the flint finds, and has confirmed the importance of known Roman and medieval concentrations of settlement and industry.

David Adams, Derek Jenkins and Julia Wise

Atherstone, Anglo-Saxon *sceat*

M Longfield discovered a *sceat* when metal detecting south of Atherstone. The obverse shows a head to right but the features are difficult to make out. The reverse shows a standard having within the square three crosses pommee in three angles and a triangle of pellets in the fourth; a pelleted annulet in centre and pellets between the crosses. Outside the pelleted square on each of two adjoining sides can be seen a cross pommee between four pellets; the other crosses are off the flan. This type is *BMC* 3a and Rigold Series G and has been discussed in Williams (fig 106b). Michael Metcalf who has seen this silver coin considers it an official issue, rather than a derivative piece, and suggests its origin might be Quentovic in northern France. It can be dated to the second quarter of the eighth century.

Keary, C F, 1887 *Catalogue of Anglo-Saxon Coins in the British Museum* 1,6

Rigold, S E, 1977 The Principal Series of English Sceattas *British Numismatic Journal* **47**, 27

Metcalf, D M, in Williams, J H, 1979 *St Peter's Street, Northampton: Excavations 1973-1976*, 243-4

W A Seaby, Warwickshire Museum

Bidford-on-Avon, Prehistoric flint tools from Tower Hill (SP 1052)

Between 1985 and 1990 over 50 flint artefacts of neolithic or Bronze Age date have been found in the vicinity of Tower Hill, Bidford. The majority are worked

flakes, but there are a few examples of recognisable tool types including blades, knives, scrapers and a single leaf-shaped arrowhead.

During 1990 R J Laight collected a further 80 flint artefacts from Tower Hill. Over half are simple worked flakes, but some 27 display varying degrees of retouch and may be classified as scrapers, while three are borers, two blades and one, a transverse arrowhead. There are also two possible microliths. The significance of these finds lies in their providing evidence for possible Neolithic settlement in this part of the Avon valley.

Philip J Wise, Warwickshire Museum

Bidford, Tower Hill, Iron Age gold coin (SP 1052)

L Phillips, using a metal detector found a gold stater on this hillside. It is of the Atrebatic Abstract type (Van Asdell 216-1; Allen British QB) having a blank convex obverse, and on the concave reverse a disjointed Celtic horse right with wheel below body and various other symbols in the field. These coins have been dated to the time when Caesar came to Britain in 54BC but Allen and Mack placed them somewhat later, *c* 40-20BC. However that may be, they are certainly the inspiration of the Dobunnic types having triple-tailed horses which were struck somewhat later in the century. It weighs 5.135g.

Van Arsdell, R D, 1989 *Celtic Coinage of Britain,* 115

Allen, D E, 1958 The Origins of Coinage in Britain, A Reappraisal Frere, S S, (ed) *Problems of the Iron Age in Southern Britain,*

Mack, R P, 1975 *The Coinage of Ancient Britain,* 44

W A Seaby, Warwickshire Museum

Bidford-on-Avon, A Romano-British Brooch from Marlcliff (SP 0950)

A very good example of a rosette or thistle brooch (Collingwood Group W) has been found at Marlcliff by R J Laight. The brooch has been cast in a one-piece mould and comprises a tubular head, which contains the spring, a short ribbed bow, a circular plate and a fantail-shaped, ribbed leg. It measures 57mm long, is slightly damaged and is a mature specimen dated to around AD43. This is an unusual find in Warwickshire, the main concentration of rosette brooches being in the Colchester area. Five other Romano-British brooches have been found at Marlcliff this year, all of 1st century date.

Collingwood, R G, and Richmond, I, 1969 *The Archaeology of Roman Britain* 293

Philip J Wise, Warwickshire Museum

Bidford, Field off Stratford Road, Anglo Saxon *sceat*

L Phillips using a metal detector, discovered a "porcupine" *sceat* in relatively fine condition in an area where coins of Offa and Coenwulf, late 8th and early 9th centuries, have been found in recent years (*West Midlands Archaeol* 1988). It is of Rigold Series E and Metcalf G3. For a corpus of the variety see Blackburn and Bonser, p100, and especially no 24 on the plate which shows a die duplication of Phillips' obverse. Dr Metcalf, who has seen the coin, considers it a primary coin and of good silver.

Rigold, S E, 1977 The Principal Series of English Sceattas *British Numismatic Jounal*

47, 27

Metcalf, D M, 1966 A stylistic analysis of "porcupine" *sceattas*, *Numismatic Chronicle* **6**, 184

Blackburn, M A, and Bonser, M J, 1988 The "Porcupine" *sceattas* of Metcalf's Variety G *British Numismatic Journal* **57**, 99-103

W A Seaby, Warwickshire Museum

Bidford-on-Avon, excavation of part of an Anglo Saxon cemetery, WA 605 (SP 099518)

The existence of a large Anglo-Saxon cemetery in Bidford has been known since the 1920s, when some 214 burials were excavated. A watching brief was undertaken during construction of a car park at the rear of the Anglo-Saxon public house, in an area immediately west of the previously known burials. The discovery of further burials during the initial earthmoving operations resulted in a two week excavation, the objective of which was to excavate and record the burials and other features of archaeological interest before the site was completely levelled.

The excavation revealed 17 inhumation burials, some of which had been disturbed by 19th century digging on the site, or by the recent earthmoving. Several of the burials, however, were more or less intact and in some cases the bone was well preserved. One of the burials was of a child, the rest were probably all adults. They were generally supine, sometimes with the hands and/or feet crossed. One body lay prone with the legs bent.

Objects were found in many of the graves. Three of the male burials contained iron spearheads, knives and circular shields, of which the central iron boss survived. Knives seem to have been common in burials of both sexes, and in some cases were the only kind of object buried with the body. Several of the burials, presumably (but not certainly) of women, had brooches of bronze on the shoulders or the chest. Most of the brooches were decorated either with punched or carved patterns, and some were gilded. The richest burials had three brooches, usually a matching pair on each shoulder and a third on the chest, as well as beads (of glass or amber), a knife, and other small objects. One body had a complete pot, with stamped decoration, buried by the head, but otherwise pottery was very rare. The burials are likely to date to the period AD 550-700, but detailed study of the grave goods should refine the dating for some individuals.

An additional discovery at this site was a number of circular pits. These contained no diagnostic material, but definitely predated the graves and are likely to belong to the later prehistoric period. At the eastern edge of the site a ditch was discovered which may have been contemporary with the pits, and could possibly have served as a settlement boundary.

Paul Booth and John Hodgson, Warwickshire Museum

Bushwood, High Chimneys Farm, Iron Age counterfeit coins (SP 1869)

The finding by N Ford, using a metal detector, of the bronze core of a once gilt stater similar in type to that from Bidford, is a reminder of numerous counterfeits which have been recorded from the western Midlands, and one wonders if these pieces were tolerated as low currency by the British inhabitants. Mr Ford also found one of the many British imitations of

Claudian coins, a *dupondius* bearing the head of Antonia, and Claudius sacrificing on the reverse, a crude copy of *RIC* 82, at the same place. As no later Roman coins have turned up there, could this in fact be the site of an Iron Age Farm overthrown by the advance of the troops, or more probably in the aftermath of the Boudiccan rebellion?

Mattingly, H, and Sydenham, E A, (1923) *Roman Imperial Coinage* **1**

W A Seaby, Warwickshire Museum

Great Wolford, Anglo-Saxon penny (SP 2534)

S A Gibbs found an Ethelraed II Long-cross penny by Wulfwine of London (997-1003) when metal detecting in a field to the east of the earthworks during the autumn. It is *BMC* type iva and North 774.

Grueber, H A, and Keary, C F, 1893 *Catalogue of Anglo-Saxon Coins in the British Museum* **2**, 205

North, J J, 1963 *English Hammered Coinage* 1, 111

W A Seaby, Warwickshire Museum

Lunt, Baginton, SP 344752

The University of Warwick and the University of British Columbia, Canada, under the auspices of Coventry Museum Archaeology Unit, undertook the third season of the training excavation in the present five year bloc. Work concentrated on continuing to uncover a length of the western defences and the sequence of defensive ditches. Work will continue in July 1991.

Mancetter (SP 320965)

Another trench, 56m by 5m, within the 1st century fortress immediately to the east of the 1989 trench proved that the outer building line continues (*West Midlands Archaeol* **32**, 90). The presence of another building behind the outer line was also demonstrated. Another ditch was revealed, running north to south, parallel to the ditch found last year but turning east to suggest a corner, again truncating all the earlier structures.

A track with cart ruts heading towards *Manduessedum* was preserved in the ditch sediment, conveniently dated by coin to late 2nd early 3rd century AD.

A pit under the building, had burnt material, which contained barley, emmer and chaff all in a good state of preservation.

K Scott, Atherstone Archaeological Society

Rugby to Ansty, gas pipeline (SP 457759 - SP 391822)

Excavation was carried out of two prehistoric sites and part of a medieval fishpond complex in advance of gas pipe construction:

1 King's Newnham (SP 441772) Area A

A 20m wide swathe was cut through part of a late Iron Age/Romano-British settlement, on 2nd terrace gravels, north of the River Avon. A small sub-rectangular enclosure ditch was located, with a southern entrance and an extension on the east side. The west side had been truncated by post-medieval quarrying. A series of six small pits were located in the interior, each containing heat-cracked pebbles within their fill. Only the largest pit produced evidence of

burning, together with a quantity of daub and burnt clay. No other features had survived within the enclosure and only one small pit and two small post holes were located outside it. The quarrying to the west may well have removed up to 50% of the original extent of the enclosure, hindering interpretation of its nature and function.

2 King's Newnham (SP 436773) Area B

A 10m corridor was excavated through a scheduled barrow cemetery (SAM Warwicks 163), (Webster and Hobley 1964, Site 104). The large, northern ring ditch in a group of three apparently connected by a ditch, was the only cropmark feature affected by the pipeline.

The ditch of the northern ring had been recut at least twice on its north-western quadrant, and once on the south-east. Its width was found to be 4.80m in the north-west quadrant, and 3.00m in the south-east. This narrowing appears to continue around the circuit of the ditch, as previous excavation of the southern quadrant of the ring (Simpson 1968) suggested a maximum width of 0.80m. The ring had an internal diameter of 45m.

A series of linear ditches was found to post-date the ring-ditch. No burials or any other contemporary features were identified within or adjacent to the rings, and only a single sherd of possible Bronze Age pottery was recovered from the ring ditch. A small quantity of Mesolithic and earlier Neolithic flint was recovered from beneath the area of the central mound and a few similar flakes were found in the ditch.

Other features were excavated along the pipeline corridor, including Romano British gullies, undated pit alignments, undated post hole formations and modern ditches. One feature of possible significance to the cemetery was a small curving gully, 2.5m long x 0.6m wide, and surviving to a depth of 0.13m. The fill contained fragments of six separate vessels in the Grimston-Lyles Hill tradition.

3 Coombe Abbey fishponds (SP 406803)

The pipeline corridor, measuring over 30m in width at this point, revealed large dark patches of earth and a patch of particularly dense stone and tile work in an area of fishpond earthworks. Excavation through the stone and tile patch revealed a sequence of 13th-14th century dumping into a steep sided pit, measuring 7.5m by 2m. Further work along the pipe trench revealed a succession of similar pits, although none of the others contained the same type of debris. These pits may have been the result of sand quarrying, as they were cut through pure sand and showed no signs of having been lined. Large linear ditches to the south-east were also examined; these may have been part of the water management system for the fishponds.

Webster, G, and Hobley, B, 1965 Aerial reconnaissance over the Warwickshire Avon, *Archaeological Journal* **CXXI** (1964), 1-22

Simpson, D D A, 1969 Site No 104, Kings Newnham, Bretford, Warwickshire, *Avon Severn Valleys Research Project Report* **5** (1968-9)

Stuart Palmer, Warwickshire Museum

Wolston Fields Farm, archaeological evaluation (SP 440752)

An evaluation was undertaken, in advance of an application for gravel extraction. Some 70ha of mixed arable on 1st, 2nd and 4th river terrace deposits immediately south of the River Avon were examined.

Approximately 45ha of suitable fields were walked, and the entire area was subject to a magnetometer "scanning and susceptibility" exercise, with limited areas of intensive gridded study. Some 9466m^2 of trial trenches were excavated across the site.

Trenches through a sub-rectangular enclosure (WA3416) at the north-east end of the site produced a few sherds dating to the later 1st millennium BC, and a similar date could be assigned to a variety of pits, ditches and post holes found within a 150m radius of the enclosure. At the south-west end of the site a large recut ditch was located, which enclosed a series of storage pits, gullies and hearths spread over an area of 2-3ha. Pottery recovered from these features was within the date range 800-500 BC. No evidence of these features had been revealed by aerial photography, probably because they were partially covered by the remains of medieval ridge and furrow. The central, lower-lying areas of the application site contained a variety of sterile pits and gullies, some of which may represent parts of field systems contemporary with the later 1st millennium settlement.

A buried soil horizon with related waterlogged pits under 0.5m of redeposited clay remains undated, but possibly indicates the existence of further settlement in the central area of the site.

It is conceivable that the area of the application site forms part of a previously unidentified settlement/land unit associated with either of the two late Bronze Age cremation cemeteries excavated to the south and south-west of the site (Bateman 1978; Chatwin 1944).

Bateman, J, 1978 A late Bronze Age cremation cemetery and Iron Age/Romano-British enclosures, Ryton-on-Dunsmore, Warwickshire, *Trans Birmingham Warwickshire Archaeol Soc* **88** (1976-77), 9-47

Chatwin, P B, 1949 Prehistoric finds at Wolston, near Coventry, *Birmingham Archaeol Soc Transactions and Proceedings* **LXV** (1943-44), 143

Stuart Palmer, Warwickshire Museum

WEST MIDLANDS

Birmingham Diocese

An assessment was made of the below-ground archaeological potential of the 47 churches of medieval origin in the Diocese. The assessment employed site observation and previous records. The results will be used by the Diocesan Advisory Committee in its consideration of development proposals. Copies of the assessment have been deposited in Sites and Monuments Records for the West Midlands, Warwickshire and Hereford and Worcester as appropriate. I am grateful to the Field Group of the Birmingham and Warwickshire Archaeological Society for their assistance in site observation.

M A Hodder for Birmingham Diocesan Advisory Committee

Birmingham, Lifford Hall (SP 056797)

Mills have been sited at Lifford, close by the River Rea, since at least the 14th century (Demidowicz 1989). In 1989 the excavation of a 19th-century mill (Lifford Mill II) to the north of Lifford Hall was carried out (*West Midlands Archaeol* **32**, 92). In 1990 BUFAU undertook a trial excavation, in advance of construction, on the site of the probable precursor of Lifford Mill II (Litherland 1990). The presence of this earlier mill is indicated by an early 19th-century map, which shows an L-shaped mill building on the line of former mill leats, about 25m north of Lifford Hall. The trial trench did not locate the L-shaped building, which must lie just to the south, in an area unthreatened by the development. However, the excavations

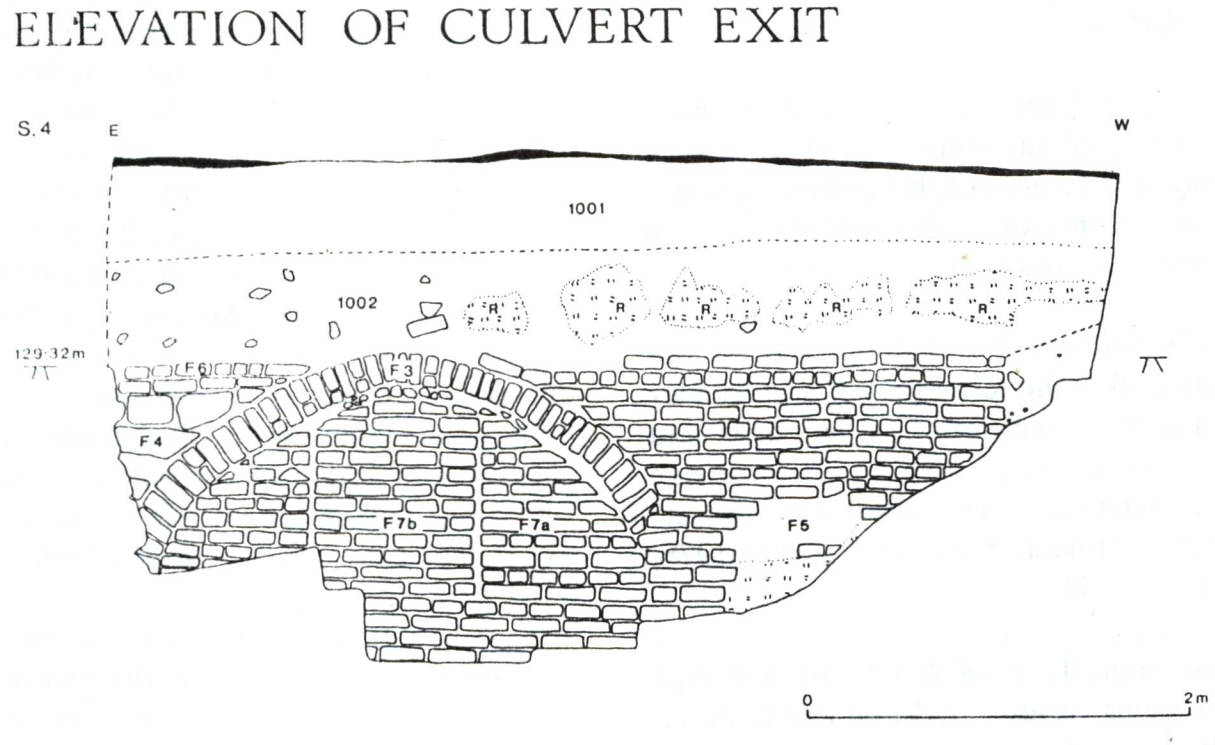


Figure 18 Lifford Mill II culvert exit

did reveal the exit (fig 18), supported by a brick retaining wall, of underground leats running from Lifford Hall (where another mill was sited), and shed some light on the development of the watercourse system at Lifford. A survey of the underground leats, still surviving as impressive stone-lined tunnels, was also carried out.

Demidowicz, G, 1989 *Uncovering the Historical Landscape: the Mills and Hall, Lifford*

Litherland, S, 1990 *An Archaeological Evaluation near Lifford Hall, Kings Norton, Birmingham* BUFAU

Simon Buteux, Birmingham University Field Archaeology Unit

Birmingham, Watermill survey

In 1990 the survey of watermills on the river Rea was completed, but work was interrupted for six months to research the great watermill at the Soho manufactory on the Hockley Brook. This was related to the purchase of Soho House, the former home of Matthew Boulton, by the City Museum. A total of seventeen mills was studied in the documentary record, photographed on site and surveyed where appropriate. Since the last report (Demidowicz 1988) two more mills have been discovered from documentary sources. These are:

Moseley Mill	SP 070837 Salisbury Road
Ladywell Mill	SP 072864 Ladywell Walk

Both these mills were in use for a short period in the latter half of the 18th century.

The remaining Rea mills studied were as follows (travelling downstream):

Lifford Mill I	SP 05657965
Lifford Mill II	SP 05717972
Hazelwell Mill	SP 05718099
Dogpool Mill	SP 05978206
Moor Green Mill	SP 06148303
Cannon Hall Mill	SP 06838408 (discovered 1987)
Edgbaston Mill	SP 08568405
Speedwell Mill	SP 07128501
Malt/Moat Mill	SP 07488645
Town Mill	SP 07608637
Heath Mill	SP 08198664/ 08208664
Willett's Meadow	SP 085869
Duddeston Mill	SP 09138782
Saltley Mill	SP 09388801
Nechells Park Mill	SP 09558955

In 1989 Lifford Mill and in 1990 Lifford Mill I were excavated ahead of major development (*West Midlands Archaeol* **32**, 92 and 89 above). Agreement was reached last year for an archaeological evaluation of the site of Edgbaston Mill, prior to its development as a hotel, leisure and sports complex. Work is expected to begin some time in the early summer of 1991.

In 1991 it is intended to study the Bournebrook Mills and when this work is completed, these and the mills on the Cole and Rea will be published as volume I of *The Watermills of Birmingham.*

Demidowicz, G, 1988 Birmingham watermill survey, *West Midlands Archaeol* **31**, 44

George Demidowicz for Birmingham Museum

Bushbury, Green Wedge (SJ 9303)

In December 1989 Birmingham University Field Archaeology Unit was commissioned by Wolverhampton Borough Council to undertake an archaeological survey of

"Bushbury Green Wedge", one of the few significant areas of open space remaining within the borough. The survey comprised documentary research, systematic field inspection, including measured survey of earthworks and other landscape features, and an interpretation of the development of the historic landscape and its buildings.

Litherland, S, 1990 *An Archaeological Survey of Bushbury Green Wedge* BUFAU

Simon Buteux, Birmingham University Field Archaeology Unit

Bushbury, Old Fallings Hall (SJ 929015)

Work began in 1990 on the monitoring of building repairs to Old Fallings Hall, a small early 18th-century classical mansion, and was accompanied by documentary research into the building's history.

Iain Ferris, Birmingham University Field Archaeology Unit

Castle Bromwich Hall Gardens (SP 142897)

A second season of work concentrated on sampling two areas: the Middle Terrace and the Best Garden on the Upper Terrace.

The sequence of construction and subsequent alteration of the Middle Terrace between *c*1740 and *c*1820 was established.

In the Best Garden, in addition to four distinct phases of parterre gardens evidence relating to the medieval status of Castle Bromwich Hall was recovered. Environmental sampling of a 13th or 14th century cess pit recovered seeds of wheat, barley, rye, field bean, pea, apple/pear, tares and vetches. The wheat had been processed; this, coupled with evidence of introduced weed seeds from clayland environments (Castle Bromwich Hall stands on sandy soils) suggests that the site was a collecting point for local crops. This points to the site of the Hall being occupied by a demesne farm or manor house; the finding of medieval floor tiles, including Eames design 182, may be further evidence.

Other deposits identified included a probable quarry hollow, and an extensive layer of dark rich loam, interpreted as a medieval cultivation soil buried beneath later terracing.

Five major phases of ornamental gardens have been identified. The earliest dated to *c*1600, followed by a redesign and extension in 1726. In *c*1820 a new design incorporated a change of alignment and entailed some structural alterations. The fourth phase consisted of maltese cross designs in plant beds and gravel paths between lawns. The fifth and final phase was photographed *c* 1900 and is still retained today.

Environmental work on the different stages of the gardens was well-rewarded with evidence of historic composting and other soil enhancement programmes. Some well-dated assemblages of ceramics were recovered from the different phases. It is hoped to publish the full account in *Post Medieval Archaeology*.

Christopher Currie and Martin Locock, Castle Bromwich Hall Gardens Trust

Coventry, 38-39 Bailey Lane (SP 337790)

The sandstone cellar beneath the former 38-39 Bayley Lane reported in *West Midlands Archaeol* (**30**, 64) has now been fully consolidated and is incorporated into the new Coventry Information Centre. It is open to the public and contains interpretive

material and a display of artefacts from the immediate area. A watching brief during construction recorded the fabric of two further (roofless) cellars/basements before they were filled with concrete.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, "The Old Vicarage", St Laurence's Church, Foleshill (SP 353825)

An evaluation was carried out in the garden of the Old Vicarage, St Laurence's Church. Tradition records the discovery of "Saxon" burials near the church in the 1880's. A 10x1m trench failed to locate any such features although an unstratified sequence of 12th to 19th century pottery was recovered. This is in keeping with the known history of St Laurence's as a chapelry of St Michael's church, Coventry and founded in the 12th century.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Friar's Road (SP 344785)

Following evaluation, further excavations were carried out across a length of the medieval City Wall on Friar's Road to enable accurate piling to straddle the wall remains without damaging the fabric. A 5m length of wall foundtions, 2.4m wide was uncovered, along with a section through the defensive ditch, the infilling of which was heavily waterlogged. Work showed that the ditch was not filled in until *c* 1800. A previously unknown bridge abutment was located projecting into the north (inner) side of the ditch. Considerable quantities of pottery *c*1750-1820 were recovered, along with animal bone and environmental material.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Gulson Hospital (SP 340786)

Plans for an extension to Gulson Hospital Lodge culminated in the need for evaluation, the area possibly being part of the Whitefriars Carmelite Friary (1342-1539). Post-medieval garden surfaces were located in all three trenches excavated. No medieval features were located before natural clay was reached.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Hay Lane (SP 335790)

Following evaluation, a programme of excavation and watching briefs were undertaken in an area bounded by Hay Lane and Bayley Lane. Part of the area was documented in 1410 as "The castle bakehouse" (fig 19), and excavation was concentrated here. The south wall of a substantial stone building of the second half of the 13th century was located, with two large stone bread ovens built up against its inner (north) side (fig 19). Charred cereals within the fills confirmed their function and a good pottery sequence accompanied the structure. The bakehouse was burnt down *c* 1300 and another building was constructed over the remains, using the same line on the south wall. This was a half timbered structure, uprights still surviving *in situ*. The old bakehouse surfaces were covered with substantial mortar floors. By 1450 this building was itself demolished, due probably to severe structural problems. With Coventry entering a period of decline, it was never rebuilt and the site lay open until the mid 19th century.

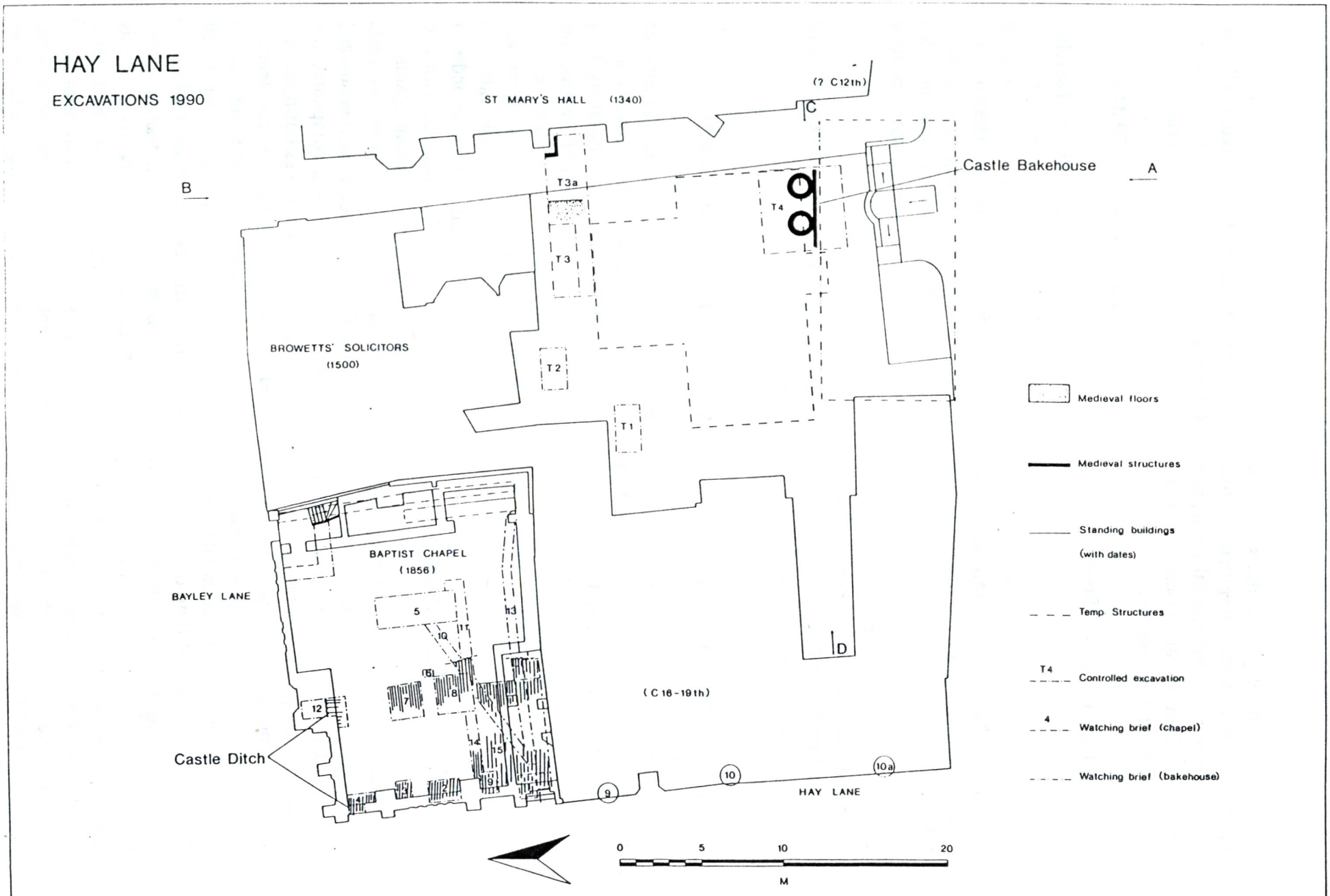


Figure 19 Location of Hay Lane excavations

Nearby, a watching brief on the conversion of the 19th century Baptist Chapel located substantial archaeological deposits belonging to the infilling of a large ditch, aligned north/south under 9-10a Hay Lane and turning east along Bayley Lane. All the material recovered from the ditch was 12th century in date. This was interpreted as belonging to the 11th-12th century Coventry Castle, possibly dividing the motte from the bailey.

Gooder, E, (Tr) 1973 *The Register of the Cathedral Priory of St Mary, Coventry. The Pittancer's Rental 1410-1411.*

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Holy Trinity Church (SP 335791)

Excavations, funded by Stephen Alan Wright for Holy Trinity Church, fell into two parts.

A narrow trench was cut at the rear of the churchyard wall in preparation for the dismantling and reinstatement of the wall fabric which was in a dangerous condition. Burials uncovered were recorded and covered for protection while work progressed.

Investigation was also made as to the whereabouts of a blocked-up entrance said to lead to a charnel house beneath the early 16th century Marler Chapel. The charnel house was believed to have been in use between 1526 and *c*1698. Access for a video camera via an air vent confirmed that the charnel contents were still intact. A series of three trenches were cut, the first two proving negative, but the third, at the east end of the chapel, located the remains of a substantial stone doorway entirely below the present ground level and completely blocked off.

The work followed enquiries about emptying the charnel house to put it to a pastoral use. Following the excavation recommendations for preservation *in situ* have been made.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Kirby Corner (SP 29674?)

Evaluation was undertaken in advance of development plans on the junction of Kirby Corner Road and Gibbet Hill Road. The work was carried out due to the proximity of a 13th century kiln waster dump and a prehistoric enclosure on aerial surveys. Geophysical survey over 8800m^2 threw up four anomalies which the museum later investigated by trenching. Concentrations of 19th-20th century building were found to have been the cause.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, St Mary's Benedictine Priory (SP 336792)

Research excavations, funded by Coventry City Council, Department of Property Services, were carried out as a prelude to change of use for surrounding buildings. The excavations concentrated on the west end of the Cathedral Priory church. Both inside and outside the building substantial raft foundations were uncovered with small areas of tiled floor surviving above. A west doorway into the north aisle was located along with structural remains which suggest the existence of a Galilee porch or similar. External buttresses shown in Hobley (1971, fig 2) as square are now proven to be half-octagonal. A programme of recording the

standing masonry has been instituted. To date the south-west tower and tower/south aisle pier have been completed.

Hobley, B, 1971 Excavations at the Cathedral and Benedictine Priory of St Mary, Coventry *Trans Birmingham and Warwks Archaeol Soc* **84** 45-139

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, Spon Street/Corporation Street (SP 331791)

Building work over the site of the town ditch investigated in 1986 unexpectedly encroached upon unexcavated areas. Truncated walls and a sandstone flagged floor were uncovered, cleaned and recorded before being sealed with concrete. The structures are interpreted as being a building attached to the nearby Spon Gate and the Town wall. Three mason's marks were recorded here on Town wall fabric; two are unremarkable, but the third is an uncommon depiction of the instruments of the passion, dated *c*1391-99.

Margaret Rylatt and Iain Soden, City of Coventry

Coventry, 119-124 Spon Street (SP 325790)

Excavations were carried out by Coventry and District Archaeological Society under the auspices of Coventry Museums Archaeology Unit at the rear of 119-124 Spon Street, in preparation for the systematic dismantling of the buildings which are late medieval (in poor condition) and their re-erection and renovation within the Spon Street scheme. Occupation surfaces and rubbish pits of the 19th and 20th centuries were excavated with a sandstone wall providing vague evidence of an earlier building.

It is hoped to continue work in 1991, to be completed eventually by the total excavation of the interiors of the row.

Margaret Rylatt and Bernard Oakley

Coventry, Well Street (SP 331793)

Building of an access road to a new car park called for a watching brief as the area was on the line of the 14th-15th century Town wall. Modern foundations were uncovered. Disturbance only affected 19th century levels.

Margaret Rylatt, Jo Wainwright and Dave Etheridge

Halesowen, Foxcote Lane Mesolithic site (SO 938835)

Fieldwalking over the last ten years has produced a Mesolithic assemblage of 9,148 flints from three fields bordering a stream and pond to the east of Foxcote Lane (fig 20). The flint is pebble flint, not natural to the area.

The assemblage consists of the following groups:

Microliths	126
Borers, awls and worked points	57
Notch tools	428
Scrapers	128
Saws	25
Burins	4
Total selected tools	768

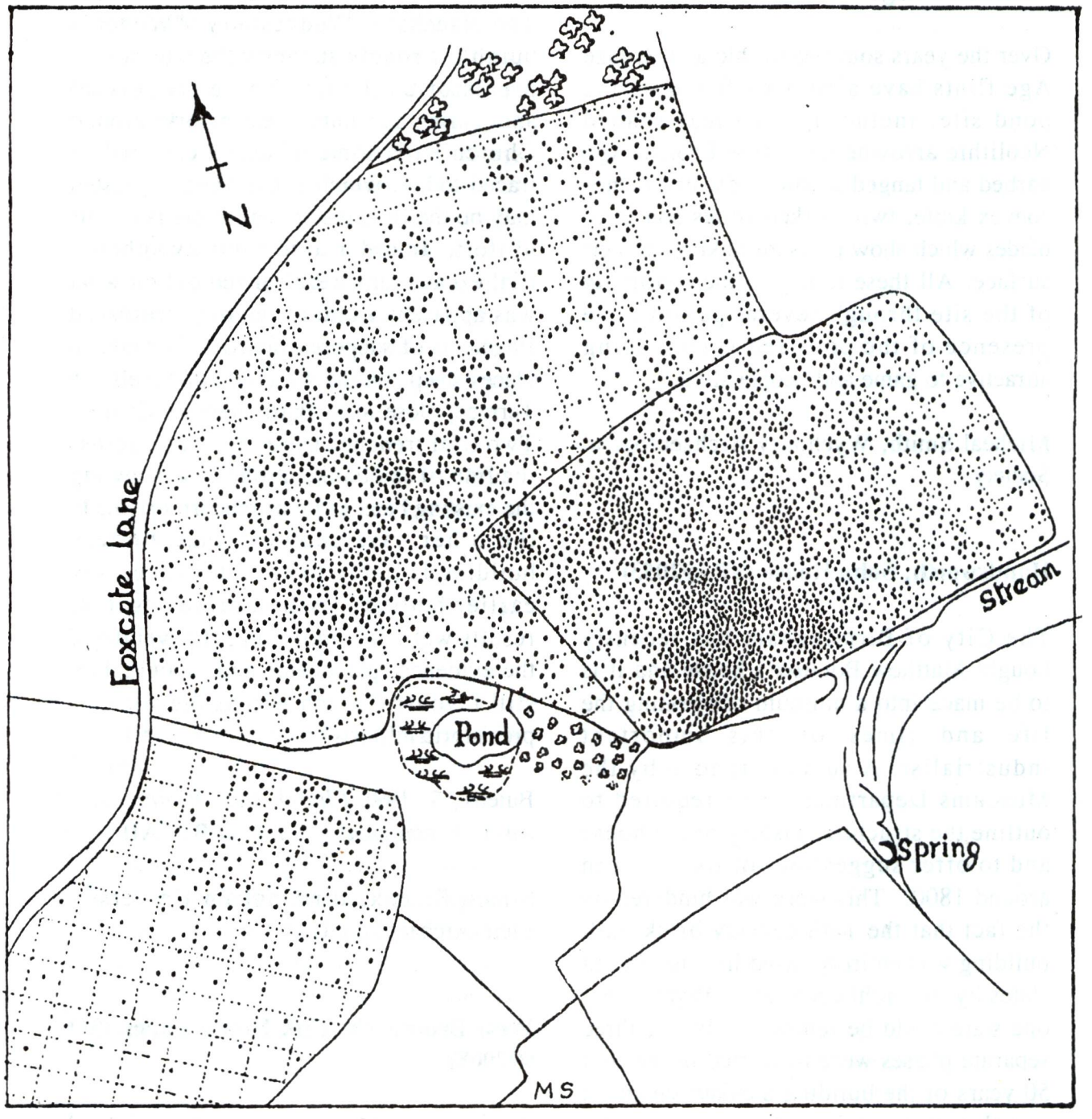


Figure 20 Artefact distribution from fieldwalking

Utilised blades and flakes	759
Waste blades and flakes	5955
Burnt flint	908
Total assemblage	9148

Over the years some Neolithic and Bronze Age flints have also been found on the pond site, including nine leaf-shaped Neolithic arrowheads, three Bronze Age barbed and tanged arrowheads, one plano-convex knife, two worked points and three blades which show pressure flaking on their surface. All these testify to the continuity of the site through several periods, the presence of the pool and spring being attractive to game and people alike.

Micheal Smith, Wychbury Archaeological Society

Handsworth, Soho House (SP 892053)

The City of Birmingham has recently bought Matthew Boulton's house and it is to be made into a museum celebrating the life and times of this important industrialist. A survey, funded by the Museums Department, was required to outline the structural history of the house and to offer suggestions of its layout in around 1800. This work was hindered by the fact that the 18th century brick built building was entirely cased in flush fitting slates by the architect Samuel Wyatt; only one slate could be removed. In all, three separate phases were identified in the first 50 years of the building's existence and it was clear that a major extension planned by Samuel's more famous brother, James, was started but not finished. By using a combination of the techniques of both architectural history and architectural archaeology, a reasonable understanding of the building's structural development was obtained.

Richard K Morriss, City of Hereford Archaeology Unit

Wednesbury, Church Hill (SO 987954)

The placename Wednesbury, "Woden's burgh", strongly suggests the site of of a prehistoric hillfort. There are several antiquarian accounts of earthworks around Church Hill, some of which can still be traced today, which it has been suggested may be the remains of the ramparts of this hillfort. In order to test this hypothesis, trial excavations were carried out on what was apparently one of the best preserved fragments of supposed rampart - a bank, in places steep, on the west side of Ethelfleda Terrace, close to St Bartholomews Church. Two trial trenches were excavated across the line of the bank, in one case showing the existing bank to be of modern origin, in the other case showing that modern building is likely to have destroyed any earlier features. While these negative results were disappointing, the weight of the evidence, placename and topographic, still favours Church Hill as the site of a prehistoric hillfort.

Buteux, S, 1990 *Church Hill, Wednesbury: An Archaeological Evaluation* BUFAU

Simon Buteux, Birmingham University Field Archaeology Unit

West Bromwich, Oak House Barns (SO 997908)

An evaluation was carried out for Sandwell Metropolitan Borough Council prior to the establishment of a visitor centre for the Oak House Museum, a large timber-framed building dating from the late 16th century. The scheme will involve a limited amount of landscaping and the renovation of two nearby barns, one of which displays timber

framing of 17th century date. The barns became incorporated into industrial workshops in the late 19th century.

No features earlier than the late 19th century were identified in two evaluation trenches which were located to the rear of the barns. However, several features, including a pit and a gully, were recorded in two trenches located in the open area between the barns and the house. These contained fragments of earthenware and black/brown glazed pottery and may be contemporary with the early occupation of the house. They may be associated with backyard or gardening activity to the rear of main building and were overlain by what was interpreted as a 17th- to 19th-century cultivated soil.

Hughes, E G, 1990 *Oak House, West Bromwich: An Archaeological Evaluation 1990* BUFAU

E G Hughes, Birmingham University Field Archaeology Unit

West Bromwich, Sandwell Priory (SP 024915)

A report on the 1982-88 excavations is in preparation, and is expected to be published in late 1991. Consolidation of the exposed masonry on the site has been completed, and interpretation panels will be erected soon. Some finds from the excavation are displayed in an exhibition at Sandwell Park Farm.

M A Hodder, Sandwell Metropolitan Borough Council

Directory of Archaeological Groups and Institutions

COUNTY SITES & MONUMENTS RECORDS AND ARCHAEOLOGICAL UNITS:

Birmingham University Field Archaeology Unit
Minerals Engineering Building
Edgbaston
Birmingham B15 2TT

Tel: 021 414 5513

R A Tomlinson, Director
Peter Leach & Iain Ferris, Assistant Directors
Simon Buteux, Manager

Coventry Museums Archaeology Unit
Herbert Art Gallery and Museum
Jordan Well
Coventry CV1 5QP

Tel: 0203 832433

Margaret Rylatt, Senior Keeper of Archaeology
Iain Soden, Field Officer

Dudley Castle Archaeological Project
2 The Broadway
Dudley
West Midlands DY1 4QB

Tel: 0384 235305

Steve Linnane, Director

Dudley Metropolitan Borough Council
Planning and Architecture Dept
3 St James's Road
Dudley
West Midlands DY1 1HZ

Tel: 0384 456000 ext 4190

Pete Boland, Archaeological Officer
Sue Whitehouse, Borough SMR Officer

City of Hereford Archaeology Committee
Shirehall Forecourt
Town Hall, St Owen Street
Hereford

Tel: 0432 268121 ext 310

Ron Shoesmith, Director

Archaeology Section
Hereford and Worcester County Council
Tetbury Drive, Warndon
Worcester WR4 9LS

Tel: 0905 58608

Malcolm Cooper, County Archaeological Officer
Simon Woodiwiss, Field Officer
Hilary White, SMR Officer

Sandwell Metropolitan Borough Council
Dept of Technical Services
Wigmore, Pennyhill Lane
West Bromwich
West Midlands B71 3RZ

Tel: 021 569 4025

Mike Hodder, Borough Archaeologist
Nigel Haynes, Listed Buildings Officer

Shropshire County Council
Leisure Services
Winston Churchill Building
Radbrook Centre, Radbrook Road
Shrewsbury, SY3 9BJ

Tel: 0743 254018

Mike Watson, Senior Archaeologist

Shropshire County Council
Planning Dept
Shire Hall
Abbey Foregate
Shrewsbury

Tel 0743 252563

Harley Thomas, Conservation Officer
Penny Ward, SMR

Stafford Borough Council
Archaeology Section
Development Department
Civic Offices, Riverside
Stafford ST16 3AQ

Tel: 0785 223181 ext 351

John Darlington, Borough Archaeologist
David Wilkinson, Assistant Archaeologist

Staffordshire County Council
Planning Department
Martin Street
Stafford
ST16 2LE

Tel: 0785 223121 ext 7283

Ken Sheridan, Senior Conservation Officer
Bob Meeson, Archaeological Officer
Chris Wardle, SMR Assistant

Trent and Peak Archaeological Trust
Archaeology Department
University of Nottingham
Beeston
Nottingham
NG7 2RD

Tel: 0602 506101 ext 3396

John Walker, Director

Warwickshire County Council
Field Archaeology Office
The Butts
Warwick
CV34 4SS

Tel: 0926 410410 ext 2276

Helen Maclagan, County Field Archaeologist ext 2276
John Hodgson, SMR Officer ext 2734
Nicholas Palmer, Field Officer ext 2280
Stuart Palmer, Assistant Field Officer
Peter Hart, Assistant Field Officer

Warwickshire County Council
Alcester Archaeological Office
The Old Court House
Priory Road
Alcester
Warwickshire, B49 5DZ

Tel: 0789 764908

Stephen Cracknell, Field Officer

West Midlands Sites and Monuments Record
Joint Data Team
Radcliffe House
Blenheim Court
Solihull
B91 2AA

Tel: 021 704 0033

Neil Lang, West Midlands SMR Officer

Assistant Archaeologist, Worcester Cathedral
Chapter Office
10A College Green
Worcester WR1 2LH

Tel: 0905 28854

Christopher Guy, Assistant Archaeologist, Worcester Cathedral

Worcester City Council
Archaeology Section
Queen Elizabeth House
Trinity Street
Worcester WR1 2PW

Tel: 0905 724393

Charles Mundy, City Archaeological Officer

ARCHAEOLOGICAL SOCIETIES & RESEARCH GROUPS:

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The Gorralls
Cold Comfort Lane
Alcester
Warwickshire

D Moulson, Hon Secretary

Atherstone Archaeological Society
264 The Long Shoot
Nuneaton
Warwickshire, CV11 6JN

Bernard Hancock, Hon Secretary

Birmingham and Warwickshire Archaeological Society
c/o Birmingham and Midland Institute
Margaret Street
Birmingham B3 3BS

Tel: 021 525 7066 or 021 351 2407

Andrew Wilson, Hon Secretary

Border Counties Archaeological Group
Silverdale, 14 Kendal Way
Little Acton
Wrexham
Clwyd

June Jones, Hon Secretary

Bordesley Abbey Project
Faculty of Letters and Social Sciences
University of Reading
Whiteknights
PO Box 218
Reading RG6 2AA

Tel 0734 875123

Dr Grenville Astill

Bordesley Society
29 Salop Road
Redditch
Worcestershire

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c/o Old School House
Chaddesley Corbett
Kidderminster
Worcestershire

Chelmsley Local History Society
60 Whateley Crescent
Castle Bromwich
Birmingham B36 ODP

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20 Harvey Close
Allesley
Coventry CV5 9FU

B Oakley, Chairman

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8 Lansdowne Crescent
Worcester

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National Needle Museum
Forge Mill, Needle Mill Lane
Redditch
Worcestershire

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128 Worcester Road, Hagley
Stourbridge
West Midlands

Tom Pagett, Project Leader

Hereford & Worcester Architectural Record Group
c/o Avoncroft Museum of Buildings
Stoke Prior, Bromsgrove
Worcestershire

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17 Silver Ridge
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70 Cob Lane
Kenilworth
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Stourport-on-Severn
Worcestershire

C I Walker, Hon Secretary

Landor Society
38 Fortescue Lane
Rugeley
Staffordshire
WS15 2AE

A W Neal, Secretary

Leamington Archaeological Society
15 Church Hill
Leamington Spa
Warwickshire

Mrs Margaret Watkins, Hon Secretary

Leek and District Field Club
23 Novi Lane
Leek
Staffordshire
ST13 6NR

Mrs B Beniston, Chairman

Lickey Hills Local History Society
35 Sandhills Road,
Barnt Green
Birmingham B45 8NP

Mrs M Mabey, Hon Secretary

Rugby Archaeological Society
7 Rugby Road
Catthorpe
Lutterworth
Leicestershire

Jack Lucas, Chairman

Shropshire Archaeological Society
Much Wenlock Museum
Much Wenlock
Shropshire
TF13 6HR

Yvette Staelens, Hon Secretary

Solihull Archaeological Group
149 Hill Village Road
Four Oaks
Sutton Coldfield
West Midlands

Mrs M Dunlery, Hon Secretary

South Staffordshire Archaeological & Historical Society
6 Lawson Close
Aldridge
Walsall
WS9 0RX

Mrs B Fox, Membership Secretary

South Worcestershire Archaeological Group
4 Orchard Close
Upton-on-Severn
Worcestershire

Mrs A Richards, Hon Secretary

Stafford and Mid Staffordshire Archaeological Society
15 Jasmine Road
Great Bridgeford, Stafford
Staffordshire

Mr Ashley-Carter, Chairman
Mrs Kay Wood, Secretary

Stoke-on-Trent Museum Archaeological Society
10 Washerwall Road
Werrington
Stoke-on-Trent
Staffordshire

Anne Roberts, Hon Secretary

Stour and Smestow Archaeological Society
44 Wollescote Road
Stourbridge
DY9 7JJ

E J Worton, Hon Secretary

Stourbridge Historical and Archaeological Society
Kingswinford
Brierley Hill
West Midlands

D C Hickman, Hon Secretary

Telford Archaeological and Historical Society
18 Cherrington
Stirchley
Telford

Miss M Sumnall, Hon Secretary

Tong Archaeological Group
Lizard Grange
Tong
Shropshire
TF11 8PU

Alan Wharton, Director of excavations

Vale of Evesham Historical Society
Pigeons Manor Farm
Farm Lane
South Littleton
Worcestershire

Mrs V Lemmon, Hon Secretary

Walsall Local History Society
Central Library
Lichfield Street
Walsall
WS1 1TR

Mrs G Fink, Treasurer

Whitchurch Area Archaeological Group
21 Bathfields Crescent
Whitchurch
Shropshire

Mrs M James, Hon Secretary

Woolhope Naturalists' Field Club
40 Stanhope Street
Hereford

S M Kendrick, Hon Secretary

Worcester and District Industrial Archaeology & Local History Society
Tall Trees
Old Hill
Flyford Flavell
Worcestershire

Tony Jeffs, Hon Secretary

Worcestershire Archaeological Society
91 Hallow Road
Worcester

Mrs Gwen Grice, Hon Secretary

Worcestershire Historical Society
3 Field Terrace
Bath Road
Worcester
WR5 3BN

Miss B Ronchetti, Hon Secretary

Wychbury Archaeology Society
28 Wynnal Lane South
Wollescote
Stourbridge
West Midlands DY9 9AH

Granville Calder, Director

MUSEUMS:

Avoncroft Museum of Buildings
Stoke Heath
Bromsgrove B60 4JR

Tel: 0527 31363

Michael G L Thomas, Director
Simon Penn, Curator

Department of Archaeology and Ethnography
Birmingham Museum & Art Gallery
Chamberlain Square
Birmingham B3 3DH

Tel: 021 235 2834

Jane Peirson Jones, Keeper (Ethnography)
Philip Watson, Deputy Keeper (Prehistory)
David Symons, Asst Keeper (Roman and medieval)

Herbert Art Gallery and Museum
Jordan Well
Coventry
CV1 5QP

Tel: 0203 832433

Nick Dodd, Senior Keeper of Social History

Hereford City Museum and Art Gallery
Broad Street
Hereford
HR4 9AU

Tel: 0432 268121 ext 207 and 334

Miss A E Sandford, Curator

Hereford and Worcester County Museum
Hartlebury Castle
Hartlebury
Nr Kidderminster
DY11 7XZ

Tel: 0299 250416

Mr Robin Hill, Museum Officer

Ironbridge Gorge Museum
Ironbridge
Telford
Shropshire

Tel: 095245 3522

Stuart B Smith, Director

Much Wenlock Museum
High Street
Much Wenlock
Shropshire
TF13 6HR

Tel: 0952 727773

Isabel Churcher, Assistant Keeper

Nuneaton Museum and Art Gallery
Riversley Park
Nuneaton
CV11 5TU

Tel: 0203 326211

Anne Robson, Curator

Rowley's House Museum
Barker Street
Shrewsbury
SY1 1QT

Tel: 0743 61196

Mike Stokes, Keeper of Archaeology

Stoke-on-Trent City Museum & Art Gallery
Bethesda Street
Hanley
Stoke-on-Trent ST1 3DW

Tel: 0782 202173

D Barker, Keeper of Archaeology
W D Klemperer, Director, Hulton Abbey Project

The Shakespeare Birthplace Trust
The Shakespeare Centre
Henley Street
Stratford-upon-Avon
Warwickshire

Tel: 0789 204016

Major P Gardner, Assistant

Tamworth Castle Museum
Tamworth
Staffordshire

Tel: 0827 4222 ext 389

Mrs E Ballard, Curator

Warwickshire County Museum
Market Place
Warwick
CV34 4SA

Tel: 0926 410410 ext 2033

Philip Wise, Keeper of Archaeology

Wednesbury Art Gallery and Museum
Holyhead Road
Wednesbury
West Midlands WS10 7DF

Tel: 021-556 0683

Martin Senior, Curator

Wolverhampton Art Gallery
Lichfield Street
Wolverhampton WV1 1DU

Tel: 0902 24549

Peter Vigurs, Curator

Worcester City Museum
City Museum and Art Gallery
Foregate Street
Worcester WR1 1DT

Tel: 0905 25371

The Commandery
Sidbury
Worcester WR1 2HU

Tel: 0905 355071

Tim Bridges, Keeper of Archaeology

EDUCATIONAL ESTABLISHMENTS:

University of Birmingham
PO Box 363
Birmingham B15 2TT

Tel: 021-414 3344

Dept of Ancient History & Archaeology (Susan Limbrey, 021-414 5507; Lawrence Barfield, 021-414 5501; Simon Esmonde-Cleary, 021-414 5508)
School of Continuing Studies (Margaret Ehrenberg, 021-414-5600)
Dept of Geography (Della Hooke, 021-414 5776; Terry Slater, 021-414 5534)
School of History (Steven Bassett, 021-414 5765; Christopher Dyer, 021-414 5765)
Dept of Plant Biology (James Greig; Lisa Moffat, 021-414 5591)
School of Computer Science (Susan Laflin, 021-414 4769;
electronic mail: JANET LaflinS@UK.AC.BHAM)

Department of Adult and Continuing Education
The University
Keele
Staffordshire ST5 5BG

Tel: 0782 625116

David Wilson

Research Centre for Computer Archaeology
Computer Department
North Staffordshire Polytechnic
Blackheath Lane
Stafford ST18 OAD

Tel: 0785 53511

John Wilcock

Workers Educational Association (West Mercia District)
78-80 Sherlock Street
Birmingham
B5 6LT

Tel: 0543 423549

John Hunt, Tutor Organiser

Department of Continuing Education
University of Warwick
Coventry
CV4 7AL

Attn Miss P Handley

NATIONAL ORGANISATIONS:

Historic Buildings and Monuments Commission for England
Inspectorate of Ancient Monuments
Fortress House, 23 Savile Row
London W1X 2AB

Tel: 071 973 3000

Central Excavation Unit, HBMCE
Fort Cumberland
Fort Cumberland Road
Portsmouth
Hampshire PO4 9LD

Tel: 0705 817472

Royal Commission on the Historical Monuments of England
National Archaeological Record
Green Lane
Maybush
Southampton SO1 9FP

Tel: 0703 780966

Royal Commission on the Historical Monuments of England
(Head Office)
Fortress House
23 Savile Row
London W1X 2JQ

Tel: 071 973 3500

Ministry of Agriculture, Fisheries and Food
Soil Survey of England and Wales
Woodthorpe
Wolverhampton
West Midlands WV6 8TQ

Tel: 0902 754190

J M Hodgson

Institute of Field Archaeologists
Minerals Engineering Building
University of Birmingham
Edgbaston
Birmingham B15 2TT

Institute of Field Archaeologists, West Midlands
Regional Group
Hereford and Worcester County Council
Archaeology Section
Tetbury Drive
Warndon
Worcester WR4 9LS

Tel: 0905 58608

James Dinn, Hon Secretary

Council for British Archaeology
112 Kennington Road
London, SE11 6RE

Tel: 071 582 0494

Richard Morris, Director

Council for British Archaeology Regional Group 8

Chairman	Dr Steven Bassett, School of History, University of Birmingham, Edgbaston, Birmingham, B15 2TT (021 414 5675)
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