

UNLOCKING THE PAST (SOUTH WORCESTERSHIRE COLLECTIONS)

STAGE 3 REPORT AND HER ENHANCEMENT

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Contents

Part 1 Project summary

Part 2 Detailed report

1.	Introduction.....	2
2.	Project methodology	2
2.1	Aims.....	2
2.2	Methods	3
3.	Collections from the Almonry Museum (by D Williams)	4
3.1	Excavation at Groatens, Ashton under Hill (WSM07578).....	4
3.2	Excavation at Broadway gravel pits (WSM10943).....	5
3.3	Excavation at Sedgeberrow (WSM07517).....	7
4.	Collections from Birmingham City Museum (by J Timby).....	8
4.1	Introduction.....	8
4.2	Excavation at Bredons Norton 1912 (WSM 35836)	8
4.3	Excavations on Bredon Hill: 1912-1944 (WSM 35838 and 38363)	10
4.4	Excavation at Elmont Coppice (WSM 34855).....	16
4.5	Excavation at Elmont Field (WSM 35839).....	19
4.6	Excavation at Nettlebeds Field (WSM 35840)	22
4.7	Excavations at Overbury Park (WSM 35841) and Overbury Park Wood (WSM 35842).....	23
4.8	Coins from the Bredon Hill area (Birmingham Museum Collection) (by C E King).....	27
5.	Collections from South Worcestershire Archaeological Group archive (by D Williams).....	34
5.1	Fieldwalk to south-west of Baughton (WSM 30567)	34
5.2	Fieldwalk at Smallbrook Farm, Broadway (WSM 34322)	35
5.3	Fieldwalk at Defford (WSM 30370).....	38
5.4	Fieldwalking at Eckington, Worcestershire (WSM 05900-05908/9, 07281, 07582, 35844 and Eckington unlocated finds) (by C J Evans).....	40
5.5	Fieldwalk at <i>Ponderosa</i> , Evesham (WSM 35834).....	58
5.6	Fieldwalk south of Lower End Farm, Great Comberton (WSM 30360).....	60
5.7	Fieldwalk south-east of Lower End Farm, Great Comberton (WSM 31634)	61
5.8	Fieldwalk at Hawford (WSM 28767)	62
5.9	Fieldwalk at Kemerton (WSM 28780).....	63
5.10	Excavation at Murcot (WSM 35828)	65
5.11	Fieldwalk at Pensham (WSM 34238)	66
5.12	Fieldwalk at Pirton (WSM 29550).....	67
5.13	Fieldwalk at Glenmore Farm, Wick (WSM 35845).....	69
6.	Lithics from aggregates: re-appraisal and HER enhancement (by R Jackson).....	70
6.1	Introduction.....	70
6.2	Methods	72
6.3	Review of the evidence for Worcestershire	74
6.4	Key sites.....	81
6.5	Research directions	84
7.	Discussion (by C J Evans).....	86
7.1	Introduction.....	86
7.2	Dating	87
7.3	Sources of pottery	92
7.4	Site status.....	92
7.5	Assessment of fieldwalking data associated with features detected by non-invasive fieldwork techniques.....	92
7.6	Biases in collection	95
7.7	Conclusions.....	97
8.	The archive	98
9.	Acknowledgements	98
10.	Bibliography	98
11.	Appendix 1 Petrological analysis (by R Ixer)	105
12.	Appendix 2 Concordance of recorded pottery fabrics.....	108
13.	Appendix 3 Human bone from Evesham (by C Lythe).....	111

14.	Appendix 4 Lithic analysis, Hoarstone Farm, Trimpley Top, Worcestershire (WSM 38560) <i>(by A Mora-Ottomano)</i>	113
15.	Appendix 5 Lithic analysis, King's End, Worcestershire (WSM 38558) <i>(by A Mora-Ottomano)</i>	120
16.	Appendix 6 Lithic analysis from Bevere, Worcestershire (WSM 38559) <i>(by A Mora-Ottomano)</i>	127
17.	Appendix 7 HER tabulated input data.....	131

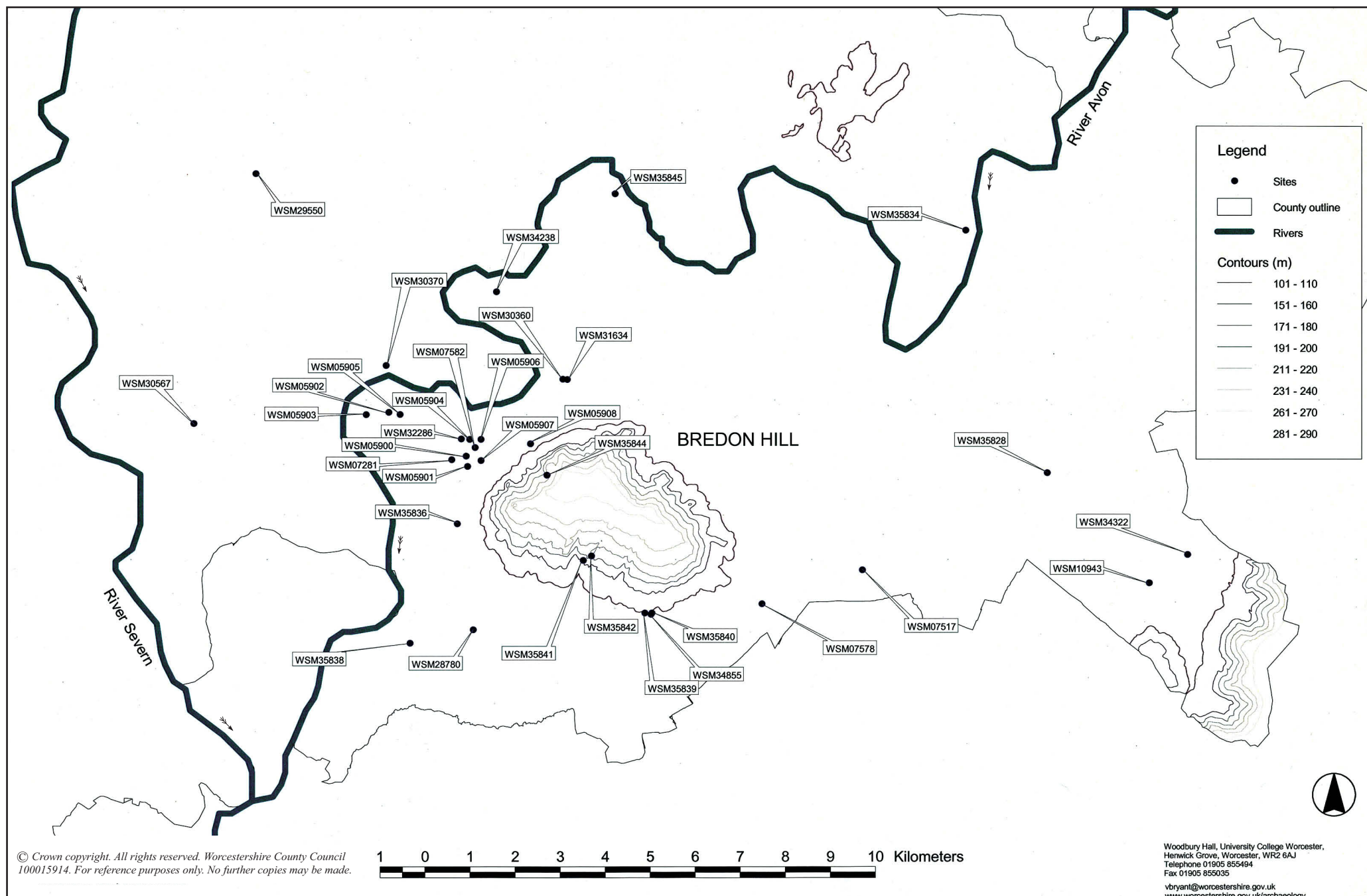
Tables

Figures

1	Location of sites
2	Defford: distribution of Roman pottery by sherd count
3	Defford: distribution of Roman pottery by average sherd weight
4	Roman pottery assemblages by % sherd count

Abbreviations

AP	Aerial photograph
HER	Historic Environment Record (Worcestershire)
SWAG	South Worcestershire Archaeological Group
WHEAS	Worcester Historic Environment and Archaeology Service



Location of sites

Figure 1

Unlocking the past (south Worcestershire collections): Stage 3 report and HER enhancement

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With contributions by Robert Ixer, Cathy King, Christine Lythe, and Alvaro Mora-Ottomano

Part 1 Project Summary

Three collections of artefacts were included in the present project. These were largely from aggregate-producing areas of south Worcestershire, and therefore have potential to provide useful information for the management and promotion of the historic environment in these parts of the county. The project is funded through an Aggregates Levy Sustainability Fund (ALSF) grant from English Heritage.

The focus of the Stage 3 project has been on patterns of Romano-British settlement and earlier activity on sites, where assemblages assessed during the Stage 2 project were determined to be suitable for further analysis. By far the largest body of this material (75%) came from Bredon Hill sites in the Birmingham Museum collection. These produced some interesting artefacts, though the actual sites excavated are unlocated and there is no stratigraphic information. Petrological analysis was carried out on a fine grey ware Roman fabric which was a notable component of the Bredon Hill collection.

The South Worcestershire Archaeological Group (SWAG) fieldwalking assemblages (24% of the project assemblage) comprised a number of useful assemblages, some of which were specifically from cropmark sites in the south of Worcestershire. The assemblages from the Almonry Museum in Evesham (less than 1% of the overall project assemblage) were largely incomplete, but still contributed to the broad characterisation of sites in the local area. In addition for this latter collection the animal bone was subject to specialist identification and was then utilised together with a selection of the Roman pottery for the creation of a teaching collection to be used by the Almonry for its outreach activity. A small amount of human bone was also analysed, and petrological analysis was carried out on a small group of late Neolithic grooved ware pottery from Broadway.

The lithics from the majority of the collections had previously been assessed as of limited value, other than their potential to contribute to an understanding of the overall pattern and distribution of early prehistoric activity in the county. However, three collections solely comprising lithics have provided a rare opportunity in the county to examine assemblages of more than 50 items, and to develop an understanding of the character and dating of these sites and of lithic assemblages generally in the area. A guide to the recognition of worked flint has been produced for the general public.

In the case of fieldwalked cropmarks (SWAG sites) the Roman and earlier finds were reviewed in detail against the cropmark plots to ascertain whether this would produce useful information about the types and periods of types of cropmark site. It was concluded that, though in principle this was a valid approach, the current data was not amenable to this treatment, as it did not allow sufficient resolution of plotting to be achieved to enable useful correlation with underlying features. Recommendations for future fieldwalking practice were made accordingly.

Part 2 Detailed report

1. Introduction

This report consolidates the assessment undertaken in Stage 2 (Jacobs and Jackson 2007) of the ‘Unlocking the Past’ project, where archaeological collections from three sources were the focus of study. These individual collections held material that varied considerably in terms of artefact quality and quantity and in terms of potential for further analysis (*ibid* table 1), and other uses described below.

Overall it was acknowledged that these collections had considerable potential to contribute to our understanding of patterns of Romano-British settlement and economic activity within aggregate production areas in the south of the county. This would further allow the development of a characterisation of site assemblages and date ranges across one of the main past, present and potential future aggregate production areas of the County. Therefore the results of the more detailed analysis would continue to provide useful data for curatorial management purposes as well as enhancing the HER for this part of the county. In addition it helps support the development of future research priorities for the Roman period, which forms the chief focus of the Stage 3 work. The need for such work has been highlighted within the West Midlands Research Agenda framework for the Roman period in Worcestershire (Locket 2002) and by the Study Group for Roman Pottery, in their research agendas for rural sites (Booth and Willis 2006).

The opportunity to use the fieldwalking data for integration with cropmark plots was also a focus of study, where assessment was undertaken at this stage to establish whether there was any potential to use the data in this way. Roman coins around Bredon Hill formed another defined focus of study.

Some further limited areas of potential importance were identified at Stage 2 for other periods, such as thin section analysis of the re-discovered Neolithic grooved ware sherds from Broadway, and the reconsideration of their context. This will allow incorporation of a rare Late Neolithic fabric within the county type fabric series and facilitate comparison of the nature and context of these finds with other similarly dated material on both a regional and national basis (Appendix 1).

Though the lithics from the majority of the collections had proved at Stage 2 assessment to be of limited value, they still have the potential to contribute to understanding of the overall pattern and distribution of early prehistoric activity in the county. Three collections solely comprising lithics provide a rare opportunity in the county to examine assemblages of more than 50 items (Appendices 4-6). These have considerable potential for further analysis and to contribute to the development of an understanding of the character and dating of these sites in their own right and of lithic assemblages in the area. Further, through comparison with excavated assemblages and the lesser fieldwalking collections it is hoped to better develop an understanding of the character of surface lithic assemblages in the county. Such analysis would help address recognised problems for lithic research within the county and the wider region (as defined by Barfield 2008).

The opportunity was also established for the creation of more teaching resources and to provide guidance on flint recognition for wider use by the general public and interested non-professional.

In all 67 boxes of finds were included in Stage 3 out of a total of 77 (13 from the Almonry Museum, 29 from SWAG and 35 from Birmingham Museum) assessed in Stage 2. There were also miscellaneous paper archives, the majority of which had been scanned in Stage 2.

2. Project methodology

2.1 Aims

The select parts of the collections chosen for further analysis provide the opportunity to address the following aims and objectives at this stage (for explanation of overall project aims see Jacobs and Jackson 2007):

- dating and characterising Roman period settlement patterns and economic activity across one of the main aggregate extraction areas of the county (A1, A3, A4, A7 & A8; OB2, OB3);
- defining variations in settlement patterns and economic activity across these areas (A1, A3, A4, A7 & A8; OB2);
- understanding the relationship of surface assemblages to cropmark sites and where possible the dating and character of cropmark enclosures and other sites. This ultimately has the potential to provide an initial characterisation of a large number of sites on a local level. This would strengthen research frameworks and site identification in the case of further assessment/evaluation ahead of proposed aggregate extraction and also provide a model for the characterisation and dating of cropmark sites which could be tested at some future point (A1, A3, A4, A5, A7 & A8; OB2, OB3);
- improving understanding and awareness of the potential of lithic scatters in the county (A1, A3, A4, A5, A7 & A8; OB2, OB3);
- and enhancing the HER through addition of information on dating and character on sites that are not adequately or clearly recorded (A4, A6 & A7; OB1, OB4).

The analyses reported here are intended, therefore, to considerably enhance the HER for aggregate production landscapes in the south of the county and thereby improve research frameworks and datasets underpinning curatorial responses to future aggregate extraction applications in this area.

Outputs

The outputs may be summarised as follows: production of a report (grey literature and ADS), summary report (local county journal), summary critique report (ADS), creation of teaching resources (teaching boxes for the Almonry and a flint recognition sheet), and HER data (Appendix 7). Additional output will be a presentation at the annual county conference, a presentation at a meeting focussed on Roman pottery, and continuing professional involvement in the development of minerals and waste schemes for the county.

2.2

Methods

During the Stage 2 assessment all finds were assessed (Jacobs and Jackson 2007) and recorded on a Microsoft Access 2000 database, and assemblages suitable for further analysis were identified (Jacobs and Jackson 2007, especially table 1). Only Roman and prehistoric finds were analysed in detail as part of this Stage 3 programme of study. As accompanying written archive was either non-existent or poor in all cases it was considered that the principal value of most of the assemblages could be extracted through limited analysis sufficient to characterise the assemblages in terms of composition and date. Summaries of all other finds are included in the reports by site, and in the Stage 2 report (Jacobs and Jackson 2007).

The prehistoric and Roman pottery was recorded in detail using the Worcestershire County fabric type series, maintained by the County Archaeology Service (Hurst and Rees 1992, 200-209; also available at <http://www.worcestershireceramics.org>). This has been cross-referenced, where possible, with the National Roman Fabric Reference Collection (Tomber and Dore 1998). A concordance of fabrics is provided in Appendix 2. A selection of sherds was submitted for petrological analysis (Appendix 1). The collections from Birmingham City Museum were studied by Jane Timby, and the Eckington finds by Jane Evans. The Almonry Museum, and other SWAG collections were studied by Dennis Williams.

Sherds were examined macroscopically and also using x20 binocular microscope. All assemblages were quantified by sherd count and weight. The percentage of rim extant was recorded for the Almonry Museum and SWAG finds, but not for the collections from Birmingham City Museum. In general, therefore, these data is not presented in the tables below. Rims, bases, handles and other featured pieces (eg spouts, lid knobs etc) were counted separately. Jane Timby notes for the Birmingham collections that where joining sherds had

been stuck together these were counted as one, but sherds that were no longer joining, or indeed put under different accession numbers, were counted individually. In some of these collections there were a large number of unwashed very small sherds and these were not individually sorted but grouped as unclassified (code OO).

Rims were classified by form where possible. Where existing corpora exist these are referred to. The main systems used are Webster (1976) for Severn Valley wares; Young (1977) for Oxfordshire wares; the Exeter series and Dorchester Greyhound Yard for Dorset Black-burnished wares (Holbrook and Bidwell 1991; Seager Smith and Davies 1993); Peacock 1965-7 for Malvernian wares, and the standard classifications, for samian forms (Dragendorff; Curle; Ritterling, Ludowici etc) (cf Webster 1996). It should be noted that the Webster (1976) typology for Severn Valley wares is very limited and now somewhat out of date. For fragmentary material it is difficult to make direct identification and many rims are nearest matches rather than precise parallels. In some cases better parallels were found in other site assemblages (Evans *et al* 2000; Bryant and Evans 2004).

Evidence for decoration, manufacture, repair, use or reuse was recorded where this was evident. However, the material from fieldwalking was generally too abraded for any surface evidence to survive. The quantification data for the Birmingham collections was put on temporary paper *pro forma* sheets and the information transferred on to a Microsoft Excel spreadsheet. Data analysis for the other sites was undertaken using Microsoft Access 2000 and Excel. Fabric summaries were extrapolated from the data for each site. None of the pottery is illustrated.

The report that follows comprises: updated artefact reports for each site (pottery), and generally for flint and for coins; an overview section intended to form the basis for a regional report about the project; and HER tabulations of data for each site, for the enhancement of the county Historic Environment Record (Appendix 7).

The location of sites that have been subject to more detailed study at Stage 3 are shown on Figure 1.

3. Collections from the Almonry Museum (*by D Williams*)

3.1 Excavation at Groatens, Ashton under Hill (WSM07578)

3.1.1 Artefact recovery

These finds were retrieved by Dr Malkin during excavation prior to the World War II (Cox 1967). Only Roman pottery finds were presented for examination as part of the present project (it is known that Roman coins from this excavation have also been stored in the Almonry collection). No stratigraphic information was available.

3.1.2 Assemblage summary

The prehistoric and Roman material within the assemblage is summarised in Table 1.

Period	Material	Total	Weight (g)
Roman	Pottery	11	97

Table 1 Quantification of the Roman component of the site assemblage

3.1.3 The Roman pottery

The Roman sherds were grouped and quantified according to fabric type, as shown in Table 2.

Fabric code	Fabric name	Count	Weight (g)
-------------	-------------	-------	------------

12	Severn Valley ware	6	76
14	Fine sandy grey ware	1	7
22	Black-burnished ware, type 1 (BB1)	2	12
29	Oxfordshire red/brown colour-coated ware	1	1
43.1	South Gaulish samian ware	1	1

Table 2 Quantification of the Roman pottery by fabric

The condition of the pottery was generally good, although there was substantial abrasion of many of the Severn Valley ware sherds.

Severn Valley ware constituted the largest part of this assemblage (78% by weight), and all of this material had oxidised fabrics. The earliest pottery was a small sherd of samian ware from South Gaul (fabric 43.1), datable to the late 1st, or early 2nd century. Only two rim sherds, both from Severn Valley ware wide-mouthed jars, were present. One of these could not be matched to any known published form, while the other was close, in shape, to a known form (Webster 25) that has been dated as 2nd–3rd century (Webster 1976). The Black-burnished ware sherds were small and undiagnostic, but a single small Oxfordshire sherd (fabric 29) provided evidence of 3rd–4th century activity at this site.

It is concluded, from the pottery fabrics and forms, that this site was probably in continuous occupation from the mid 1st/2nd to the 3rd/4th century.

There was no artefactual evidence to support the idea that this site would have been of higher status than a small rural settlement.

3.1.4 Other artefacts

None included in this assemblage

3.2 Excavation at Broadway gravel pits (WSM10943)

3.2.1 Artefact recovery

The artefacts were from excavations carried out by Miss C N S Smith (1946). No information on context recording was available for the finds, but this would not be expected for an excavation carried out, shortly before, or during the World War II. At some stage this fieldwork activity was wrongly attributed to WSM10944. The finds bags have been renumbered appropriately, but WSM10944 remains the number used in the archive project records.

3.2.2 Assemblage summary

The prehistoric and Roman material within the assemblage is summarised in Table 3.

Period	Material	Total	Weight (g)
Neolithic	Pottery	3	100
Iron Age/Roman	Pottery	1	137
Roman	Pottery	14	358

Table 3 Quantification of the prehistoric and Roman component of the site assemblage

3.2.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 4.

Fabric code	Fabric name	Total	Weight (g)
4	Grooved ware (shell-tempered)	3	100
12	Severn Valley ware	1	42
12.1	Reduced Severn Valley ware	1	34
12.3	Reduced organically-tempered Severn Valley ware	1	11
14	Fine sandy grey ware	1	16
22	Black-burnished ware, type 1 (BB1)	2	115
23	Shell gritted ware	1	19
40	Oxfordshire parchment ware	1	27
97	Miscellaneous Prehistoric wares	1	137
98	Miscellaneous Roman wares	5	62

Table 4 Quantification of the Roman pottery by fabric

Judging by the sherd quantities and fabrics, it seems likely that the assemblage was a highly selective one.

The condition of the pottery was generally good, although there was significant abrasion of some of the Roman coarse-ware sherds.

Most of the pottery was Roman, but this assemblage was most notable because it contained three substantial sherds of grooved ware, dating from the late Neolithic period, and which are in very good condition. Two decorated sherds, which match surviving sherds, were published in 1936 as examples of the newly defined pottery class termed ‘grooved ware’ (Piggott 1936, fig 7, nos 6, and 8); a third decorated sherd published at the same time is not currently available. Thin sectioning of one sherd (not included in the sherds published by Piggott 1936) has now been undertaken (Ilex this volume, Appendix 1) which demonstrates that this ware is shell tempered which is unusual for the period in this region.

A sherd of Oxfordshire parchment ware, was of 3rd-4th century manufacture. This was from a bowl decorated with stripes of red paint, and bearing a cordon, of a form (P21.1) described by Young (1977) as ‘unusual’, and datable in the overall parchment ware date range of AD 240-400.

The Severn Valley wares in the assemblage were mainly unidentifiable in terms of form, except for a tankard rim of a form described by Evans, Hartley *et al* (2000), and broadly similar to Webster form 39 (1976), which dated from the 2nd century AD. The remaining coarse wares were grey, but could not be positively identified to any source. However, it was noted that one of these sherds, from a bowl rim, bore a close resemblance to the Savernake grog-tempered fabric (16.1). Pottery with this fabric was generally only distributed from Wiltshire kilns into bordering counties such as Gloucestershire, although isolated finds have been reported well beyond this (Tyers 1996).

The pottery fabrics and forms found at this site suggest that it may have been in intermittent use before the Roman period, but was then continuously occupied throughout the 2nd to 4th

centuries. There are no indications that this Roman site would have been of higher status than a small rural settlement.

3.2.4 Other artefacts

No other artefacts were associated with this assemblage.

3.3 Excavation at Sedgeberrow (WSM07517)

3.3.1 Artefact recovery

These finds were retrieved had been excavated by Dr Malkin (Site 28) prior to the World War II (Cox 1967). No stratigraphic information was available.

3.3.2 Assemblage summary

The prehistoric and Roman material within the assemblage is summarised in Table 5.

Period	Material	Total	Weight (g)
Iron Age/Roman	Pottery	1	12
Roman	Pottery	20	221

Table 5 Quantification of the prehistoric and Roman component of the site assemblage

3.3.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 6.

Fabric code	Fabric name	Total	Weight (g)
12	Severn Valley ware	9	127
12.1	Reduced Severn Valley ware	3	50
22	Black-burnished ware, type 1 (BB1)	1	1
29	Oxfordshire red/brown colour-coated ware	3	32
3.2	Malvernian tubby cooking pot	1	12
43.2	Central Gaulish samian ware	2	2
98	Roman misc. (possibly shell-gritted ware; F23)	2	9

Table 6 Quantification of the Roman pottery by fabric

The condition of the pottery was generally good, although there was substantial abrasion of many of the oxidised Severn Valley ware sherds (fabric 12).

Severn Valley ware constituted the largest part of the assemblage (55% by weight). Reduced (grey) sherds (fabric 12.1) made up an unusually high proportion (28%) of the Severn Valley ware (though it is not known, whether this was the result of selective retention of the reduced sherds during or after excavation). Severn Valley ware jars and tankards (with oxidised fabric 12) were represented, but the datable sherds covered a wide period of manufacture, from the 2nd to 4th centuries.

For such a small assemblage, the presence of a wide range of other regional and imported fabrics and forms was notable. Two small samian sherds were dated, by their Central Gaulish fabric (43.2) as 2nd century, but these may well have been residual within the contexts from which they were recovered. Other useful dating evidence was provided by the remains of two bowl foot-rings from Oxfordshire colour-coated ware (fabric 29), which are 3rd-4th century in date.

It is concluded, from the pottery fabrics and forms, that this site was probably discontinuous occupation from the 2nd to the 3rd/4th century. There is no artefactual evidence to support the idea that this site would have been of any higher status than an ordinary rural settlements in this area, though the assemblage was really quite small.

3.3.4 Other artefacts

No other artefacts were associated with this assemblage.

4. Collections from Birmingham City Museum (*by J Timby*)

4.1 Introduction

During Stage 2 (Jacobs and Jackson 2007) six assemblages from the Birmingham Museum collection were viewed as having considerable potential in their own right and were identified for more detailed analysis (Stage 3). These include large assemblages from Bredon Hill, Bredons Norton, Overbury Park, and Elmont Field (or Coppice) and Nettlebeds, the whole collection coming from the Birmingham City Museum Service, which has held the material for a number of years following the closure of the Holland Martin Museum at Overbury.

The main potential of these assemblages lay in the dating and characterisation of Roman activity in the different localities thus contributing to understanding of the overall nature of pottery distribution and utilisation in the more immediate vicinity of Bredon Hill.

4.2 Excavation at Bredons Norton 1912 (WSM 35836)

4.2.1 Summary

This assemblage was excavated in 1912, although the exact location of the site is unknown. The analysed assemblage was quite small comprising some 61 sherds weighing 752g (Tables 7-8).

Period	Material	Total	Weight (g)
Roman	Pottery	61	752
Undated	Iron	60	638

Table 7 *Quantification of the site assemblage*

	Fabric code	Fabric common name	No	No %	Wt(g)	Wt %
LPRIA-Early Roman	3	Malvernian igneous	1	1.6	20	2.7
SVW types	12	Severn Valley ware oxidised	4	6.6	41	5.5
	12.1	Severn Valley ware reduced	1	1.6	20	2.7
Local	19	Wheel-thrown Malvernian	2	3.3	133	17.7

Regional	22	Dorset Black-burnished ware	1	1.6	31	4.1
	29	Oxfordshire colour-coat	5	8.2	35	4.7
	37	?Gloucester mortaria	1	1.6	80	10.6
Continental imports	43.1	South Gaulish samian	4	6.6	36	4.8
	43.2	Central Gaulish samian	34	55.7	284	37.8
Unknown	14	fine grey ware	5	8.2	49	6.5
	15	medium grey sandy ware	1	1.6	8	1.1
	98	Miscellaneous Roman	1	3.2	15	2
Totals			61		752	

Table 8 Quantification of Roman pottery by fabric (LPRIA = late pre-Roman Iron Age, SVW = Severn Valley ware)

4.2.2 Condition

The retained assemblage was quite well preserved with an overall average sherd size of 12g. The group included body, base and rim sherds. It is clear however, that it represents a selected assemblage as there are proportionately far more samian sherds present than would be expected from an excavated assemblage. Some of these are labelled as from the Glynn Collection. Several of the other wares are typologically distinct or decorated, again suggesting selective retention.

4.2.3 Composition

The group is quite small but includes local wares accompanied by regional and continental imports. The pre-Roman native wares consist of just one sherd from a Malvernian jar with duck-stamped decoration. Severn Valley wares are clearly under-represented with just five sherds. There are five fine grey wares, all decorated with rustication, combed wavy line, impressed comb or barbotine stripes. Of note also in the local wares is a lid in Malvernian ware decorated with an applied wavy frill and with a frilled lip. The samian includes mainly mid to later 2nd century plain wares including forms Dr 18?, 18/31-31, 31, 33, 45, 79, 80 and Ludo Tg. One sherd has a rivet repair hole. Amongst the unclassified wares is a rouletted red colour-coated flange and a fine whiteware. A white-slipped mortarium rim is possibly a Gloucester product.

4.2.4 Dating

The retained wares span the 1st to 4th centuries, the latest wares being four sherds of Oxfordshire colour-coated ware dating to the period AD 240-400. The samian appears to be predominantly mid-late Antonine. The mortarium rim, possibly a Gloucester product, is likely to date to the early 2nd century.

4.2.5 Function and status

The general range of wares present falls within that to be expected within this region with a few pieces of intrinsic interest.

4.3 **Excavations on Bredon Hill: 1912-1944 (WSM 35838 and 38363)**

4.3.1 **Summary**

This assemblage represents finds gathered over a number of years from several sites (Tables 9-11). The analysed assemblage from this collection amounted to some 5670 sherds weighing 108.5kg. Most of this (5639 sherds) is Roman, the remainder dating to the medieval and post-medieval periods. In addition three small fragments of amorphous fired clay and 15 fragments (703g) of ceramic building material (CBM) were present with the pottery.

With the exception of a single sherd bearing a grid reference number, none of the sherds could be identified to a precise finds provenance. The labelled sherd, a Dorset Black-burnished ware plain-rimmed dish (Acc Group 1990.A801), was marked 612345/78910. Most of the sherds had been subjected to a provisional sorting with visually similar sherds being grouped together, and rims, bases and body sherds bagged separately, and given separate accession numbers.

Period	Material	Total	Weight (g)
Prehistoric	Worked flint	1	7
Roman	Pottery	5639	107,891
?Roman	Painted plaster	1	2
Medieval	Pottery	8	152
Post-medieval	Pottery	18	429
Post-medieval	Pipe-clay wig curler	1	12
Modern?	Slag	6	44
Undated	Iron ?tweezers	5	171
Undated	Iron fire-?surround	1	111
Undated	Iron shears	1	38
Undated	Iron object	1	8
Undated	Iron nails	56	544
Undated	Iron knife blade	1	40
Undated	Iron key	1	11
Undated	Iron horseshoe	1	166
Undated	Copper alloy object	1	24
Modern	Copper alloy	2	8
Undated	Copper alloy plate	10	25
Undated	Copper alloy brooch	7	7

Undated	Lead	5	105
Undated	Mammal bone	48	791
Undated	Worked bone	2	4
Undated	Mollusc; oyster	15	249
Undated	Molluscs snails	8	22

Table 9 Quantification of the site assemblage (all periods)

Material	Total	Weight (g)
Roman pottery	5639	107,891
Medieval pottery	8	152
Post-medieval pottery	18	429
Totals	5665	110,689

Table 10 Quantification of the pottery by period

Pottery category	Fabric code	Fabric common name	No	No %	Wt	Wt %
LPRIA- Early Roman	4.3	fossil shell	3	0.1	21	0.0
	3	Malvernian igneous	15	0.3	377	0.3
	3.2	Malvernian igneous	40	0.7	1192	1.1
	4.1	Malvernian limestone	7	0.1	114	0.1
	5.2	sandstone-tempered	1	0.0	22	0.0
	16.2	handmade grog-tempered	3	0.1	488	0.5
SVW types	12	Severn Valley ware oxidised	2577	45.7	56,340	52.2
	12.1	Severn Valley ware reduced	287	5.1	5936	5.5
	12.2	organic-tempered oxidised SVW	195	3.5	5720	5.3
	12.3	organic-tempered reduced SVW	26	0.5	752	0.7
	-	roughcast local ware	42	0.7	338	0.3
Local	3.1	handmade Roman Malvernian	75	1.3	3701	3.4

	19	Wheel-thrown Malvernian	43	0.8	1501	1.4
	149	Worcs BB1 copies	5	0.1	127	0.1
Regional	17	Midlands pink grogged ware	2	0.0	382	0.4
	20	white-slipped oxidised/reduced	44	0.8	500	0.5
	22	Dorset Black-burnished ware	327	5.8	5528	5.1
	23	Midlands shelly	19	0.3	300	0.3
	28	Lower Nene Valley colour-coat	17	0.3	202	0.2
	29	Oxfordshire colour-coat	132	2.3	1108	1.0
	33.3	Oxon colour-coated mortaria	22	0.4	396	0.4
	33.2	Oxon white slipped mortaria	3	0.1	101	0.1
	38	Oxon whiteware	23	0.4	257	0.2
	33.1	Oxon white ware mortaria	20	0.4	843	0.8
	40	Oxon parchment ware	8	0.1	64	0.1
	151	South-west oxidised	5	0.1	37	0.0
	31	South-west colour-coated	7	0.1	42	0.0
		Hadham oxidised ware	3	0.1	37	0.0
		?Wroxeter white slipped mortaria	3	0.1	280	0.3
		?Wroxeter white ware mortaria	3	0.1	103	0.1
Continental imports	42	unknown amphora	1	0.0	103	0.1
	42.1	Baetican amphora	24	0.4	4213	3.9
	42.3	Gallic amphorae	3	0.1	94	0.1
	43	samian (burnt)	1	0.0	3	0.0
	43.1	South Gaulish samian	49	0.9	241	0.2
	43.2	Central Gaulish samian	728	12.9	3725	3.5
	43.3	East Gaulish samian	1	0.0	7	0.0
	44	Moselle black slipped ware	1	0.0	3	0.0

		Argonne colour-coat	3	0.1	32	0.0
Unknown sources	13	sandy oxidised	8	0.1	120	0.1
	14	fine grey ware	593	10.5	8737	8.1
	15	medium grey sandy ware	243	4.3	3524	3.3
	41	miscellaneous whiteware	1	0.0	4	0.0
	98	fine black ware	5	0.1	28	0.0
	98	miscellaneous colour-coated wares	12	0.2	157	0.1
	98	white ware - light orange colour-coat	6	0.1	81	0.1
	98	fine oxidised ware	3	0.1	10	0.0
Totals			5639		107,891	

Table 11 Quantification of Roman pottery by fabric

4.3.2 Condition

For the most part the assemblage is in good condition, the overall average sherd size for the Roman material being 19g. Rims made up 26.5% of the sherd count. The range of fabrics is probably reflective of that to be expected in this locality. However, there are clear hints that this is a selected collection of pottery rather than one representing an *in toto* excavated assemblage. This is particularly evident when compared with the material from the 1941-2 collections (WSM 35841-2). First, the smaller, much more fragmented component usually found in an excavated assemblage from this region is not present suggesting that the larger and visually more attractive sherds have been selectively retained. Second, the samian collection represents a far higher percentage of the assemblage than one might have expected at 13.8% by sherd count. This suggests a possible collection bias, first because it can be easily identified from its colour and quality, and second because it would have been seen as the only useful component of a Roman assemblage for dating purposes at a time when little was known about coarse wares. However, the samian assemblage, given that there are 779 sherds, is almost completely devoid of any stamped or decorated wares suggesting that these have been separated out in the past so that even this group is not complete. It is more difficult to determine whether the grey or black reduced wares are under-represented, as any assemblage from this region would be expected to be dominated by oxidised Severn Valley ware.

4.3.3 Composition

The Roman assemblage from Bredon (WSM 35838 and 38363) is quite a rich and diverse group of material, which reflects the local industries as well as far reaching regional and continental links. Table 11 provides a quantified summary of the wares present.

The earliest group of wares are those derived from the pre-Roman native traditions, which continue to be used well into the 2nd century AD. This includes Malvernian igneous rock, Palaeozoic limestone-tempered and grog-tempered wares. Three sherds of fossil shell-tempered handmade ware may be residual from the later Iron Age. Collectively this group of material contributes a very small proportion to the overall assemblage, less than 2% by count and around 2% by weight. Although such wares tend to have a lower survival rate compared to the harder fired Roman wares it would seem that the area from where the pottery has been derived probably had no pre-Roman activity and such wares are the latest survivals to be found in the later 1st century-early 2nd century.

As might be expected Severn Valley wares dominate the collection accounting for 54.8% by sherd count. The range of vessel types is quite typical of the industry being dominated by wide-mouthed jars, bowls and tankards. Of particular note is a crudely made face-pot of which the upper half to two-thirds survives (2005.0219). The head is defined by an applied semi-circle of clay with a raised ridge for the nose. The eyes are two applied clay pellets each with a central piercing. Presumably the face was originally attached to a large jar. Such vessels are quite rare in the Severn Valley ware repertoire but other examples of face pots, not identical in form have been found from the cemetery at Coppice Corner, Kingsholm, Gloucester (unpub. Gloucester Museum), Blackfriars, Worcester (Jacobs and Jackson 2007, 23) and Ariconium, Herefs (Willis 2000). Other items of note include a counter (1990.A812), a hollow spout (1990.A1234) and a blind spout in reduced ware (1990.A1195). Several of the vessel sherds have an internal calcareous lining where they have contained or been used for heating water.

A number of sherds were present from oxidised globular beakers with a roughcast finish. Some have cornice rims whilst others small everted thickened rims. The fabric is very similar to the Severn Valley ware suggesting these are also a local product. Some vessels also have a white slip on the body. Possibly linked with this production is a fine grey ware (fabric 14), which accounts for 10.5% of the assemblage. Typologically this seems to date to the early-mid 2nd century with various beakers (cornice rim, globular and derived butt beaker), jars, bowls imitating samian Dr 30, cups and lids. Also present was a sherd from a bowl with vertical fluting, possibly imitating a glass pillar-moulded bowl, one with horizontal ridging and several roulette-decorated pieces. The high percentage of these wares, if all from one source, suggest this is a relatively local production (see also Elmont Field WSM 35839/34855); this was subjected to thin-sectioning (Ixxer this volume, Appendix 1) in the hope of further characterisation and aiding the search for its source.

Other local wares include handmade and wheel-thrown Malvernian wares, some copying Dorset Black-burnished ware (BB1; DOR) forms. Other forms include distinctive simple lids with large knobs and large jars.

Continental imports are represented by both fine wares and amphorae but no mortaria. The fine wares are dominated by samian, particularly from the Central Gaulish production sites with a few sherds from South Gaulish and East Gaulish sources. Table 12 provides a rough quantification of the forms present based on rim count. Other recognised forms from body sherds are also included. There are a number of characteristically late forms typical of the second half of the 2nd century, for example, Ludowici Tx cups, mortarium-like bowls Curle 21, mortarium (Dr 45), bowls (Dr 38) and dishes Dr 79. Although decorated bowls Dr 37 and Dr 30 seem moderately well represented on rim count, there are very few decorated body sherds present suggesting that these have been extracted. One notable exception is a sherd bearing a cursive mould maker's signature from Acc 2005.0222. Only one base-sherd is present with an incomplete potter's stamp (Acc No. 1990.A841). Three sherds have rivet repair holes (Acc 1990.A841; 1990.A842 and 1990.A1199).

Vessel type	samian form	Number of rims
cup	Dr 27	11
	Dr 33	33
	Dr 35	2
	Dr 40	1
	?Ritt 8	1
	Ludo Tx	2
bowl	Dr 30	5

	Dr 37	40
	Dr 38	*
	Curle 11	3
	Curle 21	2
dish	Dr 18/31 and 31	72
	Dr 36	6
	Dr 42	*
	Dr 79	2
	Curle 23	1
mortaria	Dr 45	1
Total		182

Table 12 Summary of samian forms from Bredon (WSM 35838): rim count (= present but no rim)*

Other fine-ware imports are poorly represented with there being only a single sherd from a Moselle black slip beaker and three sherds from Argonne rough cast colour-coated beakers, dating to the late 2nd-3rd century and mainly 2nd century respectively.

The amphorae sherds are mainly from South Spanish Dressel 20 vessels, used for transporting olive oil and the commonest type to be found on Romano-British sites. Of particular note is a large body sherd bearing an inscription etched in before firing (2005.A0232) which probably comes from the 1952 excavations at Elmont Copse (cf Moray-Williams 1954) and below. In addition there are three sherds from Gallic wine amphorae and one unidentified sherd (1990.A1195)

A diverse range of regional imports are present including products from Dorset, Oxfordshire, Wroxeter, Hertfordshire, the Midlands, the Nene Valley and the south-west. Products from the Dorset and South-west Black-burnished industry are the most prolific accounting for 5.8% by count of the assemblage. Jars are the commonest form present followed by flat-rimmed dishes/bowls. Just two rims each represent the grooved rim dish, typical of the later 2nd-3rd century and the later flanged conical bowl. One jar body sherd has part of a probable post-firing graffiti (1990.A1190).

Products from the Oxfordshire industries collectively contribute 3.7% by sherd count with colour-coated wares being the commonest. In contrast to the chronological pattern demonstrated by the Dorset Black-burnished wares there is a greater emphasis on 3rd- and 4th-century products. The colour-coated wares include examples of Young (2000) forms C8, C22, C45, C47, C49, C51, C58, C72, C75, C81 and C84. There is an example of a reused beaker base from 1990.A812. Bowls C84 along with at least three body sherds decorated with impressed rosettes or segmented circles indicate a date in the 2nd half of the 4th century. Several mortaria are present including whiteware forms M10, M18, M19 and M22; colour-coated examples C97 and C100 and white-slipped form WC7. The whitewares are less prolific but include examples of Young (*ibid*) forms W5, W33, W49 and W54.

Other regional traded fine wares present include 17 sherds of Nene Valley colour-coated ware, featured sherds including plain-rimmed dish and flanged bowl; a few sherds of south-west colour-coated beaker and three possible sherds of oxidised Hadham ware. Traded coarse wares include two sherds of pink grog-tempered Midlands storage jar, six Wroxeter-type mortaria and nineteen sherds of late Roman Midlands shelly ware. This latter product is

usually an indicator of later 4th–5th century occupation. Various sherds of white-slipped oxidised and reduced ware, largely from flagons, may also be regional imports.

4.3.4 Dating

Whilst the assemblage contained sherds spanning the entire Roman period, the earlier (1st century) and latest (4th century) material is less well represented with the bulk of the material dating to the 2nd and 3rd centuries. There is however commensurately more 4th century material present compared with Elmont Coppice (WSM 34855) but quantitatively less than the collections from Overbury Park (WSM 35841-2).

4.3.5 Function and status

This range of material collected would appear to be fairly typical of that to be expected from this general region. With the exception of the samian the relative proportions of the different wares is generally in keeping with other settlement assemblages from the region. As noted above there seems to be a clear bias in the quantity of samian present which can normally be taken as an indicator of the status of a site. Other indicators of status can be seen in the diversity of pottery wares present and in the incidence of more usual specialist products. The assemblage is moderately quite diverse raising it above a purely rural status but does not approach the level of diversity seen in urban centres such as Wroxeter and Gloucester. In addition it was associated with a limited amount of ceramic building material which included a range of different types of tile (tegula, flue, and pilum-type) suggesting a highly Romanised building in the vicinity (D Hurst, pers comm).

4.4 Excavation at Elmont Coppice (WSM 34855)

4.4.1 Summary

This site was excavated between 1948 and 1954 (Moray-Williams 1950; 1954). A large number of the bags contained the original context references, many referring to a ‘kiln’ (currently interpreted as a corn-drying kiln as opposed to a pottery kiln; D Hurst, pers comm). The Roman pottery assemblage retrieved from the excavated area consisted of 836 sherds of pottery weighing 15.1kg, (see Tables 13-14). This includes accessioned bags labelled WSM 34855/35839, which appear to include material from this period. Also included in Acc No 1990.A789 labelled TT3 E2, which probably belongs to the 1938 excavations and comprises just three sherds. The published reference (Moray-Williams 1954) concerns a sherd described as from a storage jar with graffiti, and this is undoubtedly the sherd of Dressel 20 amphora accessioned under WSM 38363 (2005.0232). The assemblage is fairly typical for the region with oxidised Severn Valley wares dominating accompanied by a limited range of traded regional and continental imports. In addition to the Roman assemblage the collection includes four replica pots made from local clays and fired at different temperatures.

Period	Material	Total	Weight (g)
Roman	Pottery	836	15,135
Roman	Tile	1	425
Undated	Bone	13	230
Undated	Worked bone	1	8
Modern replica	Pottery	4	480

Table 13 Quantification of the site assemblage

Pottery category	Fabric code	Fabric common name	No	No %	Wt(g)	Wt %
LPRIA- Early Roman	3	Malvernian igneous	18	2.2	397	2.6
	3.2	Malvernian igneous	13	1.6	454	3.0
	16.2	handmade grog-tempered	1	0.1	20	0.1
SVW types	12	Severn Valley ware oxidised	273	32.7	5685	37.6
	12.1	Severn Valley ware reduced	17	2.0	470	3.1
	12.2	organic-tempered SVW oxidised	9	1.1	486	3.2
	12.3	organic-tempered SVW reduced	4	0.5	98	0.6
	12/98	SVW/ fine oxidised ware	3	0.4	35	0.2
	45	roughcast local ware	4	0.5	79	0.5
Local	3.1	handmade Roman Malvernian	7	0.8	240	1.6
	19	Wheel-thrown Malvernian	50	6.0	851	5.6
	149	Worcs BB1 copies	6	0.7	120	0.8
Regional	20	white-slipped oxidised/reduced	1	0.1	13	0.1
	22	Dorset Black-burnished ware	105	12.6	1472	9.7
	23	Midlands shelly	2	0.2	96	0.6
	29	Oxfordshire colour-coat	5	0.6	45	0.3
	40	Oxon parchment ware	2	0.2	10	0.1
	154	Oxon grog-tempered storage jar	1	0.1	58	0.4
Continental imports	43.1	South Gaulish samian	6	0.7	56	0.4
	43.2	Central Gaulish samian	30	3.6	319	2.1
	43.3	East Gaulish samian	1	0.1	6	0.0
	42.1	Baetican amphorae	4	0.5	407	2.7

		Argonne colour-coat	1	0.1	2	0.0
Unknown sources	13	sandy oxidised	1	0.1	14	0.1
	14	fine grey ware	234	28.0	3371	22.3
	15	medium grey sandy ware	28	3.3	184	1.2
	98	fine black ware	5	0.6	33	0.2
	98	miscellaneous Roman	2	0.2	82	0.5
	98	fine oxidised ware	2	0.2	26	0.2
	114	mica dusted ware	1	0.1	6	0.0
Totals			836	100.0	15,135	100.0

Table 14 Quantification of Roman pottery by fabric

4.4.2 Condition

The condition of the assemblage is good with well preserved sherds. The overall average sherd weight is quite high at 18.1g suggesting that either the smaller fraction of material was not retained or that the material derives from well-sealed negative features.

4.4.3 Composition

The assemblage comprises predominantly local wares accompanied by a variety of regional and continental imports. Severn Valley wares account for 36.3% by count of the total assemblage. Fine grey wares account for 28% of the assemblage comprising various jars, beakers, lids and bowl variously decorated with burnished lattice, rouletting and in one case rustication. This is a very high percentage suggesting a local source and raises the question as to whether these were being produced at or near the site. Typologically the material is likely to date to the early-mid 2nd century. A number of the pieces are recorded as coming from within the kiln. The reference to a corn-drying building and a complete absence of waster or other industrial material suggests that the structure excavated was not for firing pottery.

Regional imports are dominated by products from the Dorset Black-burnished industry which make up 12.6% of the assemblage. The assemblage contains the standard jar, bowl and dish forms spanning the 2nd to 4th century. A small amount of Oxfordshire ware is present including a colour-coated 4th-century bowl, Young C75, two parchment wares and a grog-tempered storage jar. Other imports are restricted to two sherds of late shelly ware, a jar and a dish.

The continental imports are dominated by samian tableware, which account for 4.4% by sherd count. The group comprises a mixture of plain and decorated ware. One sherd of a decorated Dr 37 bowl probably by the potter *Cinnamus*, one of the more prolific Lezoux potters in the mid-late Antonine period, came from '1949 Kiln I/C'. One dish has a rivet repair hole (1990.A791). Other imports include four sherds of Baetican amphorae and one sherd from an Argonne colour-coated cornice rim beaker. A further sherd of Dressel 20 amphora accessioned under WSM38363 is probably that reported on in Moray-Williams (1954, 230). This is described as a sherd of storage jar from a 2nd-3rd century corn-drying building.

Other wares of note include a single mica-slipped sherd, and five sherds of a fine black ware.

4.4.4 Dating

The recovered assemblage spans the Roman period, 1st to 4th century with the emphasis being on material of 2nd to 3rd-century date. Pre-Roman native wares are present contributing 3.9% with a six sherds of probable South Gaulish samian suggesting some later

1st century occupation nearby. The two sherds of Midlands shelly ware and some of the Oxfordshire colour-coated ware indicate continued use of the area into the later 4th century but again this is quite sparse.

4.4.5 Function and status

The assemblage is quite typical of a domestic group for this region with oxidised Severn Valley wares dominating. The only unusual element is the high proportion of fine grey wares, also seen to some extent in the 1938 material from Elmont Field (WSM 35839), which may be significant; for petrological analysis see Ixer, this volume, Appendix 1. Linked with this may be the fine oxidised beakers and the sherds of local rusticated ware and perhaps a source for this material should be sought in the immediate locality. Overall jars dominate the form repertoire with a relatively low proportion of specialist forms. Samian levels usually seen as reflective of the status of a settlement, are slightly above those to be expected from a rural settlement, but not excessively so and, although traded wares are present, these are fairly limited in scope.

4.5 Excavation at Elmont Field (WSM 35839)

4.5.1 Summary

This collection results from excavations carried out from the late 1930s. Many of the accessioned bags have excavation codes for the year 1938 (B38) followed by either a trench number and layer number, or a + indicating unstratified. Murray-Threipland (1946-8, 418) stated that her 1938 excavation at Elmont encountered 'no Roman building ... but a good deal of Roman pottery, coins etc came from the top soil and the old turf underlying the medieval buildings and the bank south and east of the farm'. The same building had been partly uncovered in 1924-5 by H E Foll (1925), who dated it to the Roman period.

The Roman pottery assemblage analysed consisted of 1110 sherds of pottery weighing 12.3kg, and dating from the Roman period (see Tables 15-16). Local wares dominate the assemblage, particularly oxidised Severn Valley wares, accompanied by a typical range of regional imports and a moderately high proportion of samian. In addition to the pottery, 14 fragments of CBM (405g) and two small pieces of fired clay were recorded. The CBM included at least one imbrex. This site provides a comparable large group of material to the similarly amalgamated material in the Bredon general and Overbury collections (WSM35838, 35841 and 35842).

Material	Total	Weight (g)
Roman pottery	1110	12,301

Table 15 Quantification of the site assemblage

	Fabric code	Fabric common name	No	No %	Wt(g)	Wt %
LPRIA- Early Roman	4.3	fossil shell	1	0.1	6	0.0
	3	Malvernian igneous	1	0.1	6	0.0
	3.2	Malvernian igneous	11	1.0	134	1.1
SVW types	12	Severn Valley ware oxidised	512	46.1	5926	48.2
	12.1	Severn Valley ware reduced	50	4.5	577	4.7

	12.2	organic-tempered SVW oxidised	98	8.8	1729	14.1
	12.3	organic-tempered SVW reduced	13	1.2	142	1.2
	45	roughcast local ware	13	1.2	117	1.0
Local	3.1	handmade Roman Malvernian	20	1.8	342	2.8
	19	Wheel-thrown Malvernian	10	0.9	70	0.6
	149	Worcs BB1 copies	2	0.2	31	0.3
Regional	17	Midlands pink grogged ware	3	0.3	37	0.3
	20	white-slipped oxidised/reduced	8	0.7	139	1.1
	22	Dorset Black-burnished ware	89	8.0	926	7.5
	23	Midlands shelly	2	0.2	12	0.1
	28	Lower Nene Valley colour-coat	3	0.3	12	0.1
	29	Oxfordshire colour-coat	24	2.2	138	1.1
	33.3	Oxon colour-coated mortaria	1	0.1	28	0.2
	33.2	Oxon white slipped mortaria	1	0.1	16	0.1
	38	Oxon whiteware	1	0.1	12	0.1
	33.1	Oxon white ware mortaria	3	0.3	49	0.4
	151	South-west oxidised	1	0.1	2	0.0
	31	Brown colour-coat (South-west)	2	0.2	9	0.1
Continental imports	43	samian (burnt)	2	0.2	3	0.0
	43.1	South Gaulish samian	8	0.7	54	0.4
	43.2	Central Gaulish samian	67	6.0	458	3.7
	43.3	East Gaulish samian	1	0.1	6	0.0
Unknown sources	14	fine grey ware	108	9.7	976	7.9
	15	medium grey sandy ware	42	3.8	245	2.0
	98	Miscellaneous Roman	6	0.6	27	0.2
	98	fine oxidised ware	7	0.6	72	0.6
Totals			1110	100.0	12,301	100.0

Table 16 Quantification of Roman pottery by fabric

4.5.2 Condition

The assemblage is very typical of an excavated assemblage with an average sherd weight of 11 and a mixture of larger and smaller pieces. The presence of 20 sherds of post-medieval pottery would suggest some material was recovered from surface layers, hence the more fragmented nature of the material. There are no complete vessels or identifiable profiles present.

4.5.3 Composition

The assemblage comprises a mixture of local wares with a number of imported regional and continental imports. Local oxidised Severn Valley ware dominates the group accounting for over half the group, 60.6% by count, 68.2% by weight. Forms include the standard range of wide-mouthed jars, bowls, narrow-necked jars and tankards. The second commonest fabric is a fine grey ware (fabric 14), which accounts for 9.7% by count. Although this does not have a recognised source the high incidence of the ware would imply relatively local production (for thin section report, see Ixer, this volume, Appendix 1). Forms include various jars with beaded, flared, triangular, everted and lid seated rims, lids, beakers and bowls including a copy of a Dr 30 form. Several of the vessels are decorated with burnished lattice, rouletting, and combed wavy line. Typologically the ware belongs to the early-mid 2nd century. Of similar date is a small number of cornice rim fine oxidised beakers some with white slip or roughcast decoration. Other local wares include various Malvernian types (fabric 3.1, 19 and 149). Pre-Roman native wares (fabrics 3, 3.2, 4.3 and 16.2) account for a very small proportion of the assemblage collectively contributing 2.2%.

Continental imports are limited to samian tablewares, largely from Central Gaulish sources. Overall the samian accounts for 7% by count, 4.1% by weight. These are largely plain wares dating to the 2nd century, in particular forms (Dr 18/31, 31, 33, 35/6, 38, 40, 79 and Curle 11). A few pieces of decorated bowl (Dr 30 and 37) and one broken stamp are also present but are proportionally low, quite typical of a later 2nd century assemblage. Regional imports are dominated by sherds of Dorset Black-burnished ware which contribute 8% to the group. Products include the standard range of bowl, dish and jar forms spanning the early-mid 2nd century through the 4th century. Various products of the Oxfordshire industries are also present, particularly the colour-coated wares. Forms present include Young (1977) C22, C45, C46, C68 and a mortarium sherd spanning the period AD 240-400. The whitewares include mortarium forms (*ibid*) M17 and M22 also typical later Roman products. Other named regional imports include three sherds of Lower Nene Valley colour-coated ware, three sherds of Midlands pink grogged ware and two sherds of late Roman shelly ware.

4.5.4 Dating

The assemblage analysed from Elmont Field WSM 35839 spans the entire Roman period in terms of the forms and fabrics present. The bulk of the material however, appears to date to the 2nd and 3rd centuries with the earlier and latest components only sparsely represented.

4.5.5 Function and status

The Elmont Field assemblages present a fairly typical domestic assemblage for the region. Local products dominate the group. Jars are the commonest form present followed by bowls/dishes. In the absence of any stratigraphic information it is not possible to define any changing trends. Often the quantity, quality and range of imports to a site is taken as a reflection of the status of that site. In this particular assemblage the only continental import was samian tableware, which accounts for 7% of the total assemblage. This is quite high, as most rural sites in the area would be expected to average between 1-3% with urban sites producing higher percentages. This could be a reflection of slight collection bias, but could also be taken to reflect a fairly substantial settlement in the locality.

4.6 Excavation at Nettlebeds Field (WSM 35840)

4.6.1 Summary

These artefacts were excavated between 1948-1950 by A Moray-Williams. The pottery assemblage retained from the excavated area consisted of 134 sherds of Roman date weighing 1.910kg (see Tables 17-18). In addition there are four fragments of ceramic building material (CBM), one of which is post-medieval, the others Roman in date. The same Roman site had probably first been tested by Foll (1925) who while excavating part of a building at Elmont, took an interest in another finds scatter 300 yards to the west, where he recorded wall foundations and associated samian and other Roman finds.

Material	Total	Weight (g)
Roman pottery	134	1910

Table 17 Quantification of the site assemblage

	Fabric code	Fabric common name	No	No %	Wt(g)	Wt %
SVW types	12	Severn Valley ware oxidised	92	68.7	1381	72.3
	12.1	Severn Valley ware reduced	5	3.7	112	5.9
	12.2	organic-tempered SVW oxidised	6	4.5	100	5.2
Local	3.1	handmade Roman Malvernian	2	1.5	24	1.3
	19	Wheel-thrown Malvernian	2	1.5	43	2.3
Regional	22	Dorset Black-burnished ware	4	3.0	55	2.9
	29	Oxfordshire colour-coat	1	0.7	9	0.5
	151	South-west oxidised	1	0.7	6	0.3
	31	Brown colour-coat (South-west)	2	1.5	19	1.0
Continental import	43.2	Central Gaulish samian	3	2.2	14	0.7
Unknown sources	14	fine grey ware	15	11.2	138	7.2
	15	medium grey sandy ware	1	0.7	9	0.5
Totals			134	100.0	1910	100.0

Table 18 Quantification of Roman pottery by fabric

4.6.2 Condition

The sherds are in moderately good condition with an overall average sherd size of 14.2g. The overall balance of wares appears to be that expected for this region suggesting that this is a good representative group.

4.6.3 Composition

Although a modest group of material there is a complete absence of early pre-Roman type native wares suggesting a lack of early occupation at the site. The assemblage is dominated by Severn Valley ware which accounts for 76.9% by sherds count, 83.4% by weight. The usual range of jars, bowls and tankards are present. Other local wares include a small number of handmade and wheel-made Malvernian wares. Fine grey sandy wares form a significant component of the assemblage at 11.2% (count). Forms include a plain-rimmed dish, a dish with internal rouletted decoration and a body sherd from an indented jar or beaker. As seen with the other Bredon Hill assemblages analysed here Dorset Black-burnished ware is the commonest of the regional imports present accounting for 3% of the group. Other regional imports include south-west white slipped and colour-coated ware and a single sherd of Oxfordshire colour-coated ware (Young 1977, form C45). Samian tableware is the only continental import present and this contributes 2.2% to the group although in effect only three sherds. One sherd is decorated from a Dr 30 or 37 bowl and one sherd has a rivet repair hole.

Amongst the CBM is one fragment of combed box flue.

4.6.4 Dating

This is a small group of material, but it appears to lack any early or very late wares, most of the material probably dating to the 2nd and 3rd centuries.

4.6.5 Function and status

This site produced a similar group of material to the Bredon Hill general and Overbury collections (WSM35838, 35841 and 35842).

4.7 Excavations at Overbury Park (WSM 35841) and Overbury Park Wood (WSM 35842)**4.7.1 Summary**

The two collections from Overbury Park (WSM 35841-2) come from excavations undertaken by a consortium of Worcestershire grammar schools, directed by M W Cole and W J F Jeff during their summer camp between 1952 and 1954. As both site assemblages appear to derive from the same phase of activity, and indeed some bags are labelled with both codes, they have been treated as one group for the discussion. Both collections are held by Birmingham Museum.

This material derives from several closely spaced sites that were excavated over a number of years by schoolchildren in the early 1950s. Unfortunately, although the location of the individual sites can be relatively well established, the material appears to have been amalgamated and thus cannot be specifically located to excavation or context, thereby reducing its potential.

As a result of the amalgamation and lack of contextual information, the collection has no potential for dating specific sites or enclosures. However, the large quantities allied to the quality and range of pottery present, means the collection has a high potential for dating and characterising Roman activity in one locality and contributing to understanding of the overall nature of pottery distribution and utilisation in this area.

Although most of the pottery dates to the Roman period, the assemblage includes a single later prehistoric rim sherd (1990.A979). The Roman pottery assemblage retrieved from the excavated areas consisted of 11,094 sherds weighing 65kg (Tables 19-20). In addition a quantity of fired clay, ceramic building material (both Roman and post-medieval) and post-Roman sherds are present, along with small fragments of bone and stone.

Period	Material	Total	Weight (g)
Roman	Pottery	11,094	65,024.5
Undated	Animal bone/other finds	10,935	47,441

Table 19 Quantification of the site assemblage

	Fabric code	Fabric common name	No	No %	Wt(g)	Wt %
LPRIA- Early Roman	4.3	fossil shell	57	0.5	396	0.6
	3	Malvernian metamorphic	70	0.6	577	0.9
	3.2	Malvernian metamorphic	43	0.4	600	0.9
	4.1	Malvernian limestone	192	1.7	1419	2.2
	16.2	handmade grog-tempered	7	0.1	172	0.3
SVW types	12	Severn Valley ware oxidised	4892	44.1	30,625	47.1
	12.1	Severn Valley ware reduced	324	2.9	2445	3.8
	12.2	organic-tempered SVW oxidised	73	0.7	1617	2.5
	12.3	organic-tempered SVW reduced	54	0.5	663	1.0
	45	roughcast local ware	6	0.1	22	0.0
Local	3.1	handmade Roman Malvernian	145	1.3	3301	5.1
	19	Wheel-thrown Malvernian	1155	10.4	9608	14.8
	149	Worcs BB1 copies	15	0.1	325	0.5
Regional	20	white-slipped oxidised/reduced	10	0.1	43	0.1
	22	Dorset Black-burnished ware	653	5.9	3940	6.1
	23	Midlands shelly	81	0.7	342	0.5
	28	Lower Nene Valley colour-coat	7	0.1	25	0.0
	29	Oxfordshire colour-coat	157	1.4	1533.5	2.4

	33.3	Oxon colour-coated mortaria	10	0.1	50	0.1
	38	Oxon whiteware	24	0.2	74	0.1
	33.1	Oxon white ware mortaria	14	0.1	122	0.2
	39	Oxon burnt whiteware	3	0.0	130	0.2
	40	Oxon parchment ware	4	0.0	19	0.0
	32?	Mancetter/Hartshill mortarium	2	0.0	104	0.2
	151	South-west oxidised	1	0.0	4	0.0
	151.2	South-west white-slipped ware	5	0.0	26	0.0
	31	Brown colour-coat (South-west)	10	0.1	30	0.0
Continental imports	42.1	Baetican amphora	5	0.0	599	0.9
	43	samian (burnt)	8	0.1	19	0.0
	43.1	South Gaulish samian	1	0.0	1	0.0
	43.2	Central Gaulish samian	81	0.7	257	0.4
Unknown	13	sandy oxidised	4	0.0	59	0.1
	14	fine grey ware	93	0.8	591	0.9
	15	medium grey sandy ware	175	1.6	1281	2.0
	16	Wheel-made grog-tempered	10	0.1	239	0.4
	98	miscellaneous Roman	41	0.4	209	0.3
	OO	small sherds/ crumbs	2662	24.0	3557	5.5
Totals			11,094	100.0	65,024.5	100.0

Table 20 Quantification of Roman pottery by fabric

4.7.2 Condition

The condition of the assemblages was poor. Although marked most of the material was unwashed thus making identification difficult, particularly with the reduced wares. The assemblage also contained a significant proportion of very small sherds with the result that the overall average sherd weight was just 6g. Sherds were generally abraded and few colour-coats retained any surface finish. In contrast to the other Roman assemblages studied this collection also contained a significant amount of fired clay and ceramic building material (CBM), the latter often so fragmentary it was difficult to determine which category pieces belonged to. This would suggest that much of the material was recovered from upper surface levels. Also present were four medieval and fourteen post-medieval sherds along with fifteen fragments of post-medieval CBM.

4.7.3 Composition

The earliest sherd, an oolitic limestone-tempered rim from a jar is probably a residual later Bronze Age or early Iron Age sherd (1990.A979). It appears to be an isolated piece.

Local wares dominate the Roman assemblage accompanied by a moderately good range of regional imports and a limited range of continental imports. The percentages are slightly skewed by the fact that 24% of the assemblage comprised small sherds/crums, which have not been fabric-typed. Although pre-Roman native wares only contribute 3.3% to the assemblage there are quite a number of Malvernian tubby and rolled rim jars including one duck-stamped sherd (1990.A998) and another with impressed decoration (1990.A967). Other forms include lids, a base with a foot-ring and burnished line decoration on the interior (1990.A1141) another base with a foot-stand (1990.A1314) and a curved wall dish (1990.A1143).

Severn Valley wares account for 48.2% by count, 54.4% by weight whilst locally made Roman Malvernian handmade and wheel-made wares account for a further 11.7%. The Severn Valley wares include a range of wide-mouthed and narrow-necked jars, bowls and tankards. Less common are butt beakers, colander sherds, dishes, a nozzle from a small bottle, possibly a feeding bottle, and a single miniature jar in reduced ware. Probably local, but unprovenanced, are fine grey wares (fabric 14), which account for 0.8% by count, mainly as jars but with some beakers and bowls.

The most common regional import is Dorset Black-burnished ware with the standard range of bowls, dishes and jars chronologically spanning the 2nd to 4th centuries. Sherds of south-west BB1 have been subsumed into the same fabric code. Of particular note is a sherd with a post-firing graffiti in the form of a cross (Acc 1990.A1143).

The Oxfordshire industry is well represented with sherds from all the various wares present. Colour-coated sherds are dominant with examples of Young (2000) forms C22, C45, C49, C51, C68, C75, C81, flagon and mortaria C97 and C100. One sherd has an *in situ* lead rivet (Acc 1990.A1161). Other Oxfordshire wares include various unfeathered whitewares, whiteware mortaria, burnt whiteware jars (*ibid* form BW2), parchment wares (*ibid* form P24). Seven sherds of Lower Nene Valley colour-coated ware and 10 sherds of South-west colour-coated ware are also present. Other regional imports include two sherds of Mancetter/Hartshill mortaria and a significant number of later Roman shelly wares. The latter is present as triangular and everted rim jars and a single curved wall dish and, although only 0.7% of the total assemblage, comprises a total 81 sherds.

Continental imports comprise five sherds of Baetican amphorae and 86 sherds of samian, less than 1% of the total assemblage. There are only 10 rim sherds present, which include examples of Dr 18/31-31, 31, 35/6, 37 and 38. There are no stamps.

The CBM includes at least one piece of combed box-flue tile. The moderately large quantity of fired clay was too fragmentary to identify.

4.7.4 Dating

The earliest sherd, although an isolated piece, might suggest some prehistoric activity in the locality. Of the remaining assemblage, the sparse quantity of pre-Roman native wares, 3.3% by sherd count, suggests there is little early or immediate pre-Roman activity at the site and that most of the activity dates to the 2nd-4th century. The group thus compares well with the other assemblages analysed from Bredon and Elmont Coppice, although the Overbury assemblage has a greater number of sherds dating to the latter part of the 4th century, and possibly beyond.

4.7.5 Function and status

The assemblage compares well with others from the region and would appear to be fairly typical of a domestic occupation. The percentage of samian is more typical of a rural settlement where there may have been little demand for fine tablewares either culturally or as a result of increased affluence.

4.8 **Coins from the Bredon Hill area (Birmingham Museum Collection) (by C E King)**

The ancient coins from Bredon Hill consist of a mixture of excavation material and stray finds from six locations: Ashton under Hill, Beckford village, Elmont Field and Coppice, Kemerton Camp, Nettlebeds, and Overbury together with two pieces that could not be assigned to a find spot. The excavator's original intention was to publish both the excavation and stray finds which he interpreted as evidence of a developing and sustained agricultural settlement. Unfortunately, however, the coins have never been systematically identified, listed, or published apart from four Iron Age pieces, which were described in a brief note by Humphrey Sutherland (1955, 241).

The remaining documentation which largely dates from the mid-1950s consists of a number of handwritten lists of varying degrees of completeness and correspondence relating to specific coins involving the Iron Age specialist Derek Allen, and experts in Roman coinage including Robert Carson of the British Museum, and Humphrey Sutherland and Colin Kraay of the Ashmolean Museum. There is a typewritten list as well, relating to an accession in 1953 of 42 coins that were summarily described, together with an unknown number of 3rd and 4th century pieces. These 3rd century coins were accessioned as barbarous and divided into two groups defined as being of medium or small size. The mixed (illegible) group of 3rd and 4th century piece were recorded simply as 'various'.

Table 21 is an attempt to present the various lists compiled by Moray-Williams, the excavator, in as coherent and complete a form as possible and to suggest when material may have been listed more than once. Given the nature of the available evidence, it is impossible to know exactly how many coins there may have been originally. Moray-Williams stated in a letter dated 2 November 1955 that there were about 200 pieces but at the present time only about 140 can be securely listed by site. Some of the remaining coins could be among those in the 3rd and 4th century barbarous and illegible groups. Despite these difficulties, the chronological distribution of the surviving ancient coins presents a picture broadly compatible with that of British sites in general during the period of the Roman occupation of Britain.

According to Moray-Williams in the letter cited above, the coins ranged in date from the late Iron Age to Arcadius whose reign is broadly synonymous with the end of Roman rule in Britain. His summary, based on a hand-written list which combines coins from various Bredon Hill sites, states that there were a few 1st-century pieces, a 'fair number of Domitian/Trajan and half a dozen of Severus' from the late-1st and 2nd centuries. He also commented on a significant increase in the number of coins from the later part of the 3rd century, particularly those of Claudius II and the Tetrici ending with Carausius and a single coin of Allectus. He did not, however, note a similar phenomenon for the middle of the 4th century in the years between AD 330 and 360. Unfortunately, the estimate of the number of coins per emperor, particularly for the first two centuries AD, does not correlate well with the individual site lists.

The two largest groups of coins are from Ashton under Hill and Elmont Field and Coppice. The Ashton pieces are the most completely described, particularly the first group of Ashton coins in Table 21 where they have been linked to the data from the 1953 Accession. The Vitellius/Vespasian hybrid and a sestertius of Trajan seem to have been moved to Ashton from their original listing under Elmont Field and Coppice and Beckford Village respectively. It is regrettable that the imitations were not more closely identified, since their relative proportions in the 3rd and 4th centuries, when compared with the quantity of genuine contemporary material, would have been useful for analytical purposes. The second Ashton list is much less useful than the first as consists only of a list of rulers and the dates of their reigns. It includes coins which clearly come from other Bredon Hill sites and where possible they have been identified in the comments section.

Many of the Elmont coins are also relatively fully described and the inclusion of the reverse types for the 4th century pieces allows them to be dated within narrower limits than the regnal years of the individual rulers. Also helpful are comments from the handwritten lists (eg 'barbarous', 'plated', and 'hybrid'), as they help to distinguish ancient imitations from genuine pieces.

Neither of these groups of coins had any recorded emperors whose dates are later than the years from AD 364 to 378. Consequently the Elmont group contained no coins later than Valentinian I, Valens, or Gratian while the latest identifiable coins from Ashton under Hill seem to be of Constantius II and Magnentius.

Of the remaining sites, only the two coins from Beckford Village and the single antoninianus from Overbury have been recorded with more than the name of the emperor and the number of specimens, which limits the usefulness of the coins from Kemerton Camp and Nettlebeds quite considerably. The Kemerton Camp group are of particular interest because they are significantly later in date than those from Ashton under Hill and Elmont Field and Coppice. They begin with a coin of Septimius Severus and end with 13 coins from the later 4th century minted between 364 and AD 402. None of the other Bredon Hill sites had coins of Magnus Maximus (AD 383-88), Theodosius I (AD 378-92) or Arcadius (AD 395-402). It would have been helpful to have more details of these pieces in support of a late 4th century date for activity around Bredon Hill.

The peak periods of coin loss in the vicinity of Bredon Hill, based on the Ashton under Hill and Elmont lists, are the years from c. AD 260-95 and AD 330-48. This reflects a frequent, if not universal, pattern of Roman coins from British sites. If the Kemerton coins are added to these groups, the picture looks very different as 19 of the 23 coins from Kemerton are from the 4th century and 13 fall in the years between c AD 364 and 402.

The interesting coins in the combined Bredon Hill assemblage include the four Iron Age silver units and the 40-nummi piece of Justin I of AD 518 to 527 which represent the extremes of the chronological distribution. The four Dobunnian Iron Age coins recorded here are not the only finds from this area and should now be set in the context of the finds recorded in the *Celtic Coin Index* and the *Gazetteer of Iron Age Finds from Britain* (Van Arsdell 1994).

The early Byzantine coin of Justin I (AD 518-27) is unusual in a British context and leads one to query whether it is a modern loss. However, other Byzantine finds from the West of Britain (including Gloucestershire; S Moorhead, pers comm) have come to light in recent years, and if this one is a genuine ancient loss it adds to the picture of more widespread Mediterranean contact in post-Roman Britain that is gradually emerging.

NO	MINT AUTHORITY	DATE	MACK	VAN ARSDELL	PUBL.	1953 Acc.	COMMENTS
1	Dobunni	30-15BC	378	1042	Sutherland 1955, 241	yes ?	Sutherland 1955, no. 1; only 1 Mack 378 listed
1	Dobunni	30-15BC	379	1049	Sutherland 1955, 241	yes	Sutherland 1955; no. 2
1	Dobunni	30-15BC	378	1042	Sutherland 1955, 241	yes ?	Sutherland 1955, no. 3; only 1 Mack 378 listed
1	Dobunni	15-30AD	389	1110	Sutherland 1955, 241	yes	Sutherland 1955, no 4

ASHTON UNDER HILL ROMAN COINS

NO	EMPEROR	DATE	REF	DENOM	PUBL	1953 Acc.	COMMENTS
1	Claudius I	41-54		As?		yes	AE; barbarous
1	Vitellius/Vespasian	69-71		Denarius		no	See below: Elmont Field and Coppice
1	Trajan	98-117		Sestertius		yes	See below: Beckford Village
3	Antoninus Pius	138-161		1 Sest; 2 ?		yes	Illegible; ? 1 barbarous
1	Gordian III	238-244		Antoninianus		yes	Rev: IOVI STATORI
1	Salonina	253-268		Antoninianus		yes	Rev: IVNO REGINA
1	Postumus	260-268		Antoninianus		yes	Rev: Concordia
2	Claudius II	268-270		Antoninianus		yes	1 Rev: IOVI VICTORI; 1 barbarous
3	Tetricus II	270-274		Antoninianus		2 not 3	2 Tetricus I; one Tetricus 2

1	Probus	276-282	Antoninianus	yes	Rev: PIETAS []			
1	Carausius	286-293	Antoninianus	yes	Rev: PAX []			
1	Allectus	293-296	Antoninianus	yes	Rev: PAX AVG			
1	Maximianus	284-295	Nummus	yes	SALVS AVGG?; not London mint			
1	Theodora	337-341	Nummus	yes	Rev: PIETAS ROMANA			
11	Constantine I	306-337	Nummi	yes	GE 5, VR 2, Prov Aug 1, 2 Sol			
2	Constantius II etc.	316-361	Nummi	yes	1 C II Caes, Vict. Laet; 1Cs II, FTR			
2	Magnentius	350-353	Nummi	yes	Rev: SALVS DD 1; barbarous 1			
8	various 3c	c. 260-295		yes	Various barb. radiates; ? no.			
?	various 3c and 4c	c. 260-368		yes	Various 3c; 4c illeg.; ? no.			
ASHTON UNDER HILL (MISCELLANEOUS STRAY FINDS)								
NO	EMPEROR	DATE	REF	DENOM	PUBL.	IMIT	MINT	COMMENTS
	EISV			Silver unit				See above (Iron Age)
	Claudius I	41-54		As?		yes		?Elmont Coppice
	Vitellius	69/71		Denarius		yes		Elmont Coppice; hybrid
	Trajan	98-117		Sestertius		no		Beckford Village

M. Aurelius	161-180								? Elmont Coppice
Sept. Severus	193-211	Denarius	yes						? Elmont Coppice
Sev. Alexander	222-235	Sestertius	no						? Beckford Village
Gallienus	253-268								
Salonina	253-268								
Postumus	260-268								See below: Ashton under Hill
Victorinus	268-270	Antoninianus							? Elmont Coppice
Carausius	286-293								
Tetricus I and II	270-274								
Constantine I	306-337								
Constantine I	337-350								
Constantius II	337-361								
Gratian	367-383								
Justin I	518-527								? moved from unlocated coins; see below
ASHTON UNDER HILL									
NO EMPEROR	DATE	RIC	DENOM	PUBL	IMIT	MINT	COMMENTS		

1	Postumus	260-268	Antoninianus				Gaul	Rev: LAETITIA AVG, galley
BECKFORD VILLAGE								
	NO EMPEROR	DATE	RIC	DENOM	PUBL	IMIT	MINT	COMMENTS
1	Trajan	98-117		Sestertius		no	Rome	Rev: SPQR OPTIMO PRINCIPI, Dacia
1	Sev. Alexander	222-235		Sestertius		no	Rome	Rev: PROVIDENTIA [] S C
ELMONT FIELD COPPICE COINS								
	NO EMPEROR	DATE	RIC	DENOM	PUBL	IMIT	MINT	COMMENTS
1	Claudius 1	c. 41-54		As		yes		Barbarous
1	Vitellius/Vespasian	69		Denarius		yes		hybrid; ? cast
1	Domitian	73		As		no		Rev: SPES [] COS II
1	Hadrian	117-138		Denarius		no		Rev: PM TRP COS III, Victory
2	Faustina II	145-161		As/Dp		no		'Kiln' site; 1 illeg.
1	Marcus Aurelius	161-180				no		[] TRP XXIII/FORT RED COS III
1	Septimius Severus	193-211		Denarius		yes		plated; ? Kemerton Camp
1	Severus Alex.	222-235		Denarius		no		No details; pre-1947
1	Aemilian	253		Antoninianus		no		Obv: IMP AEMILIANVS PF FEL AVG

1	Gallienus	260-268	Antoninianus	no	Rev: FECVNDITAS AVGG; hybrid; mule
3	Claudius II	268-270	Antoniniani	yes	Rev: CONSECRATIO, eagle.; 1 barb.
1	Victorinus	268-270	Antoninianus	no	Rev: SALVS AVG
1	Tetricus I	270-274	Antoninianus	yes	Rev: PIETAS AVG
6	Tetricus I/II	270-274	Antoniniani	yes (3)	3 imits.; 1 denarius (sic) 2?
8	Carausius	286-293	Antoniniani	yes (6)	No details
4	Constantine I	330-335	Nummi	no	1 Lyons 3 Wolf & twins; 1 Victory on Prow
1	Crispus	320-325	Nummus	no	London Rev: BEATA TRANQVILLITAS
1	Constantine II	337-341	Nummus	no	Rev: VIRTVS AVGVSTI
17	Constantius II	330-337	Nummi		Rev: GLORIA EXERCITVS (All?)
3	Constans	333-350	Nummi	no	Trier Rev: GLORIA EXERCITVS
4	Magnentius	350-353	Nummi	yes	1 Two Victories; 1 VICTORIA AV G
1	Valentinian I	367-375	Nummus	no	
4	Valens	364-378	Nummi	no	1 SECVRITAS REIPVBLICAE; ?5 coins
3	Gratian	367-383	Nummi	no	

Table 21 Coin list for Bredon Hill (Birmingham Museum collection)

5. Collections from South Worcestershire Archaeological Group archive (*by D Williams*)

5.1 Fieldwalk to south-west of Baughton (WSM 30567)

5.1.1 Artefact recovery

Fieldwalking was carried out by the South Worcestershire Archaeological Group (SWAG) at Baughton during 1990-2 (Lloyd and Hebden 1998). The area of investigation, to the south-west of the village, was chosen after cropmarks revealed signs of the Roman road running southwards from Worcester towards Gloucester.

The main fieldwalking area was on the south side of the A4104 road, just west of Baughton, and was marked out with 20 x 20m squares, but no grid plan has survived. Further work, just to the south of the fieldwalked area, involved examination of ditches still in use, which revealed the presence of concentrations of Blue Lias stone, probably from the Roman road.

5.1.2 Assemblage summary

The overall assemblage collected by this fieldwalk consisted of 630 artefacts with a total weight of 6.9kg. The prehistoric and Roman material within the assemblage is summarised in Table 22.

Period	Material	Total	Weight (g)
Prehistoric	Flint	2	12
Prehistoric	Pottery	30	196
Roman	Brick/tile	1	35
Roman	Pottery	53	463

Table 22 *Quantification of the prehistoric and Roman component of the site assemblage*

5.1.3 The prehistoric and Roman pottery

The prehistoric and Roman pottery sherds were grouped and quantified according to fabric type, as shown in Table 23.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	47	403
12.2	Oxidised organically tempered Severn Valley ware	1	7
13	Sandy oxidized ware	1	2
14	Fine sandy grey ware	1	30
22	Black-burnished ware, type 1 (BB1)	1	1
32	Mancetter/Hartshill mortarium	1	15

97	Miscellaneous prehistoric wares	30	196
98	Miscellaneous Roman wares	1	5

Table 23 Quantification of the Roman and prehistoric pottery by fabric

The condition of the pottery was generally fair, with many of the smaller coarse-ware sherds being heavily abraded.

Although this assemblage was a relatively small one, it proved to be the most unusual of those assessed during the present study. In common with all the other fieldwalks, Severn Valley ware (fabrics 12 and 12.2) accounted for most of the Roman pottery (76% in this case). A small rim sherd, from a tankard (Webster form 41 or 46) was datable, but only to a broad 2nd-4th century range. The single sherd from a Mancetter/Hartshill mortarium, would also have been produced during this date range. Other small sherds of sandy wares (fabrics 13 and 14) and Black-burnished ware (fabric 22) were undiagnostic, as was a single brick/tile fragment.

Thirty prehistoric pottery sherds (miscellaneous fabric category 97) were characterised by fossil shell tempering. Most exhibited a grey core, with oxidised surfaces that ranged in colour from cream, to mid/dark brown, through to orange. None of the sherds were diagnostic, in form or decoration. Local shell-tempered wares are characteristic of assemblages dating from the Bronze Age, as at Huntsman's Quarry, Kemerton (Jackson 2005), through to the early middle Iron Age, as at Beckford (Evans *et al* in prep). Eighteen sherds showed a close match with WHEAS fabric 4.9, the mid-late Bronze Age variant, while another seven showed a closer match with Iron Age variant 4.3, and it was noted that these fabrics can be very difficult to distinguish from each other and probably overlap. Two sherds were Palaeozoic limestone-tempered ware (fabric 4.1), most common in this part of Worcestershire in the Late Iron Age (Evans *et al* in prep).

The pottery evidence suggests that there was significant prehistoric activity at Baughton, dating to some time between the Bronze Age or early middle Iron Age. The range and abundance of the Roman pottery fabrics is broadly similar from other rural sites in this part of Worcestershire.

5.1.4 Other artefacts

Two flint flakes were recovered from this site.

5.2 Fieldwalk at Smallbrook Farm, Broadway (WSM 34322)

5.2.1 Artefact recovery

A fieldwalk organised by the University of Warwick was carried out at Smallbrook Farm, Broadway, in 2005. This provided the largest of the fieldwalking assemblages covered in this study. The search area was divided into 20 × 20m squares, but a number of finds bags were recorded with non-standard designations, or simply as 'unstratified'.

5.2.2 Assemblage summary

The overall assemblage collected by this fieldwalk consisted of 1887 artefacts with a total weight of 15.689kg. The prehistoric and Roman material within the assemblage is summarised in Table 24.

Period	Material	Total	Weight (g)
Prehistoric	Flint	10	60
Prehistoric	Pottery	1	11
Iron Age/Roman	Pottery	5	45

Roman	Brick/tile	1	11
Roman	Pottery	1728	13,408
Roman	Tile	3	231

Table 24 *Quantification of the prehistoric and Roman component of the site assemblage*

5.2.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 25.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	1395	10612
12.1	Reduced Severn Valley ware	101	981
12.2	Oxidised organically tempered Severn Valley ware	44	440
12.3	Reduced organically tempered Severn Valley ware	1	5
13	Sandy oxidized ware	12	50
14	Fine sandy grey ware	43	318
15	Coarse sandy grey ware	12	62
17	Pink grog tempered ware	1	11
20	White slipped ware	1	20
22	Black-burnished ware, type 1 (BB1)	36	271
23	Shell gritted ware	1	1
28	Nene Valley ware	2	11
29	Oxfordshire red/brown colour coated ware	11	49
3	Malvernian ware	1	13
3.1	Slab-built Malvernian ware	4	48
30	Oxfordshire white colour coated ware	5	32
32	Mancetter/Hartshill mortarium	4	74
33.1	Oxfordshire white mortaria	6	49
33.2	Oxfordshire red mortaria with white slip	7	73

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	1395	10612
12.1	Reduced Severn Valley ware	101	981
12.2	Oxidised organically tempered Severn Valley ware	44	440
12.3	Reduced organically tempered Severn Valley ware	1	5
13	Sandy oxidized ware	12	50
14	Fine sandy grey ware	43	318
15	Coarse sandy grey ware	12	62
17	Pink grog tempered ware	1	11
20	White slipped ware	1	20
22	Black-burnished ware, type 1 (BB1)	36	271
23	Shell gritted ware	1	1
28	Nene Valley ware	2	11
29	Oxfordshire red/brown colour coated ware	11	49
33.3	Oxfordshire red mortaria with red-brown slip	4	55
41	Unprovenanced white ware	5	29
43.1	South Gaulish samian ware	13	48
43.2	Central Gaulish samian ware	5	15
43.3	East Gaulish samian ware	1	2
97	Miscellaneous prehistoric wares	1	11
97/98	Miscellaneous Iron Age/ Roman wares	2	4
98	Miscellaneous Roman wares	17	205

Table 25 Quantification of the Roman pottery assemblage

Preservation conditions were generally good, although some of the smaller coarse-ware sherds were badly abraded.

90% of the Roman pottery was Severn Valley ware (fabrics 12, 12.1, 12.2 and 12.3), and within this group, 92% was oxidised material. A wide variety of Severn Valley ware vessels were identifiable through rim forms, but the most common types were wide-mouthed jars. A fair number of these were datable using the form series published by Webster (1976), and gave a range of dates from the 2nd century through to the 4th century.

Fine sandy grey wares (fabric 14) were present (*c* 3%), while the relative abundances of individual Oxfordshire wares were low (fabrics 29, 30, 33, 33.1, 33.2 and 33.3). A number of Mancetter/Hartshill mortaria sherds (fabric 32) were also present. Apart from Blackburnish ware (fabric 22), pottery from further afield (eg the Nene Valley) was only found in very small quantities.

The samian pottery, from all the main production areas (ie in South, Central and East Gaul; fabrics 43.1, 43.2 and 43.3, respectively), indicated a continuous acquisition of fine wares from the 1st through to the 3rd century.

However, there were very few finds of prehistoric, or transitional Iron Age/Roman, pottery at the site. Five sherds of Malvernian pottery (fabrics 3 and 3.1) were recovered, though it cannot be determined whether this material was contemporary with early Severn Valley ware, rather than being an indication of pre-Roman occupation.

Although the assemblage from Smallbrook Farm was a large by Worcestershire standards, the sample of diagnostic sherds is probably too small for plotting of sherds/dates against spatial distribution, with any reasonable level of confidence.

The main date range of the pottery was from the 2nd century to the 4th, although the samian and Malvernian finds may have been indicative of early Roman activity. The presence of samian sherds from all three Gaulish production areas was noteworthy, though most of these were very small. However, the overall ratio of samian to Romano-British pottery was not markedly different from that of other Roman assemblages covered in the present study, and there was no evidence to clearly indicate that this site was of higher status than an ordinary rural, agricultural settlement.

5.2.4 Other artefacts

The number of Roman brick and tile fragments collected at this site was very low, relative to the yield of pottery. Of the ten pieces of flint found, three were possibly scrapers.

5.3 Fieldwalk at Defford (WSM 30370)

5.3.1 Artefact recovery

Finds were collected during a fieldwalk carried out in 2002 by the South Worcestershire Archaeological Group (SWAG), at a site to the south of the A 4104 road at Defford. The search area was divided into 20 × 20m squares (Figs 2-3). A gradiometer survey had been carried out in advance of the fieldwalk. Magnetic anomalies revealed a complex set of features, which were consistent with ditches forming enclosures, including one with quadruple ditches on one side (GSB 2000 and 2002; WSM 31908).

5.3.2 Assemblage summary

The assemblage from this fieldwalk consisted of 984 sherds weighing 18.878kg, dating from the Roman period onwards (Table 26). This site was selected for the plotting of the Roman finds against the background of features detected by geophysical survey for the purpose of assessment (see below, and Figs 2-3).

Period	Material	Total	Weight
Roman	Brick/tile	3	22
Roman	Pottery	206	1744

Table 26 Quantification of the Roman component of the site assemblage

5.3.3 The Roman pottery

The Roman pottery sherds were grouped and quantified according to fabric type, as shown in Table 27.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	183	1518
12.1	Reduced Severn Valley ware	1	1
12.2	Oxidised organically tempered Severn Valley ware	4	143
12.3	Reduced organically tempered Severn Valley ware	1	3
13	Sandy oxidized ware	2	6
22	Black-burnished ware, type 1 (BB1)	1	4
29	Oxfordshire red/brown colour coated ware	11	63
43.1	South Gaulish samian ware	2	2
98	Miscellaneous Roman wares	1	4

Table 27 Quantification of the Roman pottery by fabric

The condition of the Roman pottery from this site was generally good, with the majority of sherds displaying low levels of abrasion.

Coarse wares accounted for practically all of the Roman pottery from this site, with Severn Valley ware (12, 12.1, 12.2 and 12.3) being dominant among these (95% by weight). Wide-mouthed jars were the most frequent form identified among rim sherds of Severn Valley ware, which clearly demonstrated a range of production dates throughout the 2nd-4th century date range. However, a sherd from an Iron 'C' derived bowl is probably 1st-2nd century in date range (Webster 1976). Even more distinctive was a small sherd from the top of a samian inkwell. This example of the Ritterling 13 form had a South Gaulish (La Graufesenque) fabric (43.1), and was therefore also 1st- early 2nd century in date.

Only one sherd of Black-burnished ware (fabric 22) was found. Only a small number of Oxfordshire red/brown colour-coated sherds were recovered, but these included parts of a foot-ring and a rim, identifiable as being from forms close in shape to a Young C77 and C46 (or C55) bowls, dates for which would be no earlier than the 3rd century.

The above fabrics and forms point to Roman activity at the site over the whole 1st-4th century period. The range of fabrics was common to most of the other rural locations covered by this study, and therefore consistent with low status farming activity, although the find of part of an imported inkwell seemed very unusual for a rural site in this area.

A close correlation was observed between the spatial distribution of Roman finds and the magnetic anomalies at this site (Figs 2-3, and see Section 8). There is also a separate concentration of Roman finds at the south edge of the grid, but this lay outside the area of the geophysical survey.

5.3.4 Other artefacts

Brick/tile fragments (possibly Roman) recovered from this site were small and undiagnostic. A small number of worked lithics and medieval pottery sherds were also found.

5.4 **Fieldwalking at Eckington, Worcestershire (WSM 05900-05908/9, 07281, 07582, 35844 and Eckington unlocated finds) (by C J Evans)**

5.4.1 **Artefact recovery**

The Eckington finds were recovered during a programme of fieldwalking undertaken by SWAG as part of their Eckington parish survey, between September 1983 and June 1985. In the region of 26 acres (10.5ha) was fieldwalked (Price 1985). Two ploughed fields (WSM 05487 and 05905) were systematically walked, using a grid of 20 x 20m squares. The first (formerly WSM 05487, now WSM 07582) aimed to investigate two crop marks in the north-east of the field; the second (WSM 05905) was adjoining a Roman site recorded when the cutting for the railway was being dug in the mid 19th century. The other site assemblages represent concentrations of finds identified during the walking of field boundaries. Eleven located site assemblages are included in this report, together with a group of unmarked pottery that can only be attributed broadly to Eckington parish.

The Stage 2 assessment recorded that at some point sherds had been removed for use in a teaching collection. These are likely to be some of the more diagnostic forms.

5.4.2 **Assemblage summary**

The artefacts recovered are summarised by individual site in Tables 28-47 below. They included an assemblage of prehistoric flint flakes, pottery of Late Iron Age (1 sherd), Roman and medieval date and small quantities of Roman brick/tile, as well as a variety of post-medieval and modern finds. There are some discrepancies between the original finds records and the finds available for inclusion in this project. These are noted below, where applicable. In total 2078 sherds of Roman pottery from Eckington were studied in detail as part of the Stage 3 project (Table 48).

5.4.3 **Eckington Site WSM 5900**

Artefact recovery

The finds were recovered by SWAG in 1984 during fieldwalking of field edges (Price 1985). WSM 5900 represents a high concentration of Roman pottery recorded during this process, near to a D-shaped enclosure identified from an aerial photograph (WSM22869). The finds are related to a grid reference (SO9357040730), but are not marked with any other locational information.

In the original summary report (Price 1985) the finds from WSM 05900 and 05901 are quantified together. There are discrepancies between the quantities noted there, the quantities on the original catalogue sheets, and the quantities recorded in the Stage 2 and Stage 3 analyses of this project. The original report records 427 sherds of Roman pottery, 7 sherds of medieval pottery and 21 sherds of post-medieval pottery.

Assemblage summary

The site finds recovered are summarised in Table 28 below.

Type	Material	Total	Weight (g)
Iron Age	Pottery	3	35
Roman*	Pottery	141	1939
Undated	Brick/Tile	40	1185

Table 28 Quantification of the site assemblage (based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight
3	Malvernian ware	2	9
4.6	Oolitic limestone and sand tempered ware	1	16
5.6	Ironstone and sand tempered ware	2	19
12	Severn Valley ware	138	1868
12.2	Oxidised organically tempered Severn Valley ware	2	22
12.3	Reduced organically tempered Severn Valley ware	2	72
13	Sandy oxidized ware	1	2
14	Fine sandy grey ware	5	26
15	Coarse sandy grey ware	1	6
19	Wheel-thrown Malvernian ware	1	10
22	Black-burnished ware, type 1 (BB1)	3	33

Table 29 Quantification of the prehistoric and Roman pottery by fabric

Condition

This was one of the smaller Eckington assemblages, comprising 158 sherds (2.083kg; Table 29) of Romano-British pottery. The assemblage was less fragmentary than some of the others, with an average sherd weight of 13g, but was still abraded. There were 15 rims.

Dating

The earliest pottery comprised two body sherds in a sand and ironstone tempered ware, and a sherd in sand and limestone tempered ware; both similar to local Iron Age fabrics noted at nearby Beckford. Amongst the Roman pottery, the only form in BB1 was a plain rimmed dish (Seager Smith and Davies 1993, fig 123, WA type 20), a type produced from the 2nd century onwards. The dating therefore relied heavily on the Severn Valley ware forms, mainly broadly dated to the 2nd to 3rd centuries. Forms included jars with triangular and hooked rims (Webster 1976, fig 1A6, fig 4 C22), a small bowl (*op cit* fig 7 D34-6), and a tankard with moderately splayed walls (*op cit* fig 7E40-41). Very small quantities of organic tempered Severn Valley ware (Fabrics 12.2 and 12.3), and a fragmentary, upright rim from a tankard similar to Webster E38 (*op cit* fig 7) provided some evidence for 1st or early 2nd century activity. The assemblage also included a Malvernian ware lid, not a closely dated form.

Function and status

The small assemblage comprised local or regionally sourced wares, in particular Severn Valley ware (99% by weight), and mainly jars.

5.4.4 **Eckington site WSM 05901**

Artefact recovery

These finds were recovered from the adjacent field to WSM05900, during fieldwalking of the shared boundary, and represent another identified concentration of Roman pottery. The finds are related to a grid reference (SO93604050), but are not marked with more detailed locational information.

Assemblage summary

The finds recovered are summarised in Table 30 below.

Period	Material	Total	Weight (g)
Prehistoric	Flint	2	18
Roman*	Pottery	49	679
Med/post-medieval	Pottery	11	166
Undated	Roof tile	1	130
Undated	Stone	1	125

Table 30 Quantification of the site assemblage (* based on detailed analysis)

Fabric code	Fabric common name	Total	Weight
12	Severn Valley ware	45	591
12.1	Reduced Severn Valley ware	3	60
16.1	Savernake ware (BD30/31)	1	17
19	Wheel-thrown Malvernian ware	2	51

Table 31 Quantification of the Roman pottery by fabric

Condition

Fieldwalking produced a very small assemblage of 51 Roman sherds weighing 719g (Table 31). The sherds had a reasonably high average sherd weight, 14g, but were abraded. There were 2 rims.

Dating

The small assemblage included only two diagnostic forms, both dating from the 2nd to 3rd century: a Severn Valley ware jar with a hooked rim, similar to Webster C25 (Webster 1976, fig 5) and a moderately splayed tankard, similar to Webster E43 (*op cit* fig 7). However, the presence of a body sherd in Savernake ware (Fabric 16.1) points to some 1st to mid 2nd century activity in the vicinity.

Function and status

Only regional wares were included.

Other material

There was a very small amount of Roman roof tile in a fine sandy fabric (D Hurst, pers comm).

5.4.5 Eckington site WSM 05902

The survey report (Price 1985) records three sherds of pottery, two Roman and one medieval. These were not located and are not therefore included in this report.

5.4.6 Eckington site WSM 05903

Artefact recovery

The finds were recovered by SWAG during fieldwalking to the north-west of Eckington, in 1984. The finds come from an earth bank along the south and west sides of the field. The HER records a grid reference for the finds spot (SO 91350 41650) but the finds are not marked with more precise locational information.

Assemblage summary

The finds recovered are summarised in Table 32 below, based on data from the original records. There are discrepancies between the pottery quantities noted in the original HWCW pottery catalogue sheets, and the summary report (Price 1985).

Period	Material	Total	Weight (g)
Prehistoric	Flint	2	15
Roman*	Pottery	28	114
Roman	Roof tile	1	50
Post-medieval	Pottery	3	25
Post-medieval	Tile	10	394

Table 32 *Quantification of the site assemblage (* based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	27	110
12.1	Reduced Severn Valley ware	1	4

Table 33 *Quantification of the Roman pottery by fabric*

Condition

Only 28 sherds of Romano-British pottery were recovered, all very fragmentary (average sherd weight 4g) and abraded (Table 33). There were five rims.

Dating

Although only a small assemblage it produced a couple of diagnostically late 3rd or 4th century Severn Valley ware forms: a pulley rim jar similar to Webster A9-11 (Webster 1976, fig 3), and a short-necked bowl or jar similar to a type noted at the Malvern Hygienic Laundry site (Peacock 1968, fig 3.35) and in the late Roman assemblage from 14-20 The Butts, Worcester (Evans *et al* forthcoming).

Function and status

All sherds were in Severn Valley ware, however the assemblage is too small to draw any meaningful conclusions.

5.4.7 **Eckington site WSM 05904**

Artefact recovery

The finds were recovered by SWAG during fieldwalking of a field boundary in 1984. Other than the site code, no detailed locational information was recorded on the finds.

Assemblage summary

The finds recovered are summarised in Table 34 below, based on data from the original records.

Period	Material	Total	Weight (g)
Roman*	Pottery	32	405
Post-medieval	Pottery	2	5
Post-medieval	Roof Tile	7	60

Table 34 Quantification of the site assemblage (based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	30	387
12.2	Oxidised organically tempered Severn Valley ware	1	15
13	Sandy oxidised ware	1	3

Table 35 Quantification of the Roman pottery by fabric

Condition

Fieldwalking produced 32 sherds of Romano-British pottery, weighing 405g (Table 35). The assemblage was abraded, but was less fragmentary than some of the other Eckington material recovered. More than half the sherds (18) were rims, indicating that there may have been a bias towards these during recovery.

Dating

The high proportion of rims meant that there were a number of diagnostic forms, all in Severn Valley ware. There was some evidence for 1st to 2nd century activity: a wide-mouthed jar of Webster type C20 (Webster 1976, fig 4) and a narrow-mouthed jar in organic tempered Severn Valley ware, Webster type A1 (op cit fig 1). A range of jars and bowls are types dated broadly to the 2nd to 3rd centuries by Webster (1976, fig A7, fig 4 C22, fig 5 C25, fig 7 D34-36, fig 8 F47 and fig 10 J65). A couple of forms indicated activity continuing into the late 3rd or 4th centuries: a pulley-rimmed jar and a short-necked, wide-mouthed jar (op cit fig 3 A10-11 and fig 6 C31 respectively).

Function and status

All the pottery was locally or regionally sourced, and a range of utilitarian forms was represented, comprising jars, bowls and a lid.

5.4.8 **Eckington site WSM 05905**

Artefact recovery

The fieldwalking finds were recovered by SWAG in 1984, during fieldwalking of a ploughed field adjacent to a previously identified Roman site. A basic summary of the artefacts by grid square survives in the archive. Unfortunately the finds/finds bags are not marked with this information, so finds from individual grid squares can no longer be identified. The grid reference for the finds is SO9210041654.

Assemblage summary

The finds recovered are summarised in Table 36 below, based on data from the Stage 2 assessment. There is a discrepancy between these data and the finds recorded in the original

summary report (Price 1985), which noted 49 sherds of Roman, 11 sherds of medieval and 41 sherds of post-medieval pottery.

Period	Material	Total	Weight (g)
Prehistoric	Flint	1	14
Roman*	Pottery	165	2044
Post-medieval	Clay pipe	13	34
Post-medieval/modern	Glass	137	1344
Post-medieval/modern	Metal	7	277
Post-medieval/modern	Pottery	176	893
Undated	Bone	5	70
Undated	Fired clay/brick/tile	31	672
Undated	Miscellaneous	4	45
Undated	Slag	2	56
Undated	Roof tile	4	50

Table 36 Quantification of the site assemblage (based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	151	1809
12.1	Reduced Severn Valley ware	2	109
12.2	Oxidised organically tempered Severn Valley ware	3	22
12.3	Reduced organically tempered Severn Valley ware	5	50
13	Sandy oxidised ware	1	4
15	Coarse sandy grey ware	1	6
19	Wheel-thrown Malvernian ware	2	44

Table 37 Quantification of the Roman pottery by fabric

Condition

An assemblage of 165 sherds, weighing 2.044kg (Table 37) was recovered, reflecting the proximity of the fieldwalked area to a known Roman site. The average sherd weight of 12g is

higher than some of the other Eckington assemblages. The assemblage was abraded and there were 12 rims.

Dating

The pottery ranged in date from late 1st or early 2nd to late 3rd or 4th century. The earliest form was a sandy grey ware (Fabric 15) jar, comparable with types noted at Wroxeter in the 1st and 2nd century assemblages (Timby *et al* 2000, fig 4.60 JM7.56). The presence of organic tempered Severn Valley ware provided additional evidence for early activity. Most forms dated broadly to the 2nd to 3rd or 2nd to 4th century. These included rims from a moderately splayed Severn Valley ware tankard (Webster 1976, fig 7 E41) and two ring-necked flagons. The flagons, one in Severn Valley ware and one in sandy oxidised ware, both had the more pronounced upper rings typical of 2nd century vessels (cf Wroxeter type F3.42; Timby *et al* 2000, fig 4.49). A reduced Severn Valley ware copy of a BB1 flanged bowl (Saeger Smith and Davies WA type 25), and a splayed tankard (Webster 1976, fig 7 E44) provided evidence for late 3rd or 4th century activity.

Function and status

The fabrics all appear to be local or regional types. The presence of the flagons and grey ware jar distinguishes this from the other Eckington assemblages. These are forms that are, arguably, more typically associated with a more 'Romanised' site.

5.4.9 **Eckington site WSM 05906**

Artefact recovery

The finds were recovered during fieldwalking by SWAG in 1984. Other than the site code, no locational information was recorded on the finds. The grid reference for the finds spot is SO 93900 41100.

Assemblage summary

The finds recovered are summarised in Table 38 below, based on data from the original finds records.

Period	Material	Total	Weight (g)
Roman*	Pottery	6	102
Post-medieval	Pottery	1	15
Post-medieval	Tile	3	50

Table 38 *Quantification of the site assemblage (* based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	6	102

Table 39 *Quantification of the Roman pottery by fabric*

Condition

The assemblage produced only 6 sherds weighing 102g (Table 39), four of which were rims. All were abraded.

Dating

The assemblage was only broadly datable to the 2nd to 3rd or 4th centuries. Diagnostic forms comprised a hooked rim, wide-mouthed jar (Webster 1976, fig 5 C23-25) and a flanged bowl, similar to a type published from Worcester Sidbury (Darlington and Evans 1992, fig 19.14).

Function and status

There is insufficient evidence for site function or status.

5.4.10 **Eckington site WSM 05907**

Artefact recovery

The finds were recovered during fieldwalking by SWAG in 1984. Other than the site code, no locational information was recorded on the finds. The grid reference for the finds spot is SO9390040630.

Assemblage summary

The project summary (Price 1985) records 16 sherds of Roman pottery, one sherd of Medieval and four sherds of post-medieval pottery. Only six sherds of Roman pottery were located for the Stage 3 analysis (Table 40).

Fabric name	Fabric common name	Total	Weight (g)
12	Severn Valley ware	4	53
12.1	Reduced Severn Valley ware	1	12
14	Fine sandy grey ware	1	9

Table 40 *Quantification of the Roman pottery by fabric*

Condition

Fieldwalking produced only 6 sherds of Romano-British pottery weighing 74g, with an average sherd weight of 12g. The pottery was abraded.

Dating

The only dating evidence came from two Severn Valley ware jars; one broadly dated to the 2nd or 3rd century (Webster 1976, fig 4 C22), and the other to the 1st to 4th (*op cit* fig 1 A1).

Function and status

There is insufficient evidence for site function or status to be usefully considered.

5.4.11 **Eckington site WSM 5908/9**

Artefact recovery

The finds were recovered during fieldwalking by SWAG in 1984. Although WSM 05908 and WSM 05909 are recorded separately on the HER, the finds are all bagged together as 05908/9. Other than this site code, no locational information was recorded on the finds. The grid reference for the finds spot is SO9500041000.

Assemblage summary

Only Roman pottery was recorded. This is summarised in Table 41 below.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	622	10,660

12.1	Reduced Severn Valley ware	22	230
12.2	Oxidised organically tempered Severn Valley ware	42	648
12.3	Reduced organically tempered Severn Valley ware	7	134
12.4	Severn Valley ware variant	1	3
12.6	Severn Valley ware variant	1	39
13	Sandy oxidized ware	8	66
14	Fine sandy grey ware	2	29
16	Grog tempered ware (BD32/33)	1	8
17	Pink grog tempered ware	1	31
19	Wheel-thrown Malvernian ware	12	167
20	White slipped ware	1	11
22	Black-burnished ware, type 1 (BB1)	15	138
23	Shell gritted ware	1	6
28?	?Nene Valley ware	1	2
29	Oxfordshire red/brown colour coated ware	1	11
3	Malvernian ware	8	110
33	Oxfordshire white mortarium	3	28
43.2	Central Gaulish samian ware	2	11

Table 41 Quantification of the Roman pottery by fabric

Condition

This area produced the largest assemblage of Romano-British pottery from Eckington, 751 sherds weighing 12.332kg. On average sherds were less fragmentary than some of the other assemblages, with an average sherd weight of 16g, and the pottery was a little less abraded.

Dating

The assemblage provided good evidence for activity in the vicinity from the 1st or 2nd century through to the 4th. Early forms included a Malvernian tubby cooking pot with an upright rim (Peacock 1968, fig 1.1, 2). This type was originally dated by Peacock to the Hadrianic or Antonine periods, but has subsequently been found elsewhere in good 1st century contexts (Green and Evans 2001, 105). There was also an early Severn Valley ware jar (Webster 1976, fig 4 C20), and a number of sherds of diagnostically early organic tempered Severn Valley ware. The site produced two sherds of samian, both Central Gaulish and probably from Lezoux (Tomber and Dore 1998, LEZ SA 2, 32). One was from a Drag 37 bowl and the other from a Drag 27 cup, both dating to the 2nd century. A range of Severn valley ware forms dated broadly to the 2nd to 3rd or 2nd to 4th centuries. These included a wide-mouthed jar (op. cit. fig 4 C22), a flanged bowl (op cit fig 8 F50) and a tankard (op cit fig 7 E41). A range of forms date to the late 3rd or 4th and 4th centuries. Vessels in Severn Valley ware included a pulley-rimmed jar (op cit fig 3 A9), a hooked-rim jar (op cit fig 5

C27), a splayed tankard (op cit fig 7 E44) and various short-necked, wide mouthed jars (op cit fig 6 C31-3; Peacock 1968, fig 3.52-4, fig 4.55-60; Evans et al 2000, fig 24 JWM15). There was also a typically late 3rd to 4th century BB1 flanged bowl (Seagar Smith and Davies 1993, fig 124 WA type 25). The assemblage also contained diagnostically late Roman fabrics such as Oxfordshire red/brown colour coated ware, Pink grog tempered ware and Shell-gritted ware (Fabrics 29, 17 and 23); the latter represented by a fragmentary jar rim (cf Brown 1994, fig 29 170). Shell gritted ware in particular is characteristic of 4th century assemblages.

Function and status

Although Severn Valley ware was the most common fabric (95% by weight), the assemblage included a range of widely traded fabrics: SE Dorset BB1, grog tempered ware from Northamptonshire or Buckinghamshire, colour-coated table wares from Oxfordshire and the Nene Valley, as well as imported samian. The assemblage was dominated by jars (76% by rim EVE), the only other forms being bowls, dishes, lids, tankards, and the samian cup. On this basis it could be suggested that this site was of a higher status site than the other sites in Eckington.

5.4.12 **Eckington site WSM 07281**

Artefact recovery

The site grid reference was SO 93250 40650.

Assemblage summary

Period	Material	Total	Weight (g)
Prehistoric	Flint	12	258
Iron Age*	Pottery	2	10
Roman*	Pottery	142	1226
Post-medieval	Clay pipe	6	14
Post-medieval	Pottery	31	666
Post-medieval/modern	Glass	2	93
Modern	Pottery	35	355
Undated	Metal	1	27
Undated	Brick/tile	39	1382
Undated	Slate	7	72

Table 42 *Quantification of the site assemblage (*quantification based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
3	Malvernian ware	9	251
4.1	Palaeozoic limestone	1	9

4.4	Shell and sand	1	1
12	Severn Valley ware	102	737
12.1	Reduced Severn Valley ware	13	63
12.2	Oxidised organically tempered Severn Valley ware	8	46
12.3	Reduced organically tempered Severn Valley ware	3	51
12.4	Severn Valley ware variant	1	8
13	Sandy oxidized ware	1	2
19	Wheel-thrown Malvernian ware	4	39
22	Black-burnished ware, type 1 (BB1)	1	29

Table 43 Quantification of the Roman pottery by fabric

While 144 sherds of Roman pottery were recorded during the detailed analysis, the original records note the presence of 158 sherds (1.394kg; Table 43), in this predominantly Roman assemblage (Table 42).

Condition

This area of fieldwalking produced 144 sherds of pottery, weighing 1.236kg. The pottery was abraded and fairly fragmentary, with an average sherd weight of 9g.

Dating

The assemblage included a single rim in Malvernian Palaeozoic limestone tempered ware (Fabric 4.1; Peacock 1968), similar to forms found in late Iron Age contexts at Beckford, Worcestershire, and a sherd of shell and sand tempered ware, possible middle Iron Age in date. The rest of the assemblage ranged in date from the 1st or 2nd century through to the late 3rd or 4th. Earlier Romano-British forms comprised a Malvernian tubby cooking pot with an in-turned rim, dated by Peacock to the 1st century (Peacock 1965-7, fig 1.10) and a simple rimmed Severn Valley ware jar (Webster 1976, fig 4 C20). Most forms were more broadly dated to the 2nd to 3rd or 4th century. These included a variety of jars (Webster 1976, fig 1 A4, fig 4 C22, fig 5 C 24 or 25), bowls (*op cit* fig 7 D34; Darlington and Evans 1992, fig 1913) and tankards (*op cit* fig 7 E41 and E43). Evidence for later activity came from pulley-rimmed jars (*op cit* fig 3 A9-13), a short-necked jar (Evans *et al* 2000, fig 24 JWM15; Peacock 1965-7, fig 3.35), and a BB1 flanged bowl (Seager Smith and Davies 1993, fig 124 WA type 25).

Function and status

Severn Valley ware accounted for 73% of the assemblage by weight, though the overall percentages are biased by the presence of heavy sherds of Malvernian ware. The only non-regional Romano-British ware was Dorset BB1. The main forms were jars (51% by rim EVE), bowls and tankards.

5.4.13 **Eckington site WSM 07582**

Artefact recovery

WSM 07582 represents finds collected during fieldwalking by SWAG in 1984, associated with two crop marks (WSM 05487). The whole field was walked in 20 metre squares to assess any correspondence between crop marks and surface finds. The archive contains a summary sheet of the finds from each grid square, quantified by count. Unfortunately none of the finds were marked, so the relationship between the finds and the survey grid has been lost for the purposes of more detailed analysis. It was noted at the time that some squares

produced far more Roman sherds than their adjoining squares, though this was attributed to the varying ability of the fieldwalkers (Price 1985, 17). The finds are marked with the monument number '5487'. The grid reference for the finds is SO9377040920. The finds are summarised in Table 44 below. There is some discrepancy between the data in the original record sheets and the material assessed as part of this project. The original finds recording forms register 603 sherds of pottery, rather than 574; including 287 sherds of Roman pottery, 63 sherds of medieval pottery, 171 sherds of post-medieval pottery and 82 sherds of unidentified pottery. Some of these sherds must, therefore, have gone astray.

Period	Material	Total	Weight (g)
Prehistoric*	Flint	25	
Roman*	Pottery	280	1517
Medieval/undated	Pottery	148	449
Medieval	Tile	42	1568
Post-medieval	Pottery	146	990
Post-medieval/modern	Clay pipe	11	40
Post-medieval/modern	Glass	15	150
Post-medieval/modern	Slate	5	85
Modern	Metal	1	0
Undated	Slag	2	14
Modern	Tile	22	476

*Table 44 Assemblage quantification (*quantification based on detailed analysis)*

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	265	1350
12.1	Reduced Severn Valley ware	2	21
12.2	Oxidised organically tempered Severn Valley ware	7	31
12.6	Severn Valley ware variant	1	6
13	Sandy oxidised ware	1	18
19	Wheel-thrown Malvernian ware	2	15
3.1	Slab-built Malvernian ware	1	58
98	Miscellaneous Roman wares	1	18

*Table 45 Quantification of the Roman pottery by fabric**Condition*

The assemblage comprised 280 sherds of Romano British pottery, weighing 1517g (Table 45). The assemblage was very fragmentary, with an average sherd weight of 5g, and abraded.

Dating

Diagnostic forms indicated that activity in the vicinity may have commenced in the 1st or early 2nd century, continuing through to the late 3rd or 4th century. There was only a little evidence for the earliest activity; comprising small quantities of organically tempered Severn Valley ware (Fabric 12.2) and a rim from a globular beaker, similar to types found elsewhere in 1st century contexts (Timby *et al* 2000, fig 4.52 BK4). A number of Severn Valley ware jars had triangular rims, dated by Webster to the 2nd to 3rd centuries (Webster 1976, fig 4 C22). Other forms were more typical of late 3rd to 4th century assemblages; a flanged bowl identified by Webster as a Gloucester variant (*op cit* fig 8 F49), and a wide-mouthed jar with a hooked rim (*op cit* fig 5 C27). The presence of a possible slab built vessel in Malvernian ware, represented by a single body sherd, is also consistent with late 3rd to 4th century activity in the area (cf Bryant 2004, 366).

Function and status

The great majority of the assemblage (93% by weight) was in Severn Valley ware, all but two sherds of which were oxidised. Forms included jars, bowls, a beaker, a lid and a very fragmentary tankard.

5.4.14 **Eckington site WSM 35844***Artefact recovery*

Twelve sherds were marked with the grid reference SO 9495 4095, placing them in the same general area as 05908/05909, and have been identified as WSM 35844 fieldwalking finds.

Assemblage summary

Other than pottery, no other finds are recorded (Table 46).

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	12	346

*Table 46 Quantification of the Roman pottery by fabric**Condition*

The sherds had a high average sherd weight, 29g, but were abraded.

Dating

Some of the Severn Valley ware forms were only broadly datable to the 2nd to 3rd or 2nd to 4th centuries (Webster 1976, fig 1 A1 and 4, fig 4 C22). Some, however, indicated activity in the vicinity continued in to the late 3rd or 4th century (*op cit* fig 5 C27, fig 7 C32 and fig 9 F53).

Function and status

Six of the eight rims came from jars.

5.4.15 **Eckington unlocated finds (WSM 32286)***Artefact recovery*

A total of 563 unmarked sherds were boxed with the material from WSM35844 as Eckington finds. The precise source of these finds is uncertain.

Assemblage summary

The pottery is summarised in Table 47 below.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	513	2568
12.1	Reduced Severn Valley ware	4	48
12.2	Oxidised organically tempered Severn Valley ware	24	162
12.3	Reduced organically tempered Severn Valley ware	4	30
15	Coarse sandy grey ware	1	2
17	Pink grog tempered ware	4	32
22	Black-burnished ware, type 1 (BB1)	5	42
33.1	Oxfordshire white mortaria	6	71
43.2	Central Gaulish samian ware	2	28

Table 47 Quantification of the Roman pottery by fabric

Condition

The assemblage comprised 563 sherds of Romano-British pottery, weighing 2983g. The assemblage was very fragmentary, with an average sherd weight of only 5g, and abraded.

Dating

The assemblage provided some good dating evidence. The earliest activity was indicated by organic tempered Severn Valley ware (Fabrics 12.2 and 12.3). These included a fragmentary rim from a rusticated jar, a typical late 1st to early 2nd century form (cf Bryant and Evans 2004, fig 158.1). Two vessels in Central Gaulish samian were present: a body sherd from a DR 30 bowl from Les Martres-de-Veyre, and a fragmentary rim from a bowl or dish, from Lezoux. Both dated to the 2nd century.

Sherds of BB1 also provided reliable dating evidence. These included a flat-rimmed bowl with a groove, dating from the mid 2nd to mid-late 3rd (Seager Smith and Davies 1993, fig 123 WA type 24; Holbrook and Bidwell 1991, fig 31 type 43), a flanged bowl (Seager Smith and Davies 1993, fig 124 WA type 25) and a splayed rim cook pot (*op cit* fig 122 WA type 3), both dating to the late 3rd to 4th centuries. Other evidence came from an Oxfordshire white ware mortarium, dated by Young to c AD 100-170 (Young 1977, fig 18 M2). The pink grog tempered ware is characteristic of later Roman assemblages in this region (Booth and Green 1989). The associated Severn Valley ware forms were only broadly datable to the 1st to 4th or 2nd to 4th centuries (Webster 1976, fig 1 A1, fig 7 D34). The assemblage also included a BB1 plain-rimmed dish, another long-lived type (Seager Smith and Davies 1993, fig 123 WA type 20).

Function and status

The assemblage included a variety of jars (representing 71% by rim EVE), bowls and dishes, a lid, and a mortarium. There is evidence for access to widely traded wares such as BB1, from Dorset, Oxfordshire ware and grog tempered ware from Northamptonshire/Buckinghamshire (Booth and Green 1989).

5.4.16

Eckington general overview

The Eckington assemblage constituted c 10% of the overall project assemblage by weight (Table 48).

Site code	Total	% Total	Weight (g)	% Weight	Rim %	% Rim EVE	Average sherd wt. (g)	Date range
5900	158	7.6%	2083	9.3%	138	8.5%	13	1st/2nd to 2nd/3rd
5901	51	2.5%	719	3.2%	16	1.0%	14	1st/2nd to 2nd/3rd
5903	28	1.3%	114	0.5%	36	2.2%	4	Late 3rd/4th
5904	32	1.5%	405	1.8%	137	8.4%	13	1st/2nd to late 3rd/4th
5905	47	2.3%	523	2.3%	101	6.2%	11	1st/2nd to late 3rd/4th
5906	6	0.3%	102	0.5%	9	0.6%	17	2nd to 3rd
5907	6	0.3%	74	0.3%	10	0.6%	12	2nd to 3rd
5908/9	751	36.1%	12,332	55.0%	557	34.2%	16	1st/2nd to late 3rd/4th
7281	144	6.9%	1236	5.5%	238	14.6%	9	1st/2nd to late 3rd/4th
7582	280	13.5%	1517	6.8%	140	8.6%	5	1st/2nd to late 3rd/4th
35844	12	0.6%	346	1.5%	146	9.0%	29	1st/2nd to late 3rd/4th
Unlocated (WSM 32286)	563	27.1%	2983	13.3%	101	6.2%	5	1st/2nd to late 3rd/4th
Totals	2078		22,434		1629		11	

Table 48 Summary of the Eckington Roman pottery by site

The largest assemblage came from WSM 5908/9 (Table 48 above). The second largest group comprised the unmarked pottery without a specific find spot (WSM 32286). Overall the assemblage included 252 rims, representing 12% of the pottery recovered. There was, however, a great variation in the proportion of rims included in the individual site assemblages. For example, the 12 sherds attributed to site WSM 35844 included 10 rims, and the 32 sherds from WSM 05904 18 rims (56% of the assemblage). In contrast, the 51 sherds from WSM 05901 included only 2 rims, and the 563 unlocated sherds 21 rims (both representing only 4% of the assemblage). This could indicate biases introduced during recovery or storage, the latter perhaps reflecting the removal of diagnostic sherds for a teaching collection.

A number of diagnostic forms and fabrics provided evidence for dating. Most sites produced evidence for activity from the late 1st to mid 2nd century through to the late 3rd or 4th centuries. This appears to represent continuous activity, though amongst the Severn Valley ware in particular a number of forms can only be dated broadly to the 2nd or 3rd centuries. At least four sites appear to have been abandoned in the later Roman period but possibly in the 3rd rather than the 4th century (WSM 05900, 05901, 05906, 05907), and two (WSM 05903, 5908/9) showed evidence for 4th century activity, in the latter case definitely after the middle of the century.

Given the clear presence of later Roman activity on so many of the fields walked by SWAG, this contrasts with the results of an excavation carried out in 2007 by Birmingham Archaeology where no evidence for such activity was identified. This site, situated on a lane off Pershore Road produced only pre-Roman and early Roman pottery, the latest dating to the late 2nd century (Jane Timby, pers comm). Otherwise like the Pershore Road material, the SWAG assemblage is dominated by oxidised Severn Valley ware (Table 49 below). Malvernian ware and BB1 are the only other fabrics to represent more than 1% of the assemblage.

Fieldwalking also provided some evidence for Iron Age activity, in the form of local and regionally produced fabrics, whereas the excavation at Pershore Road produced a small but significant assemblage of Neolithic Peterborough ware. Despite fieldwalking producing no earlier prehistoric pottery flints were recovered, and so it perfectly possible that earlier prehistoric wares were just not being recovered from the plough-zone due to its generally greater friability. This is not surprising as pottery of this date is very fragile and is not often detected in the ploughsoil.

Date/ source	Fabric code	Fabric common name	Total	Total %	Weight (g)	Weight %
Iron Age	4.1	Palaeozoic limestone	1	<1	9	<1
	4.4	Shell and sand	1	<1	1	<1
	4.6	Oolitic limestone/sand	1	<1	16	<1
	5.6	Ironstone and sand	2	<1	19	<1
Iron Age pottery subtotal			5	<1	45	<1
Roman local and regional	12	Severn Valley ware	1797	86.5%	19,060	85.0%
	12.1	Reduced Severn Valley ware	48	2.3%	547	2.4%
	12.2	Oxidised organically tempered Severn Valley ware	87	4.2%	946	4.2%

	12.3	Reduced organically tempered Severn Valley ware	21	1.0%	337	1.5%
	12.4	Severn Valley ware variant	2	<1	11	<1
	12.6	Severn Valley ware variant	2	<1	45	<1
Severn Valley ware subtotal			1957	94.2%	20,946	93.4%
Roman local and regional	13	Sandy oxidized ware	13	<1	95	<1
	14	Fine sandy grey ware	8	<1	64	<1
	15	Coarse sandy grey ware	3	<1	14	<1
	3	Malvernian ware	19	<1	370	1.6%
	3.1	Slab-built Malvernian ware	1	<1	58	<1
	19	Wheel-thrown Malvernian ware	23	1.1%	326	1.5%
Local/regional Romano-British pottery subtotal			2024	97.4%	21,873	97.5%
Roman traded	16.1	Savernake ware (BD30/31)	1	<1	17	<1
	17	Pink grog tempered ware	5	<1	63	<1
	22	Black-burnished ware, type 1 (BB1)	24	1.2%	242	1.1%
	23	Shell gritted ware	1	<1	6	<1
	28	Nene valley ware	1	<1	2	<1
	29	Oxfordshire red/brown colour coated ware	1	<1	11	<1
	33	Oxfordshire white mortarium	3	<1	28	<1
	33.1	Oxfordshire white mortaria	6	<1	71	<1
Traded wares subtotal			42	2.0%	440	2.0%
Roman	43.2	Central Gaulish samian ware	4	<1	39	<1
Imported wares subtotal			4	<1	39	<1
Roman	16	Grog tempered ware (BD32/33)	1	<1	8	<1
Unknown	20	White slipped ware	1	<1	11	<1

source	98	Miscellaneous wares	Roman	1	<1	18	<1
Unknown source subtotal				3	<1	37	<1
Totals				2078		22,434	

Table 49 Summary of the Eckington Roman pottery by source/fabric

5.4.17 Lithic assemblage from Eckington (WSM 5487 – cross reference to WSM 5900, 5907 & 7582) (by Alvaro Mora-Ottomano)

Field walking survey recovered 25 worked lithics and 870g of natural gravel flint. The worked stones are flint unless otherwise stated. They are divided by their square location, and are as follows:

- 1 G7: exhausted multi-platform flake/blade core
- 2 G7: core fragment
- 3 G7: exhausted core with severe damage and patina
- 4 G7: burnt chunky flake
- 5 G7: broken patinated secondary flake
- 6 G7: flake
- 7 G7: flake
- 8 G7: flake
- 9 G7: notched flake with direct semi-abrupt retouch
- 10 G7: chunky flake with distal total direct abrupt retouch
- 11 G7: flake
- 12 G7: secondary small flake with dihedral butt
- 13 G7: naturally backed knife with semi-abrupt retouch and fracture on the cutting edge
- 14 G7: broken flake
- 15 G7: secondary blade with total lateral direct right thin retouch
- 16 G7: combined notch and borer on a flake with abrupt retouch
- 17 G7: naturally backed knife with wear trace on the cutting edge
- 18 H7: chunky primary flake
- 19 H7: natural gravel possibly utilised (?)
- 20 H7: chunky flake
- 21 H7: primary flake
- 22 H7: exhausted bladelet core (?)
- 23 H7: gravel flint with partial abrupt retouch
- 24 H7: flake
- 25 H7: snapped flake

The assemblage consists of two knives, a notched flake, a combined notch-borer, and three miscellaneous retouch (one piece with possible wear traces), which can be categorised as tools of convenience, and 17 general debitage, including 4 cores. The assemblage contains little diagnostic dateable artefacts, but the tools and the majority of the debitage are most likely to be Neolithic/Bronze Age in date.

5.5 Fieldwalk at *Ponderosa*, Evesham (WSM 35834)

5.5.1 Artefact recovery

A fieldwalk was carried out by SWAG in 1996, on land belonging to the property known as Ponderosa, to the south of Evesham. Crop marks had been observed here. The search area was divided into 20 × 20m squares.

5.5.2 Assemblage summary

The assemblage from this fieldwalk consisted of 1510 sherds, weighing 29.634kg, dating from the Roman period onwards. The Roman material within the assemblage is summarised in Table 50.

Period	Material	Total	Weight (g)
Roman	Brick/tile	24	322
Roman	Pottery	361	2971
Roman	Tile	4	223

Table 50 Quantification of the site assemblage

5.5.3 The Roman pottery

The Roman sherds were grouped and quantified according to fabric type, as shown in Table 51.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	336	2437
12.1	Reduced Severn Valley ware	6	139
13	Sandy oxidized ware	5	22
15	Coarse sandy grey ware	1	7
22	Black-burnished ware, type 1 (BB1)	1	5
29	Oxfordshire red/brown colour coated ware	4	18
32	Mancetter/Hartshill mortarium	1	28
33.3	Oxfordshire red mortaria with red-brown slip	2	11
43.1	South Gaulish samian ware	2	17

98	Miscellaneous Roman wares	3	287
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Table 51 Quantification of the Roman pottery by fabric

Preservation conditions were generally poor, with the majority of sherds displaying high levels of abrasion. The main concentration of Roman finds was in the southern part of the grided area.

Severn Valley ware (fabrics 12 and 12.1) accounted for 87% of the Roman pottery, with a ratio of approximately 20:1 for the oxidised and reduced fabrics. Sherds from narrow-mouthed jars (Webster type-forms 1, 2 and 3) might have been as early as 1st century in date. A tankard (Webster 39) possibly dated from the 2nd century, and wide-mouthed jars (Webster 22/23/24) from the 2nd century, into the 3rd. The fabric (43.1) and form (Dr18 or 18R) of a samian sherd were those of a dish from South Gaul, and, therefore, 1st-early 2nd century in date.

Oxfordshire colour-coated ware (fabric 32), red mortaria (fabric 33.3) and Mancetter/Hartshill mortaria (fabric 32) sherds all indicated 3rd-4th century occupation of this site.

Although the main date range for this site's pottery extends from the mid 1st/2nd to the later 3rd/4th century, the samian finds possibly being indicative of earlier Roman activity. The quality of the pottery is consistent with that expected from an ordinary rural settlement in this region.

5.5.4 **Lithic assemblage (WSM 2757 & 35834) (by Alvaro Mora-Ottomano)**

Fieldwalking survey recovered 16 worked lithics and 470g of natural gravel flint. The worked stones are flint unless otherwise stated. They are divided by their square location, and are as follows:

- A2: 1 primary distal flake
- A3: 1 borer with broken tip, direct semi-abrupt convergent lateral retouch
1 flint pebble fragment with distal total thin retouch
- B1: 1 secondary blade of good quality flint with right distal abrupt retouch and inverse left wear trace
- B3: 1 multi-platform core
1 exhausted core
- B4: 1 core rejuvenation flake
1 blade
1 burnt flake
- B5: 1 long whole blade with faceted butt
- C4: 1 concave side scraper on a secondary broken blade with triangular cross section
- C6: 1 primary chunk
- D6: 1 burnt broken flake
- E2: 1 single platform flake/blade core with cortical coverage which seems to originate from gravel pebbles
- E5: 1 flake with faceted butt
1 brown chert bladelet in very fresh condition, of possibly Mesolithic date

The assemblage consists of two tools, two miscellaneous retouch, three pieces with clear wear traces, which can be categorised as tools of convenience, and nine general debitage, including three cores and a core rejuvenation flake. The assemblage contains little diagnostic dateable artefacts, but the chert bladelet is very likely to be of Mesolithic date. Moreover, the borer and the scraper are possibly Neolithic or Bronze Age tools.

5.5.5 Other artefacts

Most of the material from this site comprised medieval/post-medieval tile and brick, and fragments of modern slag.

5.6 Fieldwalk south of Lower End Farm, Great Comberton (WSM 30360)

5.6.1 Artefact recovery

Finds were collected during a fieldwalk carried out in 2002 by members of SWAG, to the south of Lower End Farm, Great Comberton. The search area was divided into 20m × 20m squares.

This fieldwalk collected a large assemblage, consisting of 2033 artefacts with a total weight of 25.416kg. The prehistoric and Roman material within the assemblage is summarised in Table 52.

5.6.2 Assemblage summary

Period	Material	Total	Weight (g)
Prehistoric	Chert	1	8
Prehistoric	Flint	1	5
Roman	Brick/tile	16	160
Roman	Pottery	9	61

Table 52 *Quantification of the prehistoric and Roman component of the site assemblage*

5.6.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 53.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	9	61

Table 53 *Quantification of the Roman pottery by fabric*

The few sherds of Roman pottery recovered during this fieldwalk were all oxidised Severn Valley ware (fabric 12), but were in generally poor condition. One rim sherd was recognizable as from a jar, but was too abraded for any identification of form type to be made. All other sherds, including a handle, were also very abraded.

Consequently, only a broad date range, 1st-4th century, can be given for the Roman use of this site, which may have been farmland, rather than a place of habitation as such, for this amount of material is unlikely to inherently indicate occupation.

5.6.4 Other artefacts

Lithic finds at this site comprised a piece of worked flint, and a chert core.

5.7 Fieldwalk south-east of Lower End Farm, Great Comberton (WSM 31634)

5.7.1 Artefact recovery

SWAG carried out a fieldwalk in 2002 to the south-east of Lower End Farm, Great Comberton. This area had displayed cropmarks in the form of several linear and approximately parallel features aligned east to west, and is immediately east of the fieldwalked in 2001 (WSM30360). The search area was divided into 20 × 20m squares.

5.7.2 Assemblage summary

The overall assemblage collected by this fieldwalk consisted of 877 artefacts with a total weight of 9.181kg. The prehistoric and Roman material within the assemblage is summarised in Table 54.

Period	Material	Total	Weight (g)
Prehistoric	Flint	2	4
Roman	Brick/tile	3	18
Roman?	Metal	1	2
Roman	Metal	1	6
Roman	Pottery	30	170

Table 54 Quantification of the prehistoric and Roman component of the assemblage

5.7.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 55.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	27	128
12.1	Reduced Severn Valley ware	1	2
32	Mancetter/Hartshill mortarium	1	32
98	Miscellaneous Roman wares	1	8

Table 55 Quantification of the Roman pottery by fabric

The small Roman assemblage from this fieldwalk was dominated by Severn Valley ware, which accounted for all except three sherds. The only diagnostic sherd was from a Mancetter/Hartshill mortarium with a date range of 2nd-3rd century.

5.7.4 Other artefacts

In spite of the paucity of pottery finds, there were two incomplete but interesting metal artefacts in the Roman assemblage, both cast from a copper-containing alloys. One was broken from the upper part of a brooch, with one side of its crossbar, and part of the spring surviving. The other artefact was apparently from a small ornament, in the form of a fantail, tapering to a narrow diameter rod, where it had broken. Two flint flakes were also found.

5.8 Fieldwalk at Hawford (WSM 28767)

5.8.1 Artefact recovery

Finds were collected during a fieldwalk carried out by SWAG at Hawford in 1999 at the invitation of the Young Farmers' Club. The walked area included a large enclosure revealed by cropmarks, and partly excavated in 1955, and again in 1962. The enclosure ditch has been dated to the 2nd century AD based on the pottery from the latest excavation (Fennell 1963). A map, indicating the centre of the grid, survives in the SWAG archive, but does not show the exact layout of the 20 x 20m squares. However, the finds bags are still marked with grid letters and numbers.

5.8.2 Assemblage summary

The total artefact assemblage collected from the fieldwalked area consisted of 1962 items weighing 29.94kg. The Roman material within the assemblage is summarised in Table 56.

Period	Material	Total	Weight (g)
Roman	Pottery	120	461

Table 56 *Quantification of the Roman component of the site assemblage*

5.8.3 The Roman pottery

The Roman sherds were grouped and quantified according to fabric type, as shown in Table 57.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	116	436
12.2	Oxidised organically tempered Severn Valley ware	1	13
13	Sandy oxidized ware	2	8
43.1	South Gaulish samian ware	1	4

Table 57 *Quantification of the Roman pottery by fabric*

The preservation of the Roman pottery was generally fair, with the majority of sherds displaying moderate levels of abrasion.

This pottery from this site is remarkable insofar as 97% (by weight) of it comprised Severn Valley Ware, all of it oxidised. Of 13 Severn Valley ware rim sherds, all had simple everted, thickened or hooked forms (except for one grooved 'pulley' rim), but with none providing an exact match to a published example. The nearest fits of wide- and narrow-mouthed jars to the forms published by Webster (1976) indicated a broad range of dates within the 2nd to 4th centuries, while a South Gaulish samian sherd was of 1st- early 2nd century date.

Although the dating evidence from this assemblage indicated that this site was occupied from about the 2nd to the 4th centuries, the small range of pottery types suggests it may have had few external links. However, given the proximity of the River Severn and a much larger settlement at Worcester, it seems unlikely that this would have been a very isolated community.

5.8.4 **Lithic assemblage (WSM 28767) (by Alvaro Mora-Ottomano)**

Fieldwalking survey recovered 12 worked lithics and 45 gr. of natural gravel flint. The worked stones are flint unless otherwise stated. They are divided by their square location, and are as follows:

- A4: 1 reddish brown chert opposed platform blade core
1 miscellaneous retouched flake
- A5: 1 side scraper on a patinated and slightly abraded flake
- B2: 1 broken flake
- B8: 1 small brownish chert flake
- C8: 1 long abraded flake
1 distal reddish brown flake
- D5: 1 end scraper on a secondary flake
- D8: 1 brown chert flake
- F4: 1 broken flake with bifacial thin retouch
- AA5: 1 chert flake with partial direct left medial abrupt retouch
- CC8: 1 medial and distal portion of a laminar blade with total bilateral thin retouch, which resembles a serrated saw

The assemblage consists of three tools, three miscellaneous retouch, and six general debitage, including a core. The assemblage contains few diagnostic dateable artefacts, but the possible serrated saw may date to the late Mesolithic or early Neolithic. The scrapers and the retouched pieces are of Neolithic and/or Bronze Age date.

5.9 **Fieldwalk at Kemerton (WSM 28780)**

5.9.1 **Artefact recovery**

Finds were collected during a fieldwalk was carried out in 1998 by members of SWAG. The search area, in a field on the north-west side of Kemerton village, was divided into 20 × 20m squares. This field includes the site excavated by Time Team in 1998, and is in a part of Worcestershire where there have been numerous cropmark indications of prehistoric activity. Extensive evidence for late Bronze Age activity has also been revealed about 1.5km to the south-south-west, at Huntsman's Quarry (Jackson 2005).

5.9.2 **Assemblage summary**

The overall assemblage from this site included 143 sherds of pottery weighing 1.124kg; most of these were datable to the post-medieval and modern periods. The prehistoric and Roman material within the assemblage is summarised in Table 58.

Period	Material	Total	Weight (g)
Iron Age/Roman	Pottery	1	14
Roman	Brick	1	73
Roman	Pottery	12	114
Roman	Tile	4	72

Table 58 *Quantification of the prehistoric and Roman component of the site assemblage*

5.9.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type as shown in Table 59.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	11	91
3.1	Malvernian ware	1	14
32	Mancetter/Hartshill mortarium	1	23

Table 59 Quantification of the prehistoric and Roman pottery by fabric

The condition of the Roman pottery was generally fair, with many of the smaller coarse-ware sherds being heavily abraded.

Severn Valley ware accounted for 71% of the Roman pottery in this limited assemblage. The Severn Valley ware sherds were generally small and very abraded; none had diagnostic forms, and all were oxidised (fabric 12). This group is, therefore, datable only to its broad 1st-4th century production span.

However, the presence of a single, abraded and irregular sherd of a dark Malvernian fabric (3.1) did suggest the presence of late Iron Age or early Roman activity at the site. A sherd from a Mancetter/Hartshill mortarium (fabric 32) was 2nd century or later in date.

The artefacts from this site, though few in number, may indicate a long, and possibly continuous Roman occupation of the site. The absence of earlier prehistoric material in the assemblage should not, of itself, indicate a lack of much earlier activity potentially indicated by the cropmarks. It is quite likely that the soil conditions, combined with repeated ploughing, have not favoured preservation of any pre-Roman pottery at this site.

It is impossible to define the Roman status of this site, owing to the very small assemblage, but it is reasonable to conclude that it was unlikely to have been other than a rural settlement.

5.9.4 Other artefacts

Eleven pieces of worked flint were found (see below), mainly in the centre and east side of the field, but otherwise there were no specific concentrations of activity revealed by fieldwalking this site.

Lithic assemblage (WSM 28780) (by Alvaro Mora-Ottomano)

Field walking survey recovered 11 worked lithics and 2.1kg of natural gravel flint. The worked stones are flint unless otherwise stated. They are divided by their square location, and are as follows:

- A3: 1 exhausted and patinated blade core
1 waste flake
- A4: 1 chunky blade
- A6: 1 chunky flake with right distal wear trace, with missing butt, and is fairly patinated and abraded
- B3: 1 secondary dark grey flake of good quality with thin total left direct retouch and distal left semi-abrupt retouch
1 distal bladelet
- B4: 1 naturally backed knife with partial medial retouch from a pebble of good quality grey flint

B8: 1 notched broken flake with semi-abrupt direct retouch

D3: 1 utilised gravel chunk with wear trace on edge

Pond area: 1 secondary flake with total left inverse wear trace

Top left-hand corner: 1 obliquely blunted point (possible microlith type A)

The assemblage consists of three tools, a miscellaneous retouch, three pieces with clear wear traces, which can be categorised as tools of convenience, and four general debitage, including a core. The assemblage contains little diagnostic dateable artefacts, apart from a possible microlith of early Mesolithic date, but the number of retouched and utilised pieces confirms a series of industrial activities carried out in the prehistoric period.

5.10 Excavation at Murcot (WSM 35828)

5.10.1 Artefact recovery

These finds were excavated (date unknown) at Murcot, near Broadway. No stratigraphic information was available for this assemblage.

5.10.2 Assemblage summary

The prehistoric and Roman material of the assemblage is summarised in Table 60.

Period	Material	Total	Weight (g)
Iron Age/Roman	Pottery	1	11
Roman	Pottery	40	826
Roman	Tile	5	248

Table 60 Quantification of the prehistoric and Roman component of the site assemblage

5.10.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 61.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	21	560
12.1	Reduced Severn Valley ware	6	90
12.2	Oxidised organically tempered Severn Valley ware	2	30
12.3	Reduced organically tempered Severn Valley ware	1	13
13	Sandy oxidized ware	1	2
14	Fine sandy grey ware	1	25
22	Black-burnished ware, type 1 (BB1)	3	27
23	Shell-gritted ware	1	10
28	Nene Valley ware	1	27

3	Malvernian ware	2	23
43.2	Central Gaulish samian ware	1	6
98	Miscellaneous Roman wares	1	24

Table 61 Quantification of the Roman pottery by fabric

Preservation conditions were generally good, although many of the smaller coarse-ware sherds were badly abraded.

Severn Valley ware (fabrics 12, 12.1, 12.2 and 12.3) accounted for 84% of this Roman assemblage. The ratio of oxidised (12 and 12.2) to reduced fabrics (12.1 and 12.3) was unusually high, at nearly 6:1; it is not known whether this may have been a result of the artefact retention policy (if any) applied during or after the excavation. The Severn Valley ware rim sherds included several examples from jars. Two of these, from wide-mouthed jars (Webster 22 and 23) were likely to be 2nd-3rd century in date. A wide-mouthed jar (Peacock 45) was of similar date, but a further wide-mouthed jar form (Webster 26/27) may have been produced throughout the 2nd to 4th centuries. A pulley-rimmed, narrow-mouthed jar (form Webster 11), was more closely dated as 3rd century, by its distinctive form.

Sandy wares (fabrics 13 and 14) and Black-burnished ware (fabric 22) were present in small amounts. A single sherd of Nene Valley ware (fabric 28) was datable to the 2nd to 4th centuries, while a rim sherd of a samian Dr 18 or 18/31 bowl/dish was from Central Gaul (Lezoux, fabric 43.2) and, therefore, probably produced in the 2nd century AD.

The pottery fabrics and forms from this limited, and possibly selective, assemblage indicated that this site was in continuous use from the 2nd to 4th century. The pottery fabrics and forms are consistent with this site being a small rural settlement.

5.10.4 Other artefacts

Four fragments of Roman combed flue tiles, and one from a tegula, were noted in this assemblage. These finds suggest that at least one substantial Romanised-style building was present in the vicinity of the site, which may have been of higher status than the majority of structures in this area.

5.11 Fieldwalk at Pensham (WSM 34238)

5.11.1 Artefact recovery

A fieldwalk was carried out by staff of the Worcestershire Historic Environment and Archaeology Service in 2005, on a site at Pensham that had exhibited cropmarks. The search area was divided into 20 × 20m squares.

5.11.2 Assemblage summary

The overall assemblage collected by this fieldwalk consisted of 194 artefacts with a total weight of 3.454kg. The prehistoric and Roman material within the assemblage is summarised in Table 62.

Material	Type	Total	Weight (g)
Prehistoric	Flint	6	33
Roman	Pottery	19	188
Roman	Brick	1	24

Roman?	Tile	2	3
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Table 62 Quantification of the prehistoric and Roman component of the site assemblage

5.11.3 The prehistoric Roman and pottery

The prehistoric and Roman pottery sherds were grouped and quantified according to fabric type, as shown in Table 63.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	18	182
13	Sandy oxidized ware	1	6

Table 63 Quantification of the Roman pottery by fabric

This fieldwalk yielded very few Roman sherds, all but one of which were Severn Valley ware (fabric 12). Two Severn Valley ware rim sherds were recovered. One of these was identifiable as a form close to that of a Webster 22 wide-mouthed jar, and probably 2nd-3rd century in date. No other diagnostic pottery forms were found. A single sherd of sandy oxidised ware (fabric 13) may be 1st-2nd century in date.

The minimal evidence obtained from this Roman assemblage cannot provide a realistic date range for Roman occupation or use of this site, but the quality of the pottery is consistent with that expected from a rural settlement.

5.11.4 Other artefacts

Two fragments of possible Roman tile were recovered from this site.

5.12 Fieldwalk at Pirton (WSM 29550)

5.12.1 Artefact recovery

Finds were collected during a fieldwalk carried out in 1999 by members of SWAG, at a site to the east of Church Farm at Pirton. The search area was divided into 20 × 20m squares.

5.12.2 Assemblage summary

The overall assemblage recovered by this fieldwalk was moderate in size, comprising 1008 artefacts with a total weight of 18.7 kg. The Roman material in this assemblage is summarised in Table 64.

Period	Material	Total	Weight (g)
Roman	Brick/tile	28	421
Roman	Pottery	161	1663
Roman	Tile	3	100

Table 64 Quantification of the Roman component of the site assemblage

5.12.3 The prehistoric and Roman pottery

The prehistoric and Roman sherds were grouped and quantified according to fabric type, as shown in Table 65.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	136	1362
12.1	Reduced Severn Valley ware	3	137
12.2	Oxidised organically tempered Severn Valley ware	2	29
14	Fine sandy grey ware	6	58
15	Coarse sandy grey ware	1	5
22	Black-burnished ware, type 1 (BB1)	7	51
29	Oxfordshire red/brown colour coated ware	1	12
98	Miscellaneous Roman wares	5	23

Table 65 Quantification of the Roman pottery by fabric

The condition of the pottery was generally fair, with many of the smaller coarse-ware sherds being heavily abraded.

Severn Valley ware made up 91% of the Roman pottery, by weight. The oxidised fabric 12 accounted for most of this coarse ware, which included bowls, flagons, jars and tankards that were identified by rim sherds. Wide-mouthed jars were the most common Severn Valley ware vessels represented, but Webster 8 (jar), 37 (bowl), 40 and 44 (tankards) forms all point to 3rd-4th century activity. A number of other forms, described by Webster (1976), Evans *et al* (2000), Peacock (1968) and Waters (1963; 1976) were also noted, but none of the latter forms provided any indication of dates earlier than the 3rd century.

The organically-tempered, oxidised Severn Valley ware (fabric 12.2), and coarse sandy grey ware (fabric 15), may be of earlier manufacture (ie 1st-2nd century). However, none of their sherds was diagnostic in terms of form, and in any case they constituted only 2% (by weight) of the Roman pottery. The fine sandy grey wares (fabric 14) were produced throughout much of the Roman period, so as with fabric 12, they must be regarded as undiagnostic, in the absence of recognisable forms.

The Black-burnished ware (BB1, fabric 22) sherds in this assemblage were fragmentary, except for one rim from a cooking pot or storage jar, which may be dated as 2nd-4th century in Worcestershire. The rim of an Oxfordshire bowl (fabric 29) was 3rd-4th century in date. This was probably of the C45 form described by Young (1977); if so, the production date for this vessel may be narrowed to the range AD 270-400.

Small unidentified Roman sherds (fabric 98) were all oxidised coarse wares. Two of these sherds had a fabric matrix similar to that of Severn Valley ware, but with small sandstone inclusions, suggesting they may have been made to the west of the main area of intensive pottery production around the north end of the Malvern Hills. In addition to the pottery, small amounts of Roman brick and tile were found and were identified by their fabric, which was similar to that of oxidised Severn Valley ware.

The pottery indicated that the site was probably occupied by the 3rd and in to the 4th century. The range of pottery fabrics and forms are consistent with this site being an ordinary rural settlement.

5.12.4

Other artefacts

Late medieval and post-medieval material was present at this site, and two worked flints were also recorded.

5.13 Fieldwalk at Glenmore Farm, Wick (WSM 35845)

5.13.1 Artefact recovery

Finds were collected during a fieldwalk carried out in 1997 by SWAG at 'Five Acre' field on Glenmore Farm in Wick. The search area was divided into 20 × 20m squares, over a part of the field that had previously displayed cropmarks.

5.13.2 Assemblage summary

The artefact assemblage retrieved from the fieldwalked area consisted of 173 fragments weighing 4.720kg, and dating from the Roman period onwards (see Table 66). Level of preservation was generally fair with the majority of sherds displaying moderate levels of abrasion.

The prehistoric and Roman material within the assemblage is summarised in Table 67.

Period	Material	Total	Weight (g)
Prehistoric	Flint	1	2
Roman	Brick/tile	3	19
Roman	Pottery	19	270

Table 66 Quantification of the prehistoric and Roman component of the site assemblage

5.13.3 The Roman pottery

The Roman sherds were grouped and quantified according to fabric type, as shown in Table 67.

Fabric code	Fabric common name	Total	Weight (g)
12	Severn Valley ware	18	268
13	Sandy oxidized ware	1	2

Table 67 Quantification of the Roman pottery by fabric

Sherd preservation was generally fair, but with heavy abrasion among many of the smaller sherds.

This small assemblage consisted entirely of Severn Valley ware, except for one small sherd of sandy coarse ware. Only two rim sherds were found in this small assemblage, but neither was clearly diagnostic. A wide-mouthed jar rim was close to the Peacock 45 form, and therefore probably late 2nd-3rd century in date. A bowl rim resembling the Webster 50 form was possibly similar to the wide-mouthed jar in terms of date.

There was no evidence to indicate Roman occupation or use of this site before or after the late 2nd-3rd century date range.

There are clear local concentrations of Roman pottery within the area of this fieldwalk, but from the available data it is not possible at present to determine any links between these and the cropmark patterns seen in this field.

5.13.4 Other artefacts

The very small amount of brick/tile recovered is insufficient to suggest that any substantial buildings were on the site during the Roman period.

6. **Lithics from aggregates: re-appraisal and HER enhancement** **(by R Jackson)**

6.1 **Introduction**

6.1.1 **Background**

Difficulties have been recognised in patterns of distribution and quality of data relating to prehistoric lithics recorded on the HER, both in regional surveys such as the West Midlands Regional Research Framework (Barfield 2008; Myers 2008) and countywide as part of the Worcestershire Aggregate Resource Assessment (Jackson and Dalwood 2007).

These were identified during an earlier stage of the current project and the data available was rapidly enhanced through assessment of lithics derived from twenty-three museum and local group collections. Three larger lithic assemblages from areas close to or on aggregate producing geologies were also assessed. This has resulted in analysis of the three larger assemblages and preparation of a short note for four of the lesser assemblages within this report (Mora Ottomano, this volume). A rapid assessment of all lithic material from aggregate production areas of the county recorded on the HER was also undertaken through scanning of published sources and HER records. Together with evidence from previous surveys, assessment identified a need for further refinement of recording of prehistoric lithics within the HER. This was done with the specific aim of improving accessibility of information on worked flint and other stone recorded within the county and allowing further consideration of the potential for such material to support future research and management.

6.1.2 **The current state of lithic studies in the county**

Although previous surveys have been relatively restricted in their scope (eg Smith 1958), taken together they provide a consistent impression of the potential of lithic studies in the county and especially for aggregate producing areas.

Assessment undertaken as part of the Worcestershire Aggregates Resource Assessment indicated that the majority of the Mesolithic, Neolithic and Bronze Age sites recorded on the HER are flint scatters (Jackson and Dalwood 2007). These are widely distributed and indicate that the record for the early prehistoric period in the county is dominated as it is elsewhere by surface assemblages of flints, complemented by only a very limited number of excavated remains and palaeoenvironmental records. This places lithic studies firmly at the forefront of research into the early prehistoric period in the county.

Distribution is widely spread across the whole county but the record is biased towards aggregate extraction areas and indeed higher quality records are biased towards quarry sites subject to archaeological investigation, although these have rarely been highlighted in reports or on the HER. For example, examination of records has shown that all three quarries along the Carrant Valley in south Worcestershire (at Beckford, Aston Mill and Kemerton) have produced small but significant assemblages of Mesolithic material in association with tree-throws and natural hollows (Jackson and Dalwood 2007). All of these were incidental finds within the context of investigations focussing on later periods of activity and as such received little attention. All three sites also produced Neolithic material, those at Aston Mill and Kemerton including small quantities of pottery as well as flint and also including stratified material.

Within the Severn Valley, recent work at Ripple Quarry and Clifton Quarry has produced important Neolithic deposits, at Clifton including a significant Late Neolithic assemblage from pit contexts (Mann and Jackson forthcoming). Again the anticipated focus of the work being undertaken was not earlier prehistoric activity.

Further north in the county, relatively dense concentrations of activity are indicated by surface scatters from around Wolverley and Cookley, Kinver and Kidderminster Foreign. These include the area around Hoarstone Farm and Lightmarsh Farm, near Trimpley Top, Kidderminster Foreign which has not only yielded one of the lithic scatters analysed for the current project but is also the location of an excavation which has produced the largest,

stratified Mesolithic site assemblage recorded in the county (Bevan 1996). Lastly, excavations at Blackstone Quarry, like those noted above, were focussed on Iron Age and Roman deposits but also produced a small but important flint assemblage which highlights the potential of lithic studies in this region (Woodward 2008).

6.1.3 Data limitations and potential

Previous rapid assessment of prehistoric lithics recorded on the HER has indicated a number of limitations in the data and it is intended that this project will partially redress these.

The first issue of note that limits analysis and understanding is that many of the recorded sites represent flint scatters which have not been dated to anything more specific than the prehistoric period, yet still consistently appear in searches for Mesolithic, Neolithic or even Bronze Age sites with no means of filtering out the better dated assemblages and chronologically diagnostic material (Jackson and Dalwood 2007). Although this often results from the absence of such chronologically diagnostic material, this can equally commonly reflect the quality of the analysis or more often the accessibility of the key data within the HER. This is a general problem for flint studies across the region which has arisen as a result of the lack of detailed specialist analysis of material, the paucity of site-specific published lithic assemblages for comparison and the fact that many assemblages are chronologically mixed (Barfield 2008; Myers 2008). This has led to a classic Catch 22 situation whereby sites are either missed entirely within period specific HER searches or alternatively generate a large body of potentially irrelevant data if they are included.

Within Worcestershire, the past 10-15 years have seen a number of staff working in local units whose level of knowledge has improved the recognition and recording of lithic assemblages and allowed their potential to begin to be realised. It is, for example, notable from a rapid review of the reports by these individuals that a Mesolithic and Neolithic element has been recognised in most fieldwalked assemblages recovered during topsoil and subsoil stripping along a range of pipeline projects (eg Dinn and Hemingway 1992; Jackson 1993). These are particularly significant since they provide sample transects across wide stretches of the county and suggest that flint surface scatters are almost certainly more widely distributed and common than has often been assumed. Moreover, where detailed analysis has been undertaken of stratified material, as in the case of the Mesolithic assemblage from Lightmarsh Farm (Bevan 1996) or the predominantly late Neolithic/Beaker period material from Kemerton Quarry (Bellamy 2005), this has proved to have a high research potential. Lastly, the analysis undertaken within the current project of three privately collected surface assemblages (WSM 38558, 38559 and 38560; Mora Ottomano, this volume), has highlighted a strong Mesolithic element within the collections but also identified Neolithic and later material. This suggests that specialist assessment and analysis would undoubtedly allow many flint scatter sites to be more specifically dated and understood than at present.

Assessment of the wider lithic record held within the HER for aggregate production areas in the county also suggests that the problems noted above are compounded by a number of factors which affect the recorded distribution of early prehistoric lithic assemblages. A range of factors may bias the distribution of known scatters and therefore caution should be exercised in viewing other areas of the county as ones of only limited activity. These include the loss or non-detection by conventional means (especially fieldwalking) of certain elements of the record for the early prehistoric period, and Palaeolithic, Mesolithic, Neolithic and Bronze Age lithics are no exception. Low representation may particularly be an issue in the case of sites located within floodplain environments. In the Severn, Avon, Stour, and Teme valleys, the comparatively low incidence of earlier prehistoric period sites may be more a reflection of alluvial masking of prehistoric land-surfaces than non-utilisation of these areas. In the light of this observation, recent discoveries such as that from Clifton of stratified Late Neolithic flint and polished stone and flint axes associated with grooved ware pits buried beneath alluvium on the floodplain of the Severn are particularly significant (Mann and Jackson, forthcoming). Although not associated with features, the recovery from Droitwich of a relatively large assemblage of flint including probable Mesolithic material both from within an alluvial sequence and as residual material within later deposits (Hurst 1987; Bradley 1989; Barfield 2008) is also of considerable potential importance, effectively providing evidence for surface scatter material of the type which in other locations would be detected through

fieldwalking. Such finds highlight the potential for alluvial masking of early prehistoric sites located on floodplains and this should always be kept in mind.

For some flint assemblages and especially for individual find-spots, as noted above, dating is never likely to be precise due to absence of diagnostic tools or waste products, however, where possible accurate identification of flint and other lithic material recorded on the HER has the potential to highlight that distribution is more widespread and material more commonplace than appears to be the case at first sight. A key aim of the lithic assessment and analysis undertaken within the current project was, therefore, to improve the quality and accessibility of lithic data for the aggregate production areas of the county by enhancing the data accessible through the HER.

6.2 Methods

Recent work on the HER has allowed the incorporation of Artefact Data Tables and a major project has been completed through an IFA bursary to provide a preliminary ‘cleaning’ of records and retrospectively producing Artefact Data Tables for all sites. It is, however, recognised that for many artefact categories further refinement of the data and the tables is required (Victoria Bryant, pers comm). The work undertaken for the current assessment aimed to further refine the information held on prehistoric flint and other flaked and polished stone objects from aggregate production areas by creating a revised system of classification for the Artefact Data Tables.

At the outset, the already compiled Artefact Data Tables within the HER were used to extract a sub-set of data for aggregate producing areas as previously defined through the Worcestershire Aggregates Resource Assessment (Jackson and Dalwood 2007). The relevant section of the Artefact Data Tables was originally established using Stone as a primary field, with four sub-categories Architectural stone, Burnt stone, Flaked stone, and Stone object. The sub-category Flaked stone and the sub-divisions associated with it Flaked Stone object and Stone Flake (and a further sub-category of Flaked Stone Object, Polished Stone Axe) were specifically used to extract data from the HER for this assessment.

A revised system of classification was developed by the author in consultation with the HER Manager (Victoria Bryant) and with Alvaro Mora Ottomano who undertook the specialist lithic analysis for the project. The revised classification system resulted in the redefinition of the sub-divisions of Flaked Stone (from Flaked Stone Object and Stone Flake as originally devised) to:

- core tools (flaked and ground implements)
- flaked tools, and
- waste/production.

Further sub-divisions were established as presented in Table 68. The resultant classification system is designed to be sufficiently detailed to allow HER searches to be completed for typologically or chronologically diagnostic material but does not require detailed specialist knowledge, thus allowing maintenance of the system by HER Officers in the future. Consequently, only those levels of information highlighted have been currently implemented; the other suggested sub-divisions being less clearly defined and requiring consideration at a future date.

Lastly, key data sources such as the English Rivers Palaeolithic Project (Wymer 1996), Wymer’s Mesolithic gazetteer (1977) and the national implement petrology database (McKClough and Cummins 1988) were checked to ensure all data recorded within them from aggregate production areas was recognised within the HER, whilst as far as possible published and grey literature sources were consulted and verified.

Level 1	Level 2	Level 3	Level 4
Core tools (flaked & ground implements)	Palaeolithic handaxe	Ovate	
		Cordate	
		Pointed	

Level 1	Level 2	Level 3	Level 4
		Acheulian	
		Unclassified	
	Axe	Polished axe	
		Flaked axe (Neolithic)	
		Tranchet axe or adze	
		Axe Hammer	
		Battle Axe	
		Unclassified	
	Other core tool	Pick	
		Mace	
Flake tools	Arrowhead	Leaf shaped	Use Green's classification
		Barbed and tanged	Use Green's classification
		Other classified	Transverse (chisel)
			Transverse (oblique)
			Chisel
			Petit tranchet
			Petit tranchet derivative
			Triangular
			Blank
	Scraper	Thumbnail/button scraper	
		Other classified	End
			Double end
			Side
			Side and end
			D-shaped
			Disc
	Microlith		
	Gunflint		
	Other tool	Knife	
		Piercer/borer/awl	
		Fabricator	
		Denticulate/rod	
		Sickle	
		Dagger	
		Serrated flake/blade	
		Burin/microburin	
		Point	
		Notched tool	
		Backed blade	
		Retouched flake	
		Unclassified	
Waste/production	Core/Flaked lump	Multi-platform	
		Single platform	
		Opposed platform	
		Ecaille	
		Lavallois	
		Bladelet	
		Unclassified	
	Hammerstone		
	Debitage	Flake	
		Blade	
		Bladelet	
		Spall/chip	
		Miscellaneousdebitage	
	Unclassified	Burnt	

Table 68 Revised classification scheme for flaked stone (only those levels of information highlighted have been currently implemented; the other suggested sub-divisions being less clearly defined and requiring consideration at a future date)

6.3 Review of the evidence for Worcestershire

6.3.1 General

At the outset of this project 218 sites were identified through the HER within the previously defined aggregate production areas of the county. Associated Artefact Data Tables provided a total of 209 entries when searched for the categories of Flaked Stone and sub-categories Flaked Stone Object and Stone Flake.

Revised classification of this data sub-set within the Artefact Data Tables has more than doubled the number of entries to 430 while the associated rapid search of published sources and grey literature has added a further 69 entries (33 sites). Despite this, 128 entries remain no more closely defined than Early Prehistoric (i.e. spanning the Mesolithic through to the Late Bronze Age; c 10,000-800 BC), however, for the most part it has proved possible to more closely define the dating of the remaining entries and these are discussed in greater detail below.

6.3.2 Palaeolithic handaxes and other material

Background

The primary source of archaeological evidence for the Palaeolithic comprises stone tools, flint being the main stone raw material utilised in tool manufacture, although in areas where flint is not present (including across the Midlands), other stone raw materials, such as quartzite, were also utilised.

Lower Palaeolithic material is comparatively basic in its lithic technology, and two principal traditions have been identified. These are the 'Acheulean tradition', characterised by bifacially worked, teardrop-shaped, handaxes, and the flake and core tools of the 'Clactonian tradition' (Barton 1997).

Middle Palaeolithic material is somewhat more developed and is dominated by flint of the Mousterian tradition, typified by use of the Lavallois technique that employs a prepared flint core. This allows a greater degree of control in the production process, which is based around the creation of 'tortoiseshell-shaped' flakes subsequently used in the creation of flake-based tools (Barton 1997).

Upper Palaeolithic material comprises a wide range of tools based upon narrow blades derived from prepared cores. The period is typologically sub-divided based upon a number of separate definable flintworking typologies/industries. The Early Upper Palaeolithic in Britain has three sub-divisions. The earliest is characterised by unifacial leaf points known as Jerzmanovice points which are found widely spread south of the late glacial margin (implying that they may have also been present further north but sites have been lost). These date from as early as c 34,500 BP. Subsequently comes the Aurignacian tradition (c 32,000–30,000 BP). This is typified by nosed-scrapers, straight scrapers and busked burins but also includes leaf points. These are only thinly distributed and are restricted to the western part of the British Isles. Lastly comes the more widely distributed Gravettian tradition (c 28,000–22,000 BP) characterised by such implements as large tanged points (Font Robert points).

The Late Upper Palaeolithic can also be sub-divided into the Late Upper Palaeolithic (characterised by the Creswellian flint industry; dated c 12,600 – 12,000 BP) and a rather diverse tradition during what is termed the Final Upper Palaeolithic. The latter includes a 'penknife point' phase (post-dating 12,000 BP) and also a long blade phase often including 'bruised blades' (dated to after the end of the last stadial at c 10,300 BP; Barton 1997).

The data

The Palaeolithic record for Worcestershire, as for much of the country, is dominated by redeposited artefacts recovered from river terraces during sand and gravel extraction operations, though chance surface finds are also recorded. As yet no cave sites in Worcestershire have produced Palaeolithic material. Due to its close relationship with terrace deposits, Palaeolithic material therefore has a particular bias towards aggregate production areas.

The quantities of Palaeolithic material recovered from the county have seen a dramatic rise in numbers over the past 40 or so years. There were only nine Lower and Middle Palaeolithic artefacts recorded during Derek Roe's survey of 1968, yet by the time of Wymer's 1996 survey the number had grown to 51, while more recently the Shotton Project has recorded over 70 (Buteux *et al* 2004). Since then access to collections has allowed Lang and Keen (2005) to list some 159 Palaeolithic items, of which over 90% have derived from quarries particularly those at Aston Mill (77 artefacts, including 20 handaxes) and Beckford (63 artefacts, including 24 handaxes). These in turn have allowed more detailed information to be incorporated into the HER and supported the development of more accessible models for the period (Victoria Bryant pers comm; Lang and Keen 2005; Lang *et al* 2006).

One particular benefit of the reclassification and data enhancement undertaken for the current project has been to allow the dramatic rise in recorded Palaeolithic flint and other stone tools to be accurately and accessibly recorded on the HER. Axes and other lithic finds identifiable through an HER search for aggregate production areas prior to assessment provided 11 sites, whilst a search on the revised system yielded 16 sites, which although only a small number represents a significant increase for a period for which evidence is notably scarce in the region. Further these 16 sites are now represented by 22 entries on the Artefact Data Tables allowing key categories such as handaxes (15 entries) to be separated from other material and also to be readily quantified (60 examples). Two key sites are also identified, at Beckford Quarry and Aston Mill Quarry, Kemerton which between them have yielded 44 handaxes as well as associated material.

Discussion/distribution

In Worcestershire, the earliest potential Palaeolithic artefacts derive from the highest of the Avon terraces (5th Terrace; Lang and Keen 2005). The 5th Terrace deposits are currently dated to the interglacial at OIS 9 (339,000-303,000 BP) and, within the county, have the greatest potential for producing Lower Palaeolithic remains. The Allesborough Beds on the 5th Terrace, near Pershore, demonstrate this potential having produced important molluscan and faunal evidence. The recent surface find of a fine-grained dolerite handaxe from the same area (Derek Hurst, pers comm) highlights the potential of these deposits. A further surface find has been recorded at Harvington from an area of Avon 5th Terrace deposits, while similarly dated Bushley Green Terrace deposits on the Severn have some potential and have produced palaeontological evidence.

The highest potential for producing early Middle Palaeolithic material lies along the 4th Avon Terrace deposits which can be dated to the Ailstone-Stensham Interglacial at OIS 7 (245,000-186,000 BP), thus pre-dating human abandonment of the British Isles at *c* 190kya (Lang and Keen 2005). No Palaeolithic artefacts have been recovered from the 4th Avon Terrace in Worcestershire, yet, just beyond the county boundary, this terrace has produced a significant concentration of material at Twynning, Gloucestershire. Avon 4th terrace derived material has also been recorded a short distance into Warwickshire, at Tiddington and Little Alne.

As across the rest of Britain, Worcestershire was abandoned by humans from the end of OIS 7 or early OIS 6 (*c* 190 kya) for a period of about 130,000 years until OIS 4 (at about 60 kya). Following re-colonisation of the British Isles at about 60 kya, the later Middle Palaeolithic record for the West Midlands is relatively sparse, but is dominated by the two key assemblages in the county for Palaeolithic material collected by Paul Whitehead from the quarries at Aston Mill and Beckford, both in the Carrant Valley (Lang and Keen 2005). They derive from the Carrant Main Terrace (which equates to Avon Terrace 2) and include reworked and heavily rolled Lower Palaeolithic material presumably derived from an earlier terrace (?Terrace 5) as well as Middle and Early Upper Palaeolithic material. Middle Palaeolithic material includes flint and a single quartzite tool along with small finely made bifaces and Lavallois type prepared cores. Although reworked into material deposited somewhat after the end of the Middle Palaeolithic (organic deposits within Terrace 2 at Beckford having been dated to 27,650 \pm 250 BP; Birm-293), these provide strong evidence for human reoccupation (?Neanderthal) of this area during OIS 3 (after 60kya; Lang and Keen 2005).

For the Upper Palaeolithic, no Jerzmanovice points, of the earliest Early Upper Palaeolithic tradition, have been recovered from Worcestershire; however, an Aurignacian nosed-scraper

and a shouldered scraper have been recovered from Aston Mill Quarry. These are highly significant finds representing not only the sole artefacts of this date from the West Midlands but also the most easterly find-spot of this tradition in the British Isles, perhaps implying activity of a group moving up from south-western Europe, across the Severn Valley Plain and Gloucestershire, and into the Vale of Evesham (Jacobi and Pettitt 2000). Indeed the collections from the Aston Mill and the nearby Beckford Quarry contain material indicative of the likely existence of rare Early Upper Palaeolithic campsites along the Carrant Brook (*ibid*). No Gravettian finds have as yet been recovered from Worcestershire, although a Font Robert point recovered from just over the border into Gloucestershire, at Barnwood (*ibid*), suggests there is the strong potential for material of this date to be recovered from the Carrant Valley.

The Late Upper Palaeolithic record in the county is limited to a shouldered point and a backed blade fragment recovered from Huntsman's Quarry, Kemerton (Bellamy 2005), and a possible broken blade of this date recovered from the same area by the Shotton project (Buteux *et al* 2004). This limited pattern reflects the lack of find-spots of Late Upper Palaeolithic date in the region as a whole.

6.3.3 Mesolithic microliths and other tools

Background

The British Mesolithic commences at around about the end of the Devensian glaciation approximately 10,000 years ago. Within the archaeological record this is most noticeably marked by the adoption of microlithic flint technology, use of which lasts to about 6000 years ago (*c* 4000 BC) when Neolithic traditions including use of ceramics first appeared (Mithen 1999).

Microliths (small, finely worked flint tools) form the dominant component of artefactual assemblages from this period and, along with the waste products from their production, provide the most common evidence for Mesolithic activity. Changes in microlithic technology can be observed at around about 8500 years ago when broad blade assemblages gave way to narrow blade dominated ones. This is used to divide an Earlier Mesolithic from a Later Mesolithic and may reflect the changing environmental conditions necessitating different hunting (subsistence) strategies and, therefore, different toolkits (Mithen 1999).

A number of recent reviews have established a broad framework for the region and considerably advanced our understanding of the Mesolithic in this part of Britain. These include reviews of the evidence from the West Midlands (Myers 2008), the East Midlands (Myers 2006) and more local reviews including the claylands of the East Midlands (Clay 2002; 2006) and the Trent Valley (Knight and Howard 2004). Most relevant of these for Worcestershire is Myers' review for the West Midlands (2008) that establishes a context and framework within which the evidence for the county can be considered.

Data

The Mesolithic record for the county is dominated as it is elsewhere by surface assemblages complemented by a small number of excavated remains and palaeoenvironmental records. Distribution is widely spread across the whole county but as for most periods, the record is biased towards aggregate extraction areas (63 sites at an average density of 0.20 sites/km² as opposed to an average countywide density of 0.13 sites/km²; Jackson and Dalwood 2007). As elsewhere in the Midlands, the numbers of recorded find-spots of Mesolithic material within the county as a whole have risen dramatically in the past 30 years from the 26 recorded in 1977 (Wymer) to the 70 identified in 2002 (Myers 2008).

As noted above, the key diagnostic artefacts for the period are microliths, but burins/microburins, microdenticulates and tranchet axes or adzes also provide readily diagnostic material. Picks, scrapers, fabricators/rods, knives, notched tools and miscellaneous retouched pieces also appear while more rarely awls/piercers are also recovered. These are less readily identifiable as specifically of Mesolithic date and frequently are difficult to discern from their Early Neolithic counterparts. However, specialist identification will sometimes allow separation of these elements of the Mesolithic toolkit where subtler diagnostic Mesolithic reduction strategies and patterns of retouch can be identified.

Prior to assessment it was not possible to readily access data relating to Mesolithic sites on the HER and there were problems with the quality and usefulness of the data extracted. This is exemplified by a period specific print-out of Mesolithic flint scatters and find spots, as represented in the data held by the Worcestershire Aggregates Resource Assessment. This identifies 61 Mesolithic sites, of which four represent locations where palaeoenvironmental data has been recovered, only two are identified as having *in situ* deposits, and the remaining 55 represent chance finds or surface scatters. However, of the latter only 24 are identified with any certainty, the remainder being viewed as unconfirmed. The other readily identifiable source of Mesolithic data is Wymer's gazetteer (1977), which only identifies 26 sites in the entire county.

Following analysis, 26 sites with certain Mesolithic components can be identified on aggregates with a further four locations also producing potential Mesolithic material. One is identified specifically as Early Mesolithic, and two as Late Mesolithic. Additionally nine sites with transitional Late Mesolithic/Early Neolithic components have been identified, and a further 17 sites with potential transitional components dated to the Mesolithic-Early Neolithic or Late Mesolithic-Neolithic periods. Nineteen aggregate based sites have yielded a total of 39 microliths (compared with the 22 identified for the whole county in Wymer's gazetteer). The analysed sites at Trimpey Top (WSM 15301 and 38560; Bevan 1996; Mora Ottomano, this volume) can also be taken into consideration within this survey since they lie very close to aggregate resources. These have produced 27 microliths, as well as a large quantity of similarly dated material, from a combined assemblage of in excess of 1700 worked flints.

Discussion/distribution

Surface scatters in the north of the county indicate relatively dense concentrations of activity in the river valleys cutting through the sandstone hills around Wolverley and Cookley, Kinver and the parish of Kidderminster Foreign. The latter area includes Lightmarsh Farm, the most extensively investigated Mesolithic site in the county and a key site for the period in the region. Here, a total of 1482 flints were recovered including 88 artefacts characteristic of a Later Mesolithic narrow-blade industry (Bevan 1996). The flints were recovered from an area focussed around a feature interpreted as a tree throw. Postholes, a shallow gully and a possible pit were also recorded. The site had survived due its location within a slight hollow on a hillside above a stream. A shallow deposit of colluvium (hillwash) had accumulated within this hollow burying the features slightly deeper and thus beyond the reach of the plough. The site has been interpreted as the remains of a hunting camp at which a small shelter was constructed around the site of a fallen tree. Burnt stone, charcoal and charred hazelnut shells indicate the presence of a fire. A single radiocarbon date from a charred hazelnut shell provided an earlier 8th millennium BC date for the activity (8004 to 7592 cal BC; OxA-4327; 8800+/-80 BP). This is an early date for a narrow-blade industry and, although caution should be exercised in using an individual date, is potentially of considerable significance as an indicator of an early trend to miniaturisation and geometrification in the region. The field within which this site was recorded, as well as several other fields investigated on the pipeline in the immediate vicinity, also produced Mesolithic material. These were recognised at the time as indicative of further occupation locales, knapping episodes and/or satellite activities, an impression since strengthened by the analysis of a further surface scatter from the immediate vicinity (WSM 38560; Mora Ottomano, this volume) and enhancement of an existing record (WSM 08159) as a result of the literature search undertaken within the current project (recorded as WSM 39754).

These sites form part of a recognised focus of intensive activity spread along the southern margins of the Birmingham plateau. This apparent focus of activity coincides with areas characterised by free-draining soils, elevated locations and many small watercourses. Such an environment provides a wealth of excellent hunting locales with numerous hillside vantage points overlooking watering points but lying below the skyline (Myers 2006; 2008). Such free draining sites are predominantly based on Red Sandstone dominated geologies and it has been suggested that these may have provided particularly favourable habitats for exploitation due to relatively low levels of undergrowth and thus high degrees of visibility for hunting game under the woodland canopy (Mellars and Reinhardt 1978). However, other less deterministic models for the patterns of activity observed may also apply (see papers in Young 2000 for further discussion).

Away from this 'focal area', surface scatters and the few excavated assemblages identifiable in the record are widely distributed but are often limited in scope in comparison with these denser concentrations. Other areas of higher ground or natural promontories within the county seem to have been preferred; within aggregate production areas including sites along the Malverns and on a terrace above the river Severn at Blackstone. However, in the main such areas lie away from aggregate production areas. Within the valleys of the Severn, Avon, Stour and Teme and their tributaries, the gravel terraces situated above the river floodplains also provide a relatively common source of Mesolithic material where fieldwalking or other intensive archaeological investigation has been undertaken. As noted previously, all three quarries in the Carrant Valley (a tributary of the Avon) have produced Mesolithic material, while the flint scatter sites analysed at Bever (on the Severn; WSM 38559), and King's End (on the Teme; WSM 38558), were also predominantly Mesolithic in character. However, caution should be exercised in viewing other, lower lying areas of the county as ones of only limited activity. For instance, the discovery in Droitwich of a relatively large assemblage of flint including probable Mesolithic material both from within an alluvial sequence and as residual material within later deposits is of considerable potential importance (Hurst 1987; Bradley 1989; Barfield 2006a). One suggestion is that the brine springs at Droitwich may have been set within a relatively open landscape (see environmental discussion above), and that the area was particularly attractive to game because of the salt forming on the surface, as well as people, the latter as hunters of the game and gatherers of the salt and perhaps particular plants thriving in salty conditions (Barfield 2006a; Derek Hurst, pers comm). A similar association of Mesolithic debitage with alluvial deposits has been recognised at a site in Bengeworth, Evesham (WSM 23986), and together these highlight the potential for alluvial masking of significant assemblages of Mesolithic date along the Severn, Avon and Teme and their tributaries.

These observed patterns may reflect repeated utilisation preferred 'core areas' in the north of the county by local populations and more sporadic and transient use of lower lying areas to the south within a broader 'home range' (temporary camps), though again such models may be overly deterministic.

6.3.4 Neolithic and Early Bronze Age

Background

The Neolithic and Early Bronze Age periods in Britain are associated with the first evidence of agricultural practice and distinct changes in site type, cultural material and contexts of deposition which occur from about 4000 BC onwards (Thomas 1991 and 1999; Whittle 1997 and 1999).

Early Neolithic (c 4000–3400/3300 BC) flint assemblages are characterised by waste products dominated by narrow blades and flakes which are often difficult to distinguish from Late Mesolithic material. Typologically distinct tools include leaf shaped arrowheads, serrated flakes, fabricators and end scrapers, although apart from the leaf-shaped arrowheads these all appear in late Mesolithic assemblages as well (Edmonds 1995). Flaked and polished stone axes also provide a key indicator for the Neolithic, appearing from the early Neolithic onwards.

By the Late Neolithic (c 3000/2900–2500/2200 BC), flint technology had changed with broader, thicker waste flakes, wider core varieties and a greater variety of (often larger) tools including knives, borers and larger scrapers often worked on both sides as well as at one end (Edmonds 1995). Elaborate flint and stone axes, adzes and leaf points were produced and exchanged over long distances. Transverse arrowhead forms had replaced the leaf-shaped ones by this period and include chisel arrowheads, oblique arrowheads and petit tranchet arrowheads, all of which have a distinct association with the use of grooved ware pottery.

The Beaker and Early Bronze Age (through to about 1500 BC) is a period when flint technology (in terms of waste product) is hard to distinguish from that of the Late Neolithic, but diagnostic tools include thumbnail scrapers, barbed and tanged arrowheads, and flaked knives and daggers. Certain prestige items may have been products of specialist knappers while items such as blades and scrapers may have been everyday products and tend to the utilitarian being rather uniform (Edmonds 1995).

Until the second half of the 20th century, the Midland counties were mostly regarded as areas of virtually uninhabited wilderness until the Iron Age or even later (Buteux and Hughes 1995). This impression has been transformed over the past 50 or so years, however, the record remains very limited in both quality and quantity and until very recently there were no detailed regional overviews for the Neolithic and Early Bronze Age periods, however, the recently published West Midlands regional research framework now provides a framework for research covering this period (Ray 2008; Garwood 2008a). Apart from these recent regional perspectives, more local reviews exist for Warwickshire (Hingley 1996), the East Midlands (Clay 2002) and the Trent Valley (Knight and Howard 2004). These provide more detailed sub-regional summaries based around either large-scale surveys or areas where more intense archaeological activity has occurred than is typically the case across the region, or where resources have been available to attempt synthesis of the increasing datasets available.

The Neolithic and Earlier Bronze Age record for Worcestershire as for earlier periods is dominated (in quantity of records) by surface assemblages of flints and other finds, supplemented by a small number of excavated sites and palaeoenvironmental evidence. Aerial photography and recent development-led investigations, especially those associated with aggregate extraction and linear development, have considerably added to the record provided by surface scatters and have contributed towards the growing understanding of the nature of Neolithic and Earlier Bronze Age activity in the county. Distribution is widely spread across the whole county but the record is biased towards aggregate extraction areas (an average density of 0.28 Neolithic sites/km² and 0.31 Bronze Age sites/km² as opposed to respective averages of 0.14 and 0.12 sites/km² across the whole county; Jackson and Dalwood 2007). This reflects the factors noted previously and it is certainly the case that the County would be almost entirely lacking excavated sites of this period but for salvage recording and excavation undertaken in advance of aggregate extraction.

Data

Prior to assessment it was not possible to readily access data relating to Neolithic and early Bronze Age sites on the HER and there were problems with the quality and usefulness of the data extracted. This is exemplified by a period specific print-out of Neolithic site data held by the Worcestershire Aggregates Resource Assessment. This identifies 97 Neolithic and Early Bronze Age sites, of which one represents a source of palaeoenvironmental data, 42 are cropmarks sites, 13 represent *in situ* deposits, and the remaining 41 represent chance finds or surface scatters. However, of the latter only 26 are identified with any certainty, the remainder being viewed as unconfirmed. Sources such as the national Database of Implement Petrology for Britain (McKClough and Cummins 1988) have considerable use but have not been fully accessioned into the HER. This lists 37 stone axes, 9 flint axes, 6 axe hammers, 6 battle axes and 5 other perforated or ground stone tools for Worcestershire. Other potential sources of useful data such as Green's flint arrowhead gazetteer provide little support, only 11 find spots being mapped within the county, of which several lie beyond aggregate producing areas (Green 1980).

Following analysis, as noted previously, nine sites with transitional late Mesolithic/early Neolithic components have been identified along with 17 sites including possible transitional components (dated to the Mesolithic-Early Neolithic or Late Mesolithic-Neolithic). Nine sites have material less specifically dated to the Mesolithic-Neolithic.

Sixteen sites with Neolithic material and three with probable Neolithic components are identified, mainly on the basis of the presence of polished stone and flaked flint axes (14 instances from aggregates). A further site at Clifton, near Severn Stoke, has produced an additional five examples of polished stone axes and one example of a polished flint axe, with two further potential examples represented among associated axe fragments and these are dated specifically to the Late Neolithic through association with grooved ware and by radiocarbon dating (Mann and Jackson, forthcoming). Apart from these, nine sites have specifically Early-Middle Neolithic components (mainly leaf-shaped arrowheads; 10 examples) while, based on the presence of transverse arrowhead forms, nine further sites can also be identified as having specifically Late Neolithic components.

Twenty-eight sites with late Neolithic/early Bronze Age (Beaker) components can be identified on aggregates, predominantly through the presence of barbed-and-tanged

arrowheads (8 examples) and thumbnail scrapers (25 examples), but also through the presence of battle axes (3 examples), axe hammers (1 example) and association with Beaker pottery. Further sites with less definable material of Neolithic-Early Bronze Age date (2 sites) or broadly Neolithic to Bronze Age date (20 sites) are also present.

Discussion/distribution

The evidence for Neolithic and Early Bronze Age Worcestershire is very restricted, comprising limited flint and other artefact scatter sites; pits containing carefully selected and deposited residues of short-lived periods of non-monumental activity; a limited number of small monuments in the Worcestershire/Warwickshire Avon and Carrant Valleys; and small concentrations of funerary sites in the south of the county, along the Avon and Carrant Valleys, and north of Worcester, around Holt and Grimley.

As the most commonly identified forms of evidence for activities of this date, surface scatters and other finds represent a key source of information, and their overall distribution is widespread within aggregate producing landscapes. These sites probably provide one of the best indicators of the wide range of environments being exploited by Neolithic and Early Bronze Age communities. However, a notable problem is that the county, and indeed the wider region, have very limited resources of flint raw materials, a point noted in one of the regional research papers (Barfield 2008). Given that this is one of the most common and readily visible site indicators and that within the region flint has to be imported or derived from poor quality drift deposits, the problem of site visibility is considerable and should always be taken into account.

Further, as for other periods, a range of factors undoubtedly biases distribution patterns towards the more archaeologically 'visible' landscapes suited to prospection and subject to greater levels of commercially driven investigation. Therefore, considerable caution should be exercised when using them as indicators of the extent or intensity of activity; however, they remain a considerable and important source of information. Factors biasing distribution patterns echo those for the Mesolithic and again may particularly affect river terrace and floodplain areas. In both the Severn and Avon Valleys, the principal aggregate extraction areas, distribution is particularly liable to be biased towards the relatively high 'visibility' of gravel terrace landscapes. Conversely, in floodplain environments low 'visibility' arising from alluvial masking of prehistoric land-surfaces probably accounts for the low numbers of identified sites rather than non-utilisation of these areas.

As for the Mesolithic, lack of awareness of identified material, false perceptions and non-recognition of Neolithic forms among flint assemblages has probably also played a significant role in forming impressions of low levels of activity in some parts of the county. Just as for the Mesolithic, examination of records undertaken for this survey has shown that most quarry sites, and other extensively sampled areas (including through fieldwalking), have produced small but significant assemblages of Neolithic and earlier Bronze Age material. This suggests that material is widespread but that it may not be being recognised by fieldwalkers and/or within fieldwalking and evaluation assemblages. Also reflecting the pattern for the Mesolithic, rapid assessment indicates that many of the Neolithic and Bronze Age dated sites resulting from the data searches of the HER are in fact flint scatters which have not been dated to anything more specific than the prehistoric period, yet still appear in searches for Neolithic and Bronze Age sites. As noted previously, this is part of a wider problem for flint studies in the region reflecting the lack of detailed specialist analysis of material, the paucity of site-specific published lithic assemblages for comparison, the lack of an established tradition of fieldwalking by local groups in the northern part of the county, and the fact that many assemblages are chronologically mixed (Barfield 2008).

For some flint assemblages, and especially for individual find-spots, dating is never likely to be precise due to the absence of diagnostic tools and/or waste products. However, this survey, along with other recent assessments within the County, highlight the fact that a Neolithic element has been recognised in most fieldwalked assemblages recovered from a range of pipeline projects which have provided sample transects across wide stretches of the county (Dinn and Hemingway 1992; Jackson 1993; Jackson and Hurst 1994; Jackson *et al* 1996). Similarly, assessment and analysis of a number of fieldwalking assemblages collected by voluntary groups and individual collectors indicates the high potential of such assemblages,

including the three specifically analysed for this project (Mora-Ottomano, 2007; and this volume). Whilst these are predominantly Mesolithic in date, Neolithic and later material is also regularly present, albeit in limited quantities. This suggests that the research potential and distribution of such assemblages is greater than appeared to be the case until recently.

Stratified assemblages are considerably less common but are predominantly derived from the small number of sites in the county that have produced pits and other features but which have no evident monumental association. These occur relatively widely but have largely been incidental discoveries made, either during programmes of archaeological investigation associated with quarrying and focussed on sites of other periods, or through monitoring of pipeline construction during the building of a series of water supply mains running from Strensham in the south of the county to Trimpley in the north. Of these discoveries, the site at Clifton is of greatest interest. Here the importance of the site lies not only in the recovery of an exceptional range of material associated with several grooved ware pits (Mann and Jackson, forthcoming) but also in that it highlights the potential of areas flanking the River Severn where alluvial deposits are liable to mask prehistoric (and later) remains from detection through fieldwalking, aerial photography and/or geophysical survey.

6.3.5 Middle and Late Bronze Age

Background

Profound changes can be identified at the end of the Early Bronze Age (in *c* 1500 BC) with new conceptions of territory, land, domesticity and identity being introduced (Parker Pearson 1999; Champion 1999). The subsequent period can be separated chronologically into Middle Bronze Age period (*c* 1500-1150 BC) and a Late Bronze Age period (*c* 1150-800 BC).

Within Worcestershire, quantifying the records for this period through the HER is not possible as no distinction is made between early, middle and late phases of the Bronze Age, or between divisions within the subsequent Iron Age, however, in terms of the current study it is assumed that with the increasing use of bronze and then iron, that flint use tails off to the point that significant material is unlikely to be encountered beyond the end of the Bronze Age. Further, within the period covered, Middle and Late Bronze Age flint assemblages are poorly understood and tend to be represented by increasingly crude flakes and utilitarian tools, the implied emphasis being on functionality rather than form.

Data

Prior to assessment it was not possible to access any specific lithic data relating to the Middle to Late Bronze Age periods through the HER and there were problems with the quality and usefulness of any data extracted. Although the current survey has improved the situation, dating and identification of material from this period is often difficult as noted above.

Following analysis, only one site had material where specialist analysis identified a specifically Middle to Late Bronze Age component in the flint assemblage. Apart from this, a number of sites with broadly Neolithic to Bronze Age dated flint components can be identified (20 sites) and one with a Beaker to Middle Bronze Age component. Four sites have elements which can be generally dated to the Bronze Age period, and one specifically included material described as of Early to Middle Bronze Age date, although this could not be verified.

Discussion/distribution

In the light of the relative paucity of data for this period, no meaningful observation can be made regarding distribution of middle to late Bronze Age lithic assemblages, however, it is evident that further research needs to be undertaken to establish the nature and extent of use of worked flint and other stones during this period.

6.4 Key sites

6.4.1 Palaeolithic

As discussed above, the most productive area in the county for Palaeolithic material has been the 2nd Avon Terrace within the Carrant Valley south of Bredon Hill (Carrant Main Terrace).

Particularly high concentrations have been recovered from the two quarries regularly monitored on this terrace (at Aston Mill and Beckford), while just beyond the county this terrace has also produced finds in Gloucestershire (at Twynning Quarry) and in Warwickshire (at Bidford).

These sites provide the most abundant evidence for Middle Palaeolithic and early Upper Palaeolithic activity in the region and are of considerable importance in understanding the spread of human (?Neanderthal) re-occupation of Britain at some time after 60 kya. Given the wealth of Quaternary environmental sites in this area, it has been observed that rich archaeological sites of this age will be probably be encountered at some stage (Lang and Keen 2005). Avon Terraces 4 and 5 also have some potential for producing earlier material dating from the Lower Palaeolithic and earlier part of the Middle Palaeolithic.

Of the active quarries in the Severn Valley at the time of the Shotton Project, four were visited, at Grimley/Holt, Clifton, Ripple and Ryall. All of these lay in the Severn Valley (Terraces 2 and 3) and were assessed as being of very low potential as a result of deposition by outwash from Irish Sea ice down the Ironbridge Gorge and beyond (Buteux *et al* 2004). This effectively will have destroyed any pre-existing Quaternary or Palaeolithic sites older than that of the Dimlington Interstadial in OIS 2. Furthermore, Severn deposits were noted as having a high quartzite and low limestone content, and therefore provide a hostile environment for the preservation of fossil remains relating to early flora and fauna. Despite this observation, the 4th and 5th Terraces of the Severn have produced Palaeolithic artefacts and if subject to future exploitation have some potential for the survival of Middle or even Lower Palaeolithic material.

6.4.2 Mesolithic

The most extensive assemblage of Mesolithic material and the only one to have been associated with a range of surviving features is that recovered during salvage recording at Lightmarsh Farm, Kidderminster Foreign (Jackson *et al* 1996). This site along with surface scatter assemblages recorded in the immediate vicinity (WSM 38560, 39754) occupies higher ground between two areas of aggregate extending along the Severn and Stour Valleys around and to the north of Kidderminster. The site and associated surface scatters illustrate the high Mesolithic potential of the surrounding area, a potential enhanced by the local availability of the Cookley pollen diagram, which provides a detailed environmental context for these sites.

This area of high potential for Mesolithic activity extends to the north and east, around the southern margins of the Birmingham plateau, where a concentration of potentially similar sites have been recorded in the form of surface flint scatters. Within Worcestershire these are focussed on aggregate producing areas around Wolverley and Cookley and Kinver. Since the pipeline, and the Wolverley and Cookley areas, are the only places to have been subject to any notable level of research (the latter through fieldwalking by the local community), it seems likely that this area has a very high potential for the recovery of Mesolithic remains as both surface scatters and more importantly in the form of potentially well preserved and even *in situ* remains.

The assemblages from tree-throws and hollows on excavated and salvage recorded sites along the Carrant Valley, as well as the Mesolithic components of recently recorded surface scatters from pipelines and other locations, are small but significant indicators of the potential of the gravel terraces to provide some *in situ* deposits as well as surface scatters, indicative of the overall distribution of Mesolithic activity in the landscape.

Lastly, the evidence for Mesolithic flint scatters at alluviated sites such as Droitwich and Evesham, along with the detailed environmental information derived from palaeochannel deposits within the Severn, Avon, Salwarpe and Stour Valleys suggests that floodplains also have a very high potential for the survival of Mesolithic deposits. It is perhaps within such alluviated areas that there is the greatest potential for the survival of nationally significant Mesolithic deposits with the possibility for preservation of *in situ* waterlogged occupation deposits associated with a phase of Mesolithic activity.

6.4.3 Neolithic to Early Bronze Age

The most important sites for this period have been located in association with gravel quarrying and pipeline construction.

At Clifton Quarry (Severn Stoke) an isolated pit and a nearby small cluster of pits adjacent to a palaeochannel have produced rich Late Neolithic deposits associated with grooved ware (Mann and Jackson forthcoming). One pit was particularly notable containing not only a large assemblage of grooved ware and flint tools and waste (253 flints and *c* 884 chips) but also the potentially unique deposition of two virtually complete polished stone axes, large fragments of three of four further heat-shattered and burnt polished stone axes and also one flint axe. The nearby pit cluster also produced grooved ware and flint, while environmental samples from the main pit deposit contained substantial assemblages of charred cereal, fruit and nut remains. The importance of the discovery at Clifton lies not only in its date and character but also in that it highlights the potential of areas flanking the River Severn where alluvial deposits are liable to mask prehistoric (and later) remains from detection through fieldwalking, aerial photography and/or geophysical survey. Since aggregate extraction is focussing for the first time on these previously uneconomical areas (due to the logistics of removing the overburden to access the mineral reserves), this is an area of particular concern within this survey.

Elsewhere, evidence for Neolithic activity is more restricted but includes pits at Huntsman's Quarry, Kemerton associated with flint and pottery, including material tentatively identified as from a Peterborough Ware bowl (Woodward and Jackson 2005). At the nearby site at Aston Mill Quarry, Kemerton a pair of pits were associated with a small quantity of grooved ware and Early Bronze Age flint. These were interpreted as domestic and/or ritual activity in the vicinity of, but pre-dating a ring-ditch (Dinn and Evans 1990). Slightly further to the east, at Broadway, grooved ware was recorded in a pit excavated during the 1930s at a sand and gravel quarry and this material has been re-assessed within the current project (Ixer, this volume; Appendix 1). The site also produced further evidence of Late Neolithic to Early Bronze Age activity in the form of a barbed and tanged arrowhead and a tripartite urn (Hazzledine 1936; Smith 1946).

Sites of Beaker date similar to those of the Neolithic and are characterised by the presence of single pits and pit clusters as at Huntsman's Quarry, Kemerton where Beaker pottery and flint artefacts recovered strongly suggest domestic occupation with a range of activities represented including tool production, hunting, hide working, food preparation and other activities (Jackson 2005). Another probably domestic Beaker site has been recorded at Longmore Hill Farm, Astley (Dinn and Hemingway 1992), while Beaker material recorded at Aston Mill and Beckford probably represents similar activities, as may the pre-barrow material recovered from pits at Holt. In all of these cases of Beaker activity, as for the Neolithic period, there remains a notable absence of clear evidence for domestic structures.

Later funerary monuments and burials are slightly more common, especially in the form of ring-ditches most of which are liable to represent the ploughed out remains of Neolithic and Early Bronze Age barrows. Several examples of the latter have been tested by excavation in the Carrant Brook and also in the Severn Valley north of Worcester. Garwood's recent review (2008b) noted eight examples of ring-ditches and a double Beaker burial excavated to modern standards in the County with a further nine ring-ditches or Beaker/Bronze Age burials investigated to pre-modern standards. The most significant of these are the five (out of a group of seven ring-ditch cropmarks) excavated at Holt between 1970-75 (Hunt *et al* 1986). Of particular note was the recovery of at least eight Collared urns and one biconical urn along with an accessory cup. Fragments from three fine Beakers and at least five Beaker domestic vessels along with a transverse arrowhead and a flake from a polished stone axe are indicative of at least some form of pre-barrow activity, though its nature could not be determined.

Characteristic secondary use of many of these funerary monuments has also been observed, the ring-ditches at Aston Mill and Huntsman's Quarry in Kemerton and some of those at Holt being associated with secondary cremation deposits (Dinn and Evans 1990; Jackson 2005; Hunt *et al* 1986). The secondary use as a funerary monument of an earlier hengiform monument at Bredon also provides important evidence for the manner in which Neolithic

monuments could be re-used and adapted according to changing practice throughout the first half of the second millennium BC (J Lewis, pers comm).

Beyond this concentration, and that identified around Holt and Grimley (another quarrying landscape with a readily visible archaeological record), a key conflict can be observed between the very limited record for settlement, monument construction or other forms of activity and the relatively strong, but indirect, evidence from the palaeoenvironmental record for considerable levels of human intervention. The latter, when considered alongside the widely dispersed evidence from surface finds as examined in this study, suggests that most areas of the county were in fact utilised in some way by Neolithic and earlier Bronze Age communities. However, for reasons already discussed, the sites in many areas are less readily detected and have yet to be firmly identified, examined and characterised; a point re-enforced by the recent discoveries of significant Neolithic and Bronze Age deposits buried within alluvium at both Ripple and Clifton.

6.4.4 **Middle to Late Bronze Age**

No key site can be identified within Worcestershire, although useful information was derived from the excavation of an extensive Late Bronze Age settlement at Kemerton in the Carrant Valley. Here, despite the presence of a relatively large flint assemblage, this was largely related to earlier phases of site activity (notably Beaker in date) and it was only possible to tentatively associate a very small component of the flint assemblage with site activity of the later period (Bellamy 2005).

6.5 **Research directions**

Key research questions for this period in Worcestershire can be identified through reference to the West Midlands Regional Research Framework, the Shotton Project and the Worcestershire Aggregates Resource Assessment. Within these certain areas are specifically relevant to, or can benefit from, lithic studies.

6.5.1 **General issues**

As noted previously, a major problem for flint and other lithic studies is that local flint and other suitable raw material resources are notably limited and rely heavily on poor quality gravel derived flint, or on higher quality flint imported from a considerable distance possibly in the form of pre-prepared cores. As a consequence, flint artefacts and waste are restricted in quantity and often in quality. Further, material was often worked to exhaustion. This has implications for the interpretation of flint scatters and for the correct identification and dating of waste products and tools. In particular, caution should be exercised in assuming that low quantities of material are insignificant. For instance, evaluative fieldwalking of an 8ha area at Huntsman's Quarry, Kemerton produced only 24 worked flints and 6 burnt flint chunks, yet subsequent excavation produced widespread and significant evidence for earlier prehistoric and Late Bronze Age activity (Jackson 2005). In addition, patterns of procurement and utilisation of flint, and use and availability of other raw materials, for tools and non-utilitarian artefacts would considerably benefit from further consideration and data collection.

Beyond this basic problem, overall there has been little systematic survey or consistency of approach to field survey within the county, a problem exacerbated by a lack of tradition of avocational fieldwalking except in limited areas (notably the Avon and Carrant Valleys, a pattern which has exaggerated this area even more in the record). No targeted surveys have been undertaken to address the apparent gaps in coverage of the region. In the light of this, it is considered highly significant that where surveys or more intense, large-scale programmes of fieldwork have occurred, Mesolithic, Neolithic and Early Bronze Age lithics appear relatively common, especially in the case of Mesolithic and Early Neolithic material. Further, where excavation has followed, features have relatively regularly been encountered. This suggests that the county may in many respects reflect the pattern emerging in the East Midlands. There, recent surveys of the claylands have shown that, contrary to the previous impression of limited utilisation of these landscapes, during the Mesolithic, Neolithic and Early Bronze Age they were in fact extensively exploited (Clay 2002).

The methods used for any survey also need to be considered, whether research or development driven. Myers (2008) has suggested that the potentially small size of Mesolithic sites may be a crucial factor in whether they are detected in programmes of prospective fieldwalking, noting that 20m intervals in Leicestershire proved clearly more effective than 30m ones in neighbouring Northamptonshire. At Otterhole Farm, Buxton (Derbyshire), 10m interval test pitting revealed two discrete scatters each no more than 5m in diameter (Cherrington and Jones 2003). This suggests that even 20m intervals may be inadequate in cases where Mesolithic sites might reasonably be expected. Given the similarly restricted size of most Neolithic and Early Bronze Age non-monumental sites, and the low levels of flint present in the county, a similar observation can be made for this period. Thus curators need to specify higher than normal sampling levels for fieldwalking in areas of high potential or perhaps require them as a contingency or supplement to normal interval walking if this has produced even very small quantities of flint. Burnt/heat-shattered stone should also be routinely collected and its distribution be recorded as this is a frequently overlooked component of prehistoric sites. In addition, fieldwalking by community and special interest groups should be supported and where possible directed to try and address some of these shortfalls in coverage. Where undertaken, efforts should be made to ensure that there is a consistency of approach, an improved awareness of the character and appearance of lithics (through provision of training sessions and artefact recognition sheets) and specialist support should be provided.

Where fieldwalking and/or excavation produce earlier prehistoric lithic assemblages, proper specialist provision for subsequent analysis is essential. For well-sealed assemblages from discrete and datable excavated contexts it is important that artefact distributions are carefully recorded to allow structured deposition to be recognised and further investigated. In the case of such well-sealed assemblages, further scientific analyses (such as use/wear analysis on flint or thin sectioning of polished stone axes and other ground stone tools) should also be routinely considered and where possible employed. Such provision will enable assemblages to be more specifically dated and better understood than at present, maximising the potential of this highly limited resource. Further, whilst the current survey has allowed re-assessment of material from aggregate producing areas, away from these areas similar programmes of re-assessment and HER enhancement should be undertaken to improve the quality and consistency of the data for the county for the early prehistoric period, thereby improving the reliability of decision making processes affecting sites, or potential areas of activity, dated to these periods.

6.5.2 Palaeolithic

Any data that can refine understanding of the earliest occupation of the region, or of subsequent periods of re-occupation and abandonment, will be of the greatest importance. Since flint and other stone tools, and associated changes in technology, provide the main source of data for human activities during this period, opportunities for recovery and recognition of Palaeolithic material need to be optimised. Many of the people who make discoveries of Palaeolithic material are not professional archaeologists and are often quarry workers or independent collectors. Very little communication is maintained between the curatorial and contract archaeologists, on the one hand, and the discoverers on the other hand. Although there are opportunities to report finds through museums and the Portable Antiquities Scheme, the effectiveness of such mechanisms is limited. Further many professional archaeologists working in the field as well as members of the general public are not able to recognise many of the stone tools of this date found in the Midlands due to the use of non-flint raw materials. The heightened awareness of the potential for Palaeolithic deposits within quarries created by the Shotton Project and the Ice Age Network is helping to address some of these problems. By this means, and through consultation with the aggregates industry, it is hoped that it will prove possible to develop a set of appropriate national protocols for the reporting and subsequent investigation of any potential deposits of this date. This should in the long term enable the acquisition of additional data and better understanding of existing data. In turn this will allow some of the key research questions for the period to be addressed.

6.5.3 Mesolithic

Flint assemblages provide the most abundant and durable form of evidence for this period underpinning studies of social and economic activities and chronologies for the period.

In particular it is recognised that the identification of, and differentiation between, Early and Late Mesolithic lithic assemblages is essential to enable the understanding of these two different periods to be increased from what is currently a very low basis. Periods of transition, from Early to Late Mesolithic assemblages (informed by sites like Lightmarsh Farm) and from Late Mesolithic to Early Neolithic are similarly important in developing an understanding of the considerable changes societies underwent at these periods.

It has been noted above that where surface scatters have been investigated, or sites located during intrusive fieldwork, rare *in situ* deposits including traces of ephemeral structural remains have surprisingly been encountered regularly in this region. There is a potential of improved conditions of preservation within the shallow and colluvium filled depressions apparently favoured by Mesolithic populations. These provide considerably more valuable information about Mesolithic settlement, material culture and life-ways than can be achieved through analysis of surface scatter assemblages and unstratified material. Research excavation and development-led targeting of surface scatters should, therefore, be encouraged to determine whether surviving features are present and extend the quality and quantity of *in situ* deposits available for analysis, and therefore develop improved understanding of the nature of the resource (Myers 2008).

6.5.4 Neolithic and Early Bronze Age

Artefact scatters and surface collections for this period, as for the preceding periods, are dominated by lithics and provide a major source of evidence for the period and particularly support production of distribution patterns, while further survey and use of improved approaches are seen as being highly important.

The long-term impact of aggregate extraction and other research on selective tracts of river valley landscapes has been observed to have biased the record and produced a focus on specific elements of the Neolithic and Early Bronze Age landscape. This is to an extent unavoidable but as noted above, fieldwalking by local groups could be encouraged and supported in specific areas to test their potential.

Targeted research excavation, even small-scale, to test potential monument sites identified through cropmark evidence and to test the nature of the archaeology which surface scatters represent is required. Within programmes of fieldwork it will be essential, as noted earlier, to ensure that fieldwalking samples are adequate to recognise these site types. Some non development-led testing of appropriate methodologies for the investigation of surface scatter sites would, therefore, be of considerable benefit. This would not only support more effective future programmes of development-led work but could also support understanding of the character of any buried remains which might be associated with these surface scatters.

6.5.5 Middle to Late Bronze Age

Any flint or other flaked stone assemblages of Middle to Late Bronze Age (or later) date will be of considerable importance due to the paucity of data for the use of these during the later prehistoric period. As a result these warrant highlighting and careful study, even in circumstances where other artefact classes provide more obvious avenues of study.

7. Discussion (by C J Evans)

7.1 Introduction

A total of 23,174 sherds of Romano-British pottery and 47 sherds of prehistoric pottery were studied (Table 69 below). These derived from 33 collections; 10 from excavations and 23 from fieldwalking. The pottery ranged in date from the Neolithic to the late Roman period. The vast majority (75%) came from assemblages held by Birmingham Museum, from excavations at Bredon Hill and Overbury. Most of the assemblages came from south

Worcestershire, the main exception being from Hawford (WSM 28767), to the north of Worcester. As would be expected, the fieldwalking assemblages were more abraded and fragmentary than the excavated assemblages, as can be seen from the average sherd weights (Table 69).

7.2 Dating

Broad chronologies were established for the individual sites studied. The majority appeared to have been continually occupied, at some level, throughout the Roman period. Given the lack of stratigraphic evidence it was impossible to quantify and compare chronological changes on the sites included.

Only a handful of sites produced prehistoric pottery. Of these most produced only a couple of sherds. Excavations at Broadway (WSM 10944) produced a small but significant group of Neolithic grooved ware (Rob Ixer, Appendix 1). The largest group, 30 sherds (196g) came from fieldwalking at Baughton (WSM 30567). These were mainly undiagnostic body sherds in a local shell tempered ware (WHEAS fabrics 4.3 and 4.9). This ware characterises assemblages in this area from the Bronze Age, as at Huntsman's Quarry, Kemerton (Jackson 2005), through to the early middle Iron Age, as at Beckford (Evans *et al* forthcoming). Two sherds were identified as Peacock's Group B1 Palaeozoic limestone tempered ware (WHEAS fabric 4.1; Peacock 1968, 421-2). This is found on sites in this area in small quantities from the Middle Bronze Age on (R Jackson, pers comm), but is most common in late Iron Age/conquest period assemblages. The other sites produced body sherds in a range of local sand tempered wares (WHEAS fabrics 4.4, 4.6, 5.6), similar to fabrics recorded in the middle Iron Age Beckford assemblage (Evans *et al* forthcoming). The excavation at Bredons Norton (WSM 35836) produced the only diagnostic middle Iron Age sherd; from a Malvernian jar, decorated with 'duck' stamping (WHEAS fabric 3; Peacock 1968, Peacock Group A, 415-21).

Many of the assemblages provided some evidence for early Roman activity, dating broadly to the late 1st or 2nd centuries (Table 69). Diagnostic fabrics comprised Malvernian ware (WHEAS fabric 3), including tubby cooking pots (cf Peacock 1965-7, fig 1.10); South Gaulish and Central Gaulish samian; organic tempered Severn Valley ware (WHEAS fabrics 12.2 and 12.3); Savernake ware (WHEAS fabric 16.1) and other handmade and wheel-made grog tempered ware (WHEAS fabric 16.2). The grog tempered wares, including a wheel-made ware thought to be from Oxfordshire, are all found in the late Iron Age to early Roman Phase 3 assemblage at Childswickham (Timby 2007). A number of collections, in particular from the excavations at Bredon Hill (WSM 35838) and Elmont Field (WSM 35839), included typologically early-mid 2nd century fine grey ware (WHEAS fabric 14) and oxidised ware (WHEAS fabric 13), the latter including a white slipped ware. These occurred in a range of forms, such as beakers (cornice rim, globular and derived butt beaker), jars, bowls imitating samian Dr 30, cups and lids. The fine grey ware were submitted for petrological analysis, but their source was not identified (Ixer, Appendix 1). Fragments from rusticated jars, characteristic of this period, were also noted in some assemblages. A few Severn Valley ware forms were also indicative of early Roman activity, including tankards, jars and bowls (Webster 1976, fig 1 A2, fig 4 C20, fig 7 E38, and fig 9 H59, 60).

Most activity on all sites dated predominantly to the 2nd to 3rd centuries. This could partly reflect limitations in the dating evidence. Many Severn Valley ware forms can only be broadly dated to the 1st to 2nd, 2nd to 3rd or 3rd to 4th centuries (cf Webster 1976, fig 1 A4, fig 4 C22, fig 5 C 24 or 25, fig 7 D34, E41, E43; Darlington and Evans 1992, fig 19, no 13). The majority can therefore be used to argue for 2nd to 3rd century activity, in the absence of any diagnostically earlier or later forms. However, the fact that the large excavated assemblages, including a variety of other dating evidence, reflect the same chronological bias suggests that this emphasis may be real. The samian in the main excavated assemblages was predominantly Central Gaulish and included various mid to later 2nd century forms (Dr 18?, 18/31-31, 31, 33, 38, 45, 79, 80 and Ludowici Tg, Ludowici Tx cups, Curle 21). Other well-dated imports included Moselle black slip ware (Tomber and Dore 1998, 60 MOS BS) and Argonne colour-coated ware (Tomber and Dore 1998, 47 ARG CC) dating to the late 2nd-3rd century and mainly 2nd century respectively. Vessels in traded wares, such as BB1 groove rimmed bowls (Seager Smith and Davies 1993, fig 123 WA type 24; Holbrook and Bidwell

1991, fig 31 type 43) provided dating evidence on a number of sites. Other traded wares, such as Oxfordshire white ware mortarium and Nene Valley ware less common, but helped to date some assemblages. The wheel-made Malvernian ware (WHEAS fabric 19) also falls into this broad period (Bryant and Evans 2004, 260-1).

A number of the assemblages provided evidence for activity continuing in to the late 3rd or 4th centuries. One of the Eckington fieldwalking assemblages (WSM 05903) produced only later material, while the assemblage from the Overbury excavations (WSM 35841/2) had a greater number of sherds dating to this period. In most assemblages, however, pottery of this date formed a relatively small component. The traded wares of this period included BB1 flanged bowls and cook pots (Seagar Smith and Davies 1993, fig 124 WA type 25, fig 122 WA type 3), Oxfordshire parchment and red colour coated wares (WHEAS fabrics 29, 40), and pink grog tempered ware (Booth and Green 1989). A number of Severn Valley ware forms also dated to the late 3rd or 4th century (Webster 1976, fig 3 A9-13, fig 5 C27, fig 8 F49; Evans *et al* 2000, fig 24 JWM15; Peacock 1965-7, fig 3.35). One of the Eckington sites (WSM 07582) produced a fragment from a Malvernian slab-built vessel, a type noted elsewhere in late 3rd and 4th century contexts (Bryant 2004, 366).

The excavated assemblages from the Birmingham Museum collection (WSM 35838, 35839, 35841/2 and 35855) all included small quantities of Midlands shell tempered ware (WHEAS fabric 23), and individual sherds were recovered from a handful of the fieldwalked sites (WSM 35828, 10944, 34322 and 5908/9). These are significant finds, indicating that activity on these sites continued well into the 4th, and perhaps into the 5th century. This fabric has traditionally been rare on sites in Worcestershire, though more recently it has been identified on a number of sites (Griffin 2005 19-20; Evans *et al* forthcoming). In south Worcestershire it has been noted in late Roman contexts at Beckford (Helen Rees, pers comm), Childswickham (Timby 2007) and at Evesham Road, Pershore (Griffin 2005, 11-12, fig 17). A *tpq* date of *c* 390 was suggested for the latter (*op cit* 12). The evidence from towns in the region supports a late 4th century date for its appearance. At 1 The Butts, Worcester (Evans 2004), it was associated with nine 4th century coins, all from the upper fills of a well, the latest dating to AD 364-378. Other good dating evidence comes from Alcester (Evans 1994, 146), Gloucester (Hassall and Rhodes 1975, 85-6) and Bays Meadow villa in Droitwich (Barfield 2006b). Elmont Field (WSM 35839) produced a copy of a BB1 flanged bowl in another diagnostically late 4th century ware (WHEAS fabric 149). This was first identified in the Evesham Road, Pershore assemblage (Griffin 2005, 20), where it was assumed to be a local fabric. A sample was submitted for petrological analysis as part of this study, but the results provided little evidence for its source (Ixer, Appendix 1). Hadham ware (Tomber and Dore 1998, 151 HAD OX) is also indicative of a 4th century date.

A number of sites produced post-Roman finds. For reasons discussed elsewhere these were not included in this phase of analysis, and were summarised in the Stage 2 report (Jacobs and Jackson 2007).

Collection	Site Name	HER ref (WSM)	Type	Qty	% Qty	Wt (g)	% Wt	Av Wt(g)	Date range (main date)
Almonry	Groatens, Ashton under Hill	07578	E	11	0.0%	97	0.0%	9	2nd-4th
	Broadway	10944	E	14	0.1%	358	0.1%	26	2nd-4th
	Sedgeberrow	07517	E	20	0.1%	221	0.1%	11	2nd-4th
Subtotal				45	0.2%	676	0.3%	15	
Birmingham City Museum	Bredon's Norton	35836	E	61	0.3%	752	0.3%	12	late 1st-4th
	Bredon Hill	35838	E	5639	23.6%	107,891	43.2%	19	1st-4th (2nd-3rd)
	Elmont Coppice	34855	E	836	3.5%	15,135	6.1%	18	1st-4th (2nd-3rd)
	Elmont Field	35839	E	1110	4.7%	12,301	4.9%	11	1st-4th (2nd-3rd)
	Nettlebeds Field	35840	E	134	0.6%	1910	0.8%	14	1st-4th (2nd-3rd)
	Overbury	35841/ 35842	E	11,094	46.5%	65,024	26.0%	6	2nd-4th
Subtotal				18,874	79.1%	203,013	81.3%	11	
SWAG	Baughton	30567	F	53	0.2%	463	0.2%	9	?2nd-?4th
	Broadway	34322	F	1728	7.2%	13,408	5.4%	8	2nd-4th
	Defford	30370	F	206	0.9%	1744	0.7%	8	1st-4th
	Eckington	05900	F	141	0.6%	1939	0.8%	14	2nd-3rd
	Eckington	05901	F	49	0.2%	679	0.3%	14	2nd-3rd

Collection	Site Name	HER ref (WSM)	Type	Qty	% Qty	Wt (g)	% Wt	Av Wt(g)	Date range (main date)
	Eckington	05902	F		0.0%		0.0%		
	Eckington	05903	F	28	0.1%	114	0.0%	4	late 3rd-4th
	Eckington	05904	F	32	0.1%	405	0.2%	13	1st-4th (2nd-3rd)
	Eckington	05905	F	165	0.7%	2044	0.8%	12	1st-4th (2nd-3rd)
	Eckington	05906	F	6	0.0%	102	0.0%	17	2nd-4th?
	Eckington	05907	F	6	0.0%	74	0.0%	12	late 1st-4th
	Eckington	05908/9	F	751	3.1%	12,332	4.9%	16	late 1st-4th
	Eckington	07281	F	144	0.6%	1236	0.5%	9	1st-4th (2nd-3rd)
	Eckington	07582	F	280	1.2%	1517	0.6%	5	late 1st-4th
	Eckington	35844	F	12	0.1%	346	0.1%	29	2nd-4th
	Eckington	32286	F	563	2.4%	2983	1.2%	5	late 1st-4th
	Evesham, Ponderosa	35834	F	361	1.5%	2971	1.2%	8	2nd-4th
	Great Comberton	30360	F	9	0.0%	61	0.0%	7	late 1st-4th
	Great Comberton	31634	F	30	0.1%	170	0.1%	6	2nd-3rd
	Hawford	28767	F	120	0.5%	461	0.2%	4	late 1st-4th
	Kemerton	28780	F	13	0.1%	128	0.1%	10	2nd-4th
	Murcot	35828	E	41	0.2%	837	0.3%	20	late 1st-4th

Collection	Site Name	HER ref (WSM)	Type	Qty	% Qty	Wt (g)	% Wt	Av Wt(g)	Date range (main date)
	Pensham	34238	F	18	0.1%	188	0.1%	10	2nd-3rd
	Pirton	29550	F	161	0.7%	1663	0.7%	10	late 1st-4th
	Wick, Glenmore Farm	35845	F	19	0.1%	270	0.1%	14	late 2nd-3rd
Subtotal				4936	20.7%	46,135	18.5%	9	
Totals				23,855		249,824			

Table 69 Summary of the Roman pottery by collection/site (E = excavation, F = fieldwalk)

7.3 Sources of pottery

In many respects the assemblages reflect a similar range of sources to those noted on other Roman sites in Worcestershire. All assemblages are dominated by Severn Valley ware, predominantly oxidised, though exact proportions varied between sites. Severn Valley ware therefore represents the bulk of the storage jars and bowls used on the sites studied, along with tankards. Tubby cooking pots from the Malvern kilns were found in many assemblages, and wheel-made Malvernian copies of BB1 cooking vessels. Cooking vessels in Dorset BB1 were found in all the excavated assemblages, in varying proportions, but not all the fieldwalked assemblages. The latter probably reflects the much smaller size of the fieldwalking assemblages, and perhaps the relative difficulty of spotting dark sherds of BB1 in the ploughsoil. Table wares included samian from south, central and east Gaul; Nene Valley ware; South West colour-coated ware from Wiltshire, Hadham ware from Hertfordshire, and occasional other imports. Mortaria was predominantly from Oxfordshire, with vessels from Mancetter/Hartshill, Wroxeter and Gloucester also represented. Only the excavations at Overbury (WSM 35841/2) and Bredon (WSM 35838) produced amphorae, mainly Baetican (ie Spanish) Dressel 20.

There are some differences in the proportions of various wares in these assemblages and those noted further north, for example in Worcester. In Worcester, for example, the Mancetter/Hartshill kilns in Warwickshire are the most common source for mortaria (Darlington and Evans 1992, 55; Bryant and Evans 2004, 268), whereas in these assemblages Oxfordshire products are most common. This is something that could be explored more in future syntheses.

7.4 Site status

An attempt was made to assess the status of each site. This was based on the types of vessels represented, ranging from basic storage jars and cook pots to tables wares, mortaria and amphorae which, arguably, reflect a more 'Romanised' life style. The level of access to wider trade networks was also taken into account, based on the range of more widely traded wares in the assemblage. It was difficult to draw meaningful conclusions from the small fieldwalking assemblages. The Defford assemblage (WSM 30370) is noteworthy for including a samian Ritterling 13 ink well. This suggests some level of literacy amongst the occupants of the site, though there was nothing else in the assemblage to indicate a particularly high status site. None of the other fieldwalked assemblages produced anything exceptional, though most showed access to a range of pottery sources.

Amongst the excavated assemblages, the assemblage from Bredon Hill (WSM 35838) was thought to be moderately diverse, raising it above a purely rural status but not approaching the level of diversity seen in urban centres such as Wroxeter and Gloucester (Jane Timby, this volume). The assemblage included several unusual pieces: a sherd with graffiti, a crudely made face-pot, and a bowl with vertical fluting, possibly imitating a glass pillar-moulded bowl. The relatively high proportion of samian in this assemblage was thought to reflect a bias in finds collection or retention, though other imported fine wares and amphorae were also present. Decorated samian forms (Dr 37 and Dr 30), indicative of a higher status site, were moderately well represented in the group, despite the fact that the actual decorated sherds appeared to have been removed from the collection. This marks a contrast with the other excavated assemblages, which produced predominantly plain samian. Though the absence of decorated or stamped samian in the other assemblages studied raises the possibility that nay such pieces had been removed for study.

7.5 Assessment of fieldwalking data associated with features detected by non-invasive fieldwork techniques

One of the objectives of the project was to improve understanding and interpretation of fieldwalking assemblages in aggregates extraction areas. This was to be achieved through linking assemblages to cropmark sites, where possible, and assessing variations in the composition and character of selected surface assemblages in relation to the underlying

features. However, the quality of the records has severely limited the degree to which this aim could be met.

Ten sites associated with features known through site prospection were walked in grids (Table 70). For six of these a detailed plan of the grid survives, the finds have been marked with grid-square data, and this information has been recorded in the post-fieldwork database (group 1; Table 70). However, all but one of these sites were considered unsuitable for this stage of analysis, either because the fieldwalking data was insufficiently intact, or the overall quantity of finds spread seemed too low (ie maximum sherd quantities being less than about 10 sherds per grid).

Group	Site name	WSM ref	Cropmark	Fieldwalk grid	Grid spatially located	Finds marked with grid	Comments
1	Broadway, Smallbrook Farm	34322	Yes	Yes	Yes	Yes	APs Good rectified plot of cropmarks
	Defford	30370	Yes	Yes	Yes	Yes	geophysical survey
	Evesham, Ponderosa	35834	Yes	Yes	Yes	Yes	?AP not found
	Great Comberton	31634	Yes	Yes	Yes	Yes	AP
	Kemerton	28780	Yes	Yes	Yes	Yes	APs
	Wick, Glenmore Farm	35845	Yes	Yes	Yes	Yes	APs
2	Baughton	30567	Yes	Outline only	Yes	Yes	APs (Roman Road)
	Hawford	28767	Yes	Outline only	Yes	Yes	APs
	Pensham	34238	Yes	Outline only	Yes	Yes	AP
	Eckington	07582	Yes	Yes	Yes	No	WSM 05487 - APs not found
3	Eckington	05900	Yes	No			AP recorded but not found
	Eckington	05901	Yes	No			AP recorded but not found
	Eckington	05903	Yes	No			Earthwork

4	Great Comberton	30360	No	Yes	Yes	Yes	-
	Pirton	29550	No	Yes	Yes	Yes	-
	Eckington	05905	No	Yes	Yes	No	-

Table 70 Summary of sites with systematically fieldwalked assemblages associated with features recorded by non-intrusive techniques (Group 1 = feature plot and complete finds locational data; Group 2 = feature plot and incomplete finds locational data; Group 3 = feature plot and no finds locational data)

7.5.1 Group 1 sites (Table 70)

From the Group 1 sites only Defford (WSM 30370) was considered suitable for further study, in order to assess the potential for more detailed spatial analysis of the finds in relation to features, the latter revealed in this case by geophysical prospection (GSB 2000; GSB 2002). The fieldwalking grid was located over the area of the geophysical survey, to locate finds associated with the interpreted geophysical results. For the purposes of this report, the geophysical survey results and fieldwalking grid were overlaid on an Arcview base map, in Adobe Illustrator. Two plots were produced, one based on sherd count (Fig 2) and one on average sherd weight (Fig 3).

Figure 2

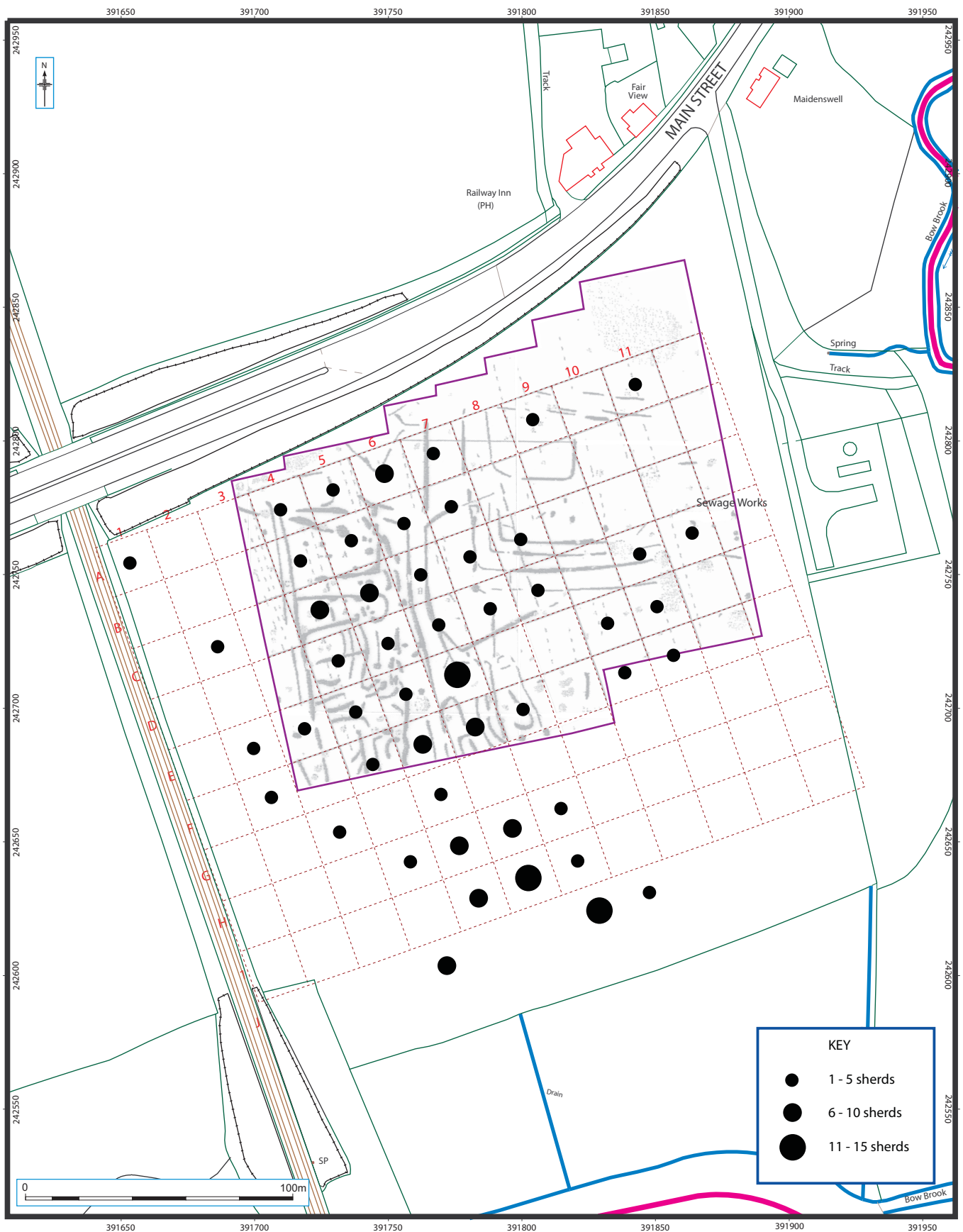
The plot by sherd count shows a broad relationship between pottery finds and the buried features indicated by geophysical survey, with the highest concentration coming from E6. It also seems likely, based on the finds evidence, that there are further buried remains to the south of the geophysical survey area, in rows H, I and J, with particular concentrations being found in squares I6 and J7. The pottery find-spots, however, cannot be precisely located; as they were recorded on site by 20 x 20m grid square. It is problematical, therefore, to relate any of the finds to any specific features. Overall the quantities of pottery recovered are not great; the highest concentration, in E6, was 15 sherds, and 22 grid squares produced only one or two sherds, and so a particular focus of occupation could only be suggested for the area of E6.

Figure 3

The distribution by average sherd weight showed variation across the site. This could reflect the presence of archaeologically better preserved deposits (eg material derived from primary fills), but could equally reflect more recent disturbance of the underlying remains bringing fresh, and thereby larger, sherds to the surface. The highest average sherd weight, 74g, came from D6. This represents only 3 sherds, including a substantial rim weighing 186g. The other grids with relatively high average sherd weights were also biased by the presence of individual sherds: H5 produced eight sherds, including a complete profile weighing 108g, E5 produced two sherds, one of which weighed 30g, and I7 two sherds, including a sherd weighing 36g. However, such small samples were generally too small for such detailed analysis to be very worthwhile, though the incidence of such large sherds probably did favour the possibility of fresh material still being brought to the surface through deeper ploughing.

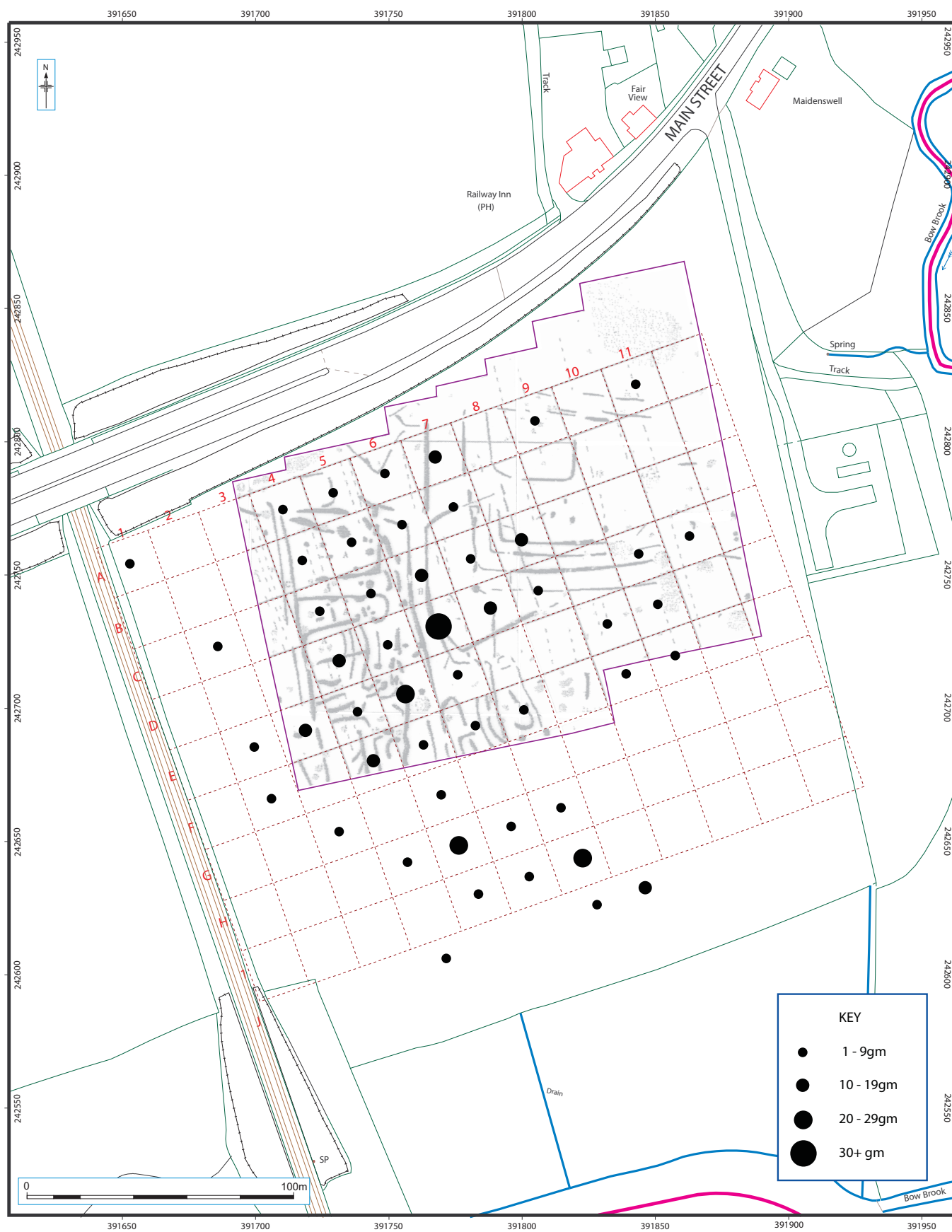
7.5.2 Groups 2-3 sites (Table 70)

For three of these ten sites (Group 2; Table 70), the finds had been marked by grid reference but only an outline of the survey area survived, the grid layout having been lost. For these, it will not be possible to do any detailed spatial analysis. However, the survey areas can still be added as polygons to the HER record, accurately defining the activity from which these finds were recovered. A similar level of detail will be possible for one of the Eckington cropmark sites (WSM 07582). In this case a detailed plan of the survey grid survived, but none of the finds were marked with this information.



Defford (WSM30370): distribution of Roman pottery by sherd count

Figure 2



Defford (WSM30370): distribution of Roman pottery by average sherd weight

Figure 3

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Three of the Eckington cropmark sites (Group 3; Table 70) were not fieldwalked systematically using a grid. WSM 05900 and 05901 produced high concentrations of Roman pottery from walking on field boundaries. They are recorded as being near to a cropmark on an aerial photograph ‘taken by a friend of one of the survey team’, though this photograph has not been located (instead a rough location is sketched on a map). The finds from WSM 05903 were associated with an earth bank along the south and west side of the field, again roughly sketched on a map.

7.5.3 **Reflection on the potential for the association of fieldwalking data with plots derived from non-intrusive archaeological techniques**

A further project aim in relation to fieldwalking was ‘to support the development and implementation of this commonly used prospection technique’ (Jacobs and Jackson 2007, 5, section 1.5, objective 3). In recent years, the use of GIS to manage the archaeological resource has led to a greater requirement for accurate spatial data. At the same time, the increased use of GPS in the field has made this an easily achievable goal. However, the assemblages included in this project were not recovered with this level of accuracy in mind. At the same time, it is unfortunate that where a reasonable level of accuracy was recorded in the field, this information has sometimes subsequently been lost. One useful outcome of this project, therefore, is to illustrate:

- the need for adherence to appropriate methodologies to be applied in any future fieldwalking projects, in terms of collection and recording of finds and the spatial location of survey areas, and;
- above all the physical preservation of the survey data in its entirety for future use.

The former is easiest to define in that well developed methodologies exist for landscape surveys (eg Haselgrove *et al* 1985; Gaffney and Tingle 1989; Schofield 1991; Richards 1985; Gaffney and White 2007), and the consistent use of one or other of these would ensure future comparability between sites so essential for future studies. Likewise approachable guidelines also exist specifically for amateur groups (Steane and Dix 1978; Wass 1992). The physical preservation of the records is, however, more problematic, unless there is a closer liaison between vocational and avocational archaeologists, where the latter can take advantage of more routine archiving systems to perpetuate the data, though, whether resources would allow such a straightforward solution is equally problematic.

7.6 **Biases in collection**

The assemblages represent fieldwork undertaken by a variety of local groups over a considerable period of time; the earliest, Bredons Norton (WSM 35836) excavated in 1912, and the latest, Smallbrook Farm, Broadway, fieldwalked by SWAG in 2005 (WSM 34322). Over this period the aims and methods of fieldwork have evolved considerably, affecting collection/retention policies and the level of context information recorded. The principal value of these collections has been to date and, to varying degrees, characterise activity on the sites studied, with limited potential to study chronological changes through time. Many of the collections lack paper archives and have little or no stratigraphic information. Some of the excavated sites are unlocated, notably the Bredon excavations (WSM 35836, 35838), Murcot (WSM 35828) and Sedgeberrow (WSM 07517). The largest assemblage, from Overbury, came from well located sites, but all the finds have been amalgamated so all site and context information has been lost.

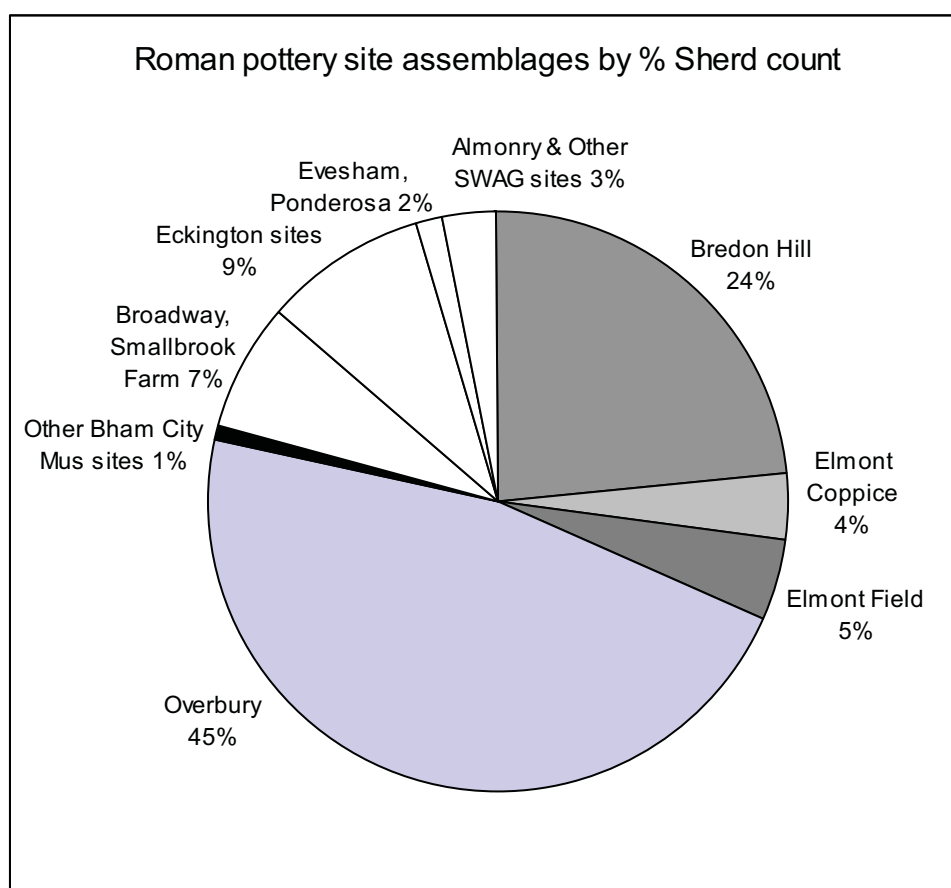


Figure 4 Roman pottery assemblages by % sherd count

The two largest assemblages came from the Birmingham Museum collections (Table 69; Fig 4); from Overbury Park (WSM 35841, 35842) and Bredon Hill (WSM 35838). There was evidence in the latter for a bias in the collection or retention of finds. Jane Timby notes the presence of a high proportion of larger and visually more attractive sherds, and an unusually high proportion of samian, leading to the conclusion that smaller, less diagnostic sherds had been discarded. Furthermore, the samian included almost no decorated or stamped sherds, raising the possibility that yet another level of selection had been made, removing these from the main body of the collection. Similar biases were noted in the Elmont Coppice assemblage (WSM 34855). This contained a high proportion of substantial sherds (average sherd weight 18g), which, if they were not from well-sealed features, would indicate selectivity in retention. Not all the excavated assemblages shared this problem. The material from Elmont Field (WSM 35839) was thought to be more representative, with an average sherd weight of 11g, and a mixture of larger and smaller pieces.

Similar biases were also evident in the fieldwalking assemblages. The original summary report on the SWAG fieldwork (Price 1985) notes variations between grid squares in one collection (WSM 07582), which is attributed to the varying experience/ability of fieldwalkers. One of the Eckington assemblages (WSM 05904) included a higher proportion of rims than would normally be expected. There were sometimes discrepancies between the number of sherds originally recorded by the fieldwalkers, and the number available for study, suggesting that pottery may have been removed at some stage in the interim; the Stage 2 assessment notes that some material was removed for a teaching collection (Jacobs and Jackson 2007). Where finds had been recovered in grid squares this information had usually not been marked on sherds or bags so this relationship had been lost, limiting the potential for spatial analysis. One of the Eckington assemblages (WSM 32286) had even lost all its locational information and so could only be attributed a general parish number on the HER.

Despite these limitations, detailed analysis of the assemblages addresses key project aims, and will contribute to wider regional studies. Through incorporation in the Worcestershire

HER, they add to the county dataset for Roman sites. In this way the results contribute to both cultural resource management in the county and academic research on Roman Worcestershire.

7.7

Conclusions

At the most basic level, the aim of this project was to record and make accessible data from a number of fieldwork assemblages that had never received detailed specialist attention; with the focus on assemblages associated with aggregate producing areas. The aims and objectives of the project can be summarised as follows:

- curatorial, contributing to the management of areas affected by aggregates extraction;
- research, contributing to other ALSF projects and the regional research frameworks;
- developing methodologies, understanding the character and interpretation of fieldwalking assemblages and their relationship with cropmarks;
- dissemination, by making data and interpretations available for researchers, museum curators and the public.

Detailed analysis of the assemblages included in this study has created new data, thereby making a valuable contribution to the HER. Most of the evidence in the HER for Roman sites comes from find spots, so fieldwalking finds recovered by amateur groups, like those included in this study, provide an important source of information. Opportunities to excavate rural sites are relatively rare; intrusive fieldwork is generally only undertaken when the archaeology is under threat. Where excavations have taken place, however long ago, there is a particular need, and responsibility, to incorporate the results in the county dataset. Rural settlement patterns in the county appear to be focussed on the gravel deposits of south and east Worcestershire (Lockett 2002), making this an area of particular interest for research. Typically, however, Roman sites in this area produce rather ephemeral archaeological remains, so interpretation is even more reliant on the artefacts recovered.

The main emphasis of the project is a curatorial one, concerned with an understanding of, and management of the archaeology of aggregate producing areas in the county. This defines the geographic scope of the project. The other main factor influencing the inclusion of these disparate assemblages is the fact that they were all unpublished. In discussing the results, therefore, it is unrealistic to directly compare this project with synthetic studies that bring together sites from geographic areas determined by broader academic research aims, such as The Wroxeter Hinterland Project (Gaffney and White 2007).

The original project aims included using each site assemblage to enhance the base-line information in the Worcestershire HER, the fieldwalking assemblages, as well as, arguably, excavated assemblages lacking a stratigraphic context, both making available data important as a contribution to the archaeological decision-making process (Hey and Lacey 2001, 23) by generally indicating the presence of sites and providing the dating evidence for them. There was less success interpreting the status of individual sites, though a couple of sites produced finds of interest in this respect (notably at Defford (WSM 30370) and a site on Bredon Hill, WSM 35838, though the latter is apparently now lost). For all sites summary tables of finds of all periods were produced in Stage 2, with more detailed information available for sites being included in this Stage 3 analysis. These have been specifically designed to facilitate the integration of site data into the HER. Even the small fieldwalking assemblages make a contribution, as in terms of the decision-making process it is important to define sites that produce very little archaeological material (eg at Great Comberton, WSM 30360), as well as those which appear archaeologically rich, and broad period dates are better than no date at all. In addition, fieldwork on aggregate sites in this area has shown that relatively small fieldwalking assemblages can belie the presence of extensive and significant buried remains (cf Jackson 2005, 6). This problem has been noted elsewhere in the county, and at Upper Moor, Pershore, for example, a build-up of colluvium from an adjacent slope had sealed the archaeological deposits (Vaughan and Jackson 2003), resulting in a lack of surface finds while at the same time improving the preservation of the archaeological deposits. None of the fieldwalked sites included in this study have subsequently been excavated.

Excavations have recently been undertaken on a separate Eckington site by Birmingham Archaeology. These revealed an Iron Age ring gully with associated pits, and a complex sequence of Romano-British features, including a large boundary ditch, a well and a stone-lined pit (work in progress). Given this evidence for Iron Age activity it is interesting that fieldwalking produced only a single sherd of Iron Age pottery. It may be that the fieldwalked sites do not have Iron Age activity. Alternatively, fieldwalking may have failed to reveal the presence of underlying Iron Age features, as at Wyre Piddle (Cook and Ratkai 1995; Griffin *et al* forthcoming). Other differences are apparent between the fieldwalked and excavated assemblages; a number of the former produced later Roman pottery not represented in the latter. It may be that focuses of activity shifted through time, or that the upper levels of sites have been lost to the plough and incorporated in the ploughsoil (D Hurst, pers comm).

As noted in the project outline, the paucity of paper archives and consequent lack of stratigraphic information precluded detailed analysis of individual sites, even for larger assemblages from located fieldwork. The large excavated groups do, however, give the best indication of site status and the range of pottery supply sources available. All the assemblages studied come from rural sites. The importance of studying such sites has been emphasised in national and regional research frameworks (Willis 1997; Booth and Willis 1997) and synthetic studies (Evans, J, 2001, 35). The Research Framework for Roman Worcestershire (Lockett 2002) identifies assemblages from the Vale of Evesham as of particular interest to ceramic studies in the county, reflecting a different range of sources to those found further north in Worcestershire. In this, and other respects, this is an area that shows more affinities with the Cotswolds area, to the south. The quantified data above support this view, and will contribute to future studies of social and cultural identity, another theme highlighted in regional research frameworks (Booth and Willis 1997; Evans, C J, 2002). The larger excavated and fieldwalked assemblages in particular provide useful comparative data for the Beckford Roman assemblage, being brought to publication as part of another ALSF project.

8. The archive

The digital archive (project reports and databases) will be placed on the ADS website, and the collections will be returned to their respective museums. Additionally data will be downloaded to the Worcestershire HER through the data tables in this report.

9. Acknowledgements

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Derek Hurst managed Stage 3 of the project reported here, and edited this report.

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11. **Appendix 1 Petrological analysis (by R Ixer)**

11.1.1 **Neolithic grooved ware from Broadway**

The sherd is from a coarse, fossil shell-tempered pot, which was excavated in the mid 20th century from a site near Broadway (WSM 10944), and was previously published by Piggott (1936, fig 7, nos 6, and 8).

Macroscopical description

The pot is well-made and coherent. The surface is a medium grey (N5 Geological Society of America rock-color chart) colour with planar to curved, white clasts up to 4mm in diameter and very rare, 1mm diameter, red rock clasts.

The sliced surface shows the pot to have fired to a medium grey (N5) with a 2mm thick, yellowish grey (5YR 7/1) inner rim. Rare, linear, white, shell debris up to 3mm in length is present accompanied by very sparse, up to 1mm long, black material.

Thin section

The pot has a black (N1) core with a 1mm wide, light brown (5YR 5/6) rim. The pot carries 4mm x 0.5mm size shell fragments and 1mm diameter, rounded, silty limestone clasts.

Microscopical description.

Petrographically the pot is a clean clay with scattered, small, angular, quartz grains within a restricted size range and no white mica.

Larger, rounded, monocrystalline quartz grains showing a restricted size range are minor in amount but are more abundant than very rare, fine-grained sandstone clasts. Plagioclase and microcline feldspars occur in trace amounts and are mainly unaltered.

The main non-plastic components are fossils dominated by well-preserved bivalve shells (?oyster) plus trace amounts of echinoid debris and a large foraminifera; trace amounts of brown, phosphatic material ?bone/spines are also present. Some of the large shell material is enclosed within micritic limestone and others are cut by thin sparite veinlets. Subangular to subrounded, silty limestone clasts comprise angular quartz, ?potassium feldspar and small fossil debris in a calcite matrix, the quartz is very similar in size and shape to the small, angular quartz in the main clay.

Locally iron-rich cutans partially infill void spaces.

Manufacture

The fossils are Mesozoic in age and raw material for the pot could have come from Jurassic rocks that crop out locally.

The pot is far more coherent than the grooved ware sherds from Clifton Quarry (these were very friable) and differs from them in many respects. This pot is tempered, whereas most of the Clifton pots were not.

This is an unusual Neolithic pot in being shell tempered rather than rock tempered.

11.1.2 **Roman fine grey ware from south Worcestershire**

The pot is sparsely ?tempered or untempered (sample reference: WSM 35839, B38 TT 40 (i) Elmont Field; Birmingham Museum 1990 A748). This fabric has been recorded as WHEAS fabric 14 (eg at Elmont Field; see Section 4.5 above).

Macroscopical description

The surface colour is a moderate light grey (N7 Geological Society of America rock-color chart). The cut surface shows a 3mm thick, light grey (N7) core within a 2mm thick, very light grey (N8) rim. There is very little non-plastic material and that is variable; voids up to 1.5mm in diameter are rare.

Thin section.

The pot has fired to a moderate olive grey (5Y 4/6) within a 1mm wide, light olive grey (5Y 5/6) rim. Pale clasts up to 0.5mm in diameter are rarer than similar size rounded, darker 'limonitic' clasts that may be mudstone. Up to 1mm long, angular voids, some with black rims are present.

Microscopical description.

The pot is made from a fine clay with an even but sparse distribution of non-plastics comprising subangular, single grains of quartz some showing strained extinction, plus minor amounts white mica and trace amounts of potassium feldspar, zircon, blue-green tourmaline and ?garnet. Rock clasts are rare but include rounded, micritic limestone, 300mm long, shell debris, polycrystalline quartz/metamorphic quartz, micaceous siltstone, chert/fine-grained acid volcanics and fine-grained sandstone with microcline in it. Rounded to subrounded, limonite-rich areas carry quartz and are larger than single grains; these may be dried clay pellets or mudstone.

Very locally gypsum some with anhydrite inclusions infill void spaces.

Manufacture

The pot is made from a natural, fine-grained silty clay or a cleaned clay. The non-plastic are minor in amount and varied and so unlikely to be temper. The presence of rare fossil debris might suggest local Mesozoic clay as the raw material.

11.1.3 **Roman fine grey ware from south Worcestershire**

The pot is a densely gritted pot with quartz sand (sample reference: WSM 35839 B38 TT 40 (1) Elmont Field; Birmingham Museum 1990 A748). This fabric has been recorded as WHEAS fabric 14 (eg at Elmont Field; see Section 4.5 above).

Macroscopical description

The surface colour is a very light grey (N8 Geological Society of America rock-color chart) where not soil-stained. The cut surface shows the pot to have fired to a uniform light grey (N7) core within a 2mm thick, very light grey (N8) rim. There is very little non-plastic material visible except for very rare, 1mm diameter, rounded rock clasts. Linear voids are up to 1mm in length.

Thin section.

The pot has a medium light grey (N6) core within a 1mm thick, light olive grey (5Y 6/1) rim. The fabric is very uniform with 0.1mm diameter, quartz temper accompanied by very rare, 0.4mm diameter, black clasts. Voids are up to 1mm in length.

Microscopical description.

The pot is monolithic, has an extremely uniform fabric and is densely packed with monocrystalline, angular quartz showing a very restricted size range. Minor to trace amounts of microcline, plagioclase, untwinned potassium feldspar, white mica and zircon plus rare, rock fragments including chert/fine-grained acid volcanics, quartzite and sandstone accompany the quartz.

Rounded, brown, organic matter that may be collophane or plant (?spores) are present in minor amounts.

Manufacture

The pot is a combination of a clean (or ?cleaned) clay and very fine-grained quartz sand and is tightly controlled. It is extremely well made and homogenous but locally siltier areas in the main clay occur showing slight inhomogeneities in the mixing.

11.1.4 **Roman BB1 variant from south Worcestershire**

The pot is a quartz-tempered pot (sample reference: (WSM 32078 context 402; analogous to fabric recorded at Overbury; see Section 4.7 above). This fabric has been recorded as WHEAS Fabric 149.

Macroscopical description

Sherd. The surface colour is black (N1 Geological Society of America rock-color chart) and has 0.5mm diameter, quartz grains adhering to it. Where the sherd is broken naturally it shows a very strong linear (laminated) fabric.

The cut surface shows that the pot has fired to 8mm thick, pale yellowish brown (10YR 7/2) core with a 2mm thick, moderate reddish orange (10R 5/6), inner rim. The clay carries rare, small, white clasts 0.5 – 1mm in diameter together with dark limonite-rich areas and rare, black clasts up to 0.5mm in size. All clasts are rounded.

Thin section 1.

The pot has fired to a dark yellowish orange (10YR 5/6) core with a 1mm thick, black (N1), outer and 1mm thick, light brown (5YR 5/6), inner rim. Angular quartz is up to 1mm in diameter and mudclasts up to 2–3mm in size and 2mm long, linear voids are more common than rock clasts

Microscopical description 1

The pot shows a bimodal distribution in its non-plastics. The clay carries very fine-grained quartz and white mica laths together with rare plagioclase. Larger, rounded quartz grains show strained extinction and are the most abundant non-plastic.

Rounded limonite-rich areas including some that are opaque carry angular quartz grains. Clay-rich areas with differing firing colours to the main clay carry fine-grained white mica and are interpreted as mudstone clasts.

Rock clasts are rare and varied; they include polycrystalline quartz including rounded 'quartzite', cherts/fine-grained acid volcanics, siltstone/metasiltstone, sandstone and rare altered feldspathic lava and micrite.

Thin section 2

The pot has a 1cm thick light brown (5YR 6/6) core with a 0.5mm thick, black (N1), outer and 2mm thick, light brown (5YR 5/6), inner rim. Mudclasts up to 5mm in size and 2 - 3mm long, linear voids are more common than rock fragments. Angular quartz is up to 1mm in diameter.

Microscopical description 1

The pot shows a bimodal distribution in its non-plastic with larger monocrystalline quartz and rock fragments in a fine clay matrix carrying very fine-grained quartz and white mica laths plus rare, rounded potassium feldspar (?orthoclase), microcline, zircon and deep green tourmaline. Larger, rounded quartz grains show strained extinction and are the most abundant non-plastic component.

Rounded, limonite-rich areas and very large, laminated mudstone clasts are present.

Rock clasts are rare but very varied and include polycrystalline quartz including rounded, stretched quartz and 'quartzite' some carry muscovite laths; cherts/fine-grained acid volcanics; phyllite; sandstone; granophyre and quartz-potassium feldspar intergrowths.

Manufacture

The pot is only lightly gritted but shows signs of tempering and comprises a clean quartz sand added to a slightly dirty clay. The range of acid igneous rocks in the clay is unusual. There is little useful provenance data in the petrography.

12.

Appendix 2 Concordance of recorded pottery fabrics

WHEAS fabric code	NRFRC*	Description
3	MAL REA	Malvernian metamorphic
3.1		handmade Roman Malvernian
3.2	MAL RE A	Malvernian metamorphic
4.1	MAL REB	Malvernian limestone
4.3		fossil shell
4.4		shell and sand
4.6		oolitic limestone and sand
5.6		ironstone and sand
12	SVW OX	Severn Valley ware oxidised
12.1	SVW RE	Severn Valley ware reduced
12.2		organic-tempered SVW oxidised
12.3		organic-tempered SVW reduced
12.4		SVW variant
12.6		SVW variant
13		sandy oxidised
14		fine grey ware
15		medium grey sandy ware
16		Wheel-made grog-tempered
16.1	SAV GT	Savernake grog-tempered ware
16.2		handmade grog-tempered
17	PNK GT	pink grog-tempered ware
19		wheel-thrown Malvernian
20		white-slipped oxidised/reduced
22	DOR BB1	Dorset Black-burnished ware
23	ROB SH	Midlands shelly

28	LVN CC	lower Nene Valley colour-coat
29	OXF RS	Oxon red brown colour-coat
30	OXF WS	Oxon white colour-coat
31	SOW CC	Brown colour-coat (South-west)
32	MAH WH	Mancetter/Hartshill mortaria
33.1	OXF WH	Oxon white ware mortaria
33.2	OXF WS	Oxon white slipped mortaria
33.3	OXF RS	Oxon colour-coated mortaria
37		?Gloucester mortaria
38	OXF WH	Oxon whiteware
39	OXF BWH	Oxon burnt whiteware
40	OXF PA	Oxon parchment ware
41		unprovenanced white ware
42.1	BAT AM	Baetican amphora
43		samian (burnt)
43.1		South Gaulish samian
43.2		Central Gaulish samian
43.3		East Gaulish samian
45		roughcast local ware
98		miscellaneous Roman
114		mica dusted ware
149		Worcs BB1 copies
151	SOW OX	South-west oxidised
151.2	SOW WS	South-west white-slipped ware
154		Oxon grog-tempered storage jar
97		miscellaneous prehistoric
98		miscellaneous Roman
OO		small sherds/crumbs

*See Tomber and Dore 1998 for explanation of fabrics

13. **Appendix 3 Human bone from Evesham (by C Lythe)**

This report refers to a selection of human bones from the archaeological group of the Evesham Historical Society (EHS), which were received for reporting via the Almonry Museum. The provenance of these remains are uncertain, it is however suspected they emerged during a 1976 dig of the Evesham Abbey gardens, the site of interest being a midden heap containing 17th-18th century rubbish.

The unstratified nature of the bones means they offer little in the way of useful archaeological information about the site. There are, however, a number of well-preserved skeletal elements, with some interesting features. These elements are described below.

Cranial vault

Partially complete with the frontal, parietal and occipital bones present. The superciliary arches (brow ridges) and the external occipital protuberance are unremarkable in size which is indicative of a female.

Cranium

Associated with mandible A.

Mandible A

Partially complete with the right coronoid process, ascending ramus and horizontal ramus intact. Only 3 teeth remain *in situ* of their alveolar sockets, RC1, RP4, RM2. There are a number of open sockets which show no signs of bony change indicating post-mortem tooth loss. The socket which would have housed the RP3 is elongated with some marginal re-absorption at the base, this is indicative of a periapical abscess. The sockets which would have originally housed RM1 and RM3 are almost entirely filled in by bony growth indicating these teeth were lost during life allowing for the alveolar sockets to 'heal.' There is no precise way to gauge at what time prior to death these teeth were shed as individual bone re-modelling/modelling is highly variable between individuals. However the surface of the RM3 is uneven with a grainy texture, evidence that bone re-modelling was still active at the time of death, it is therefore, possible to conclude that its tooth loss preceded that of the RM1.

Cervical vertebrae (x2) and lumbar vertebral body

There is evidence of osteoarthritis of the spine, which is a very prevalent condition both in modern and archaeological populations, and the most commonly observed pathology in human skeletal remains (Ortner 2003) There is marked erosion of the vertebral bodies and extensive marginal lipping (osteophytes) The joint surfaces of the vertebrae are separated by fibrocartilage discs, constant movement and compression of the discs throughout life account for the aforementioned pathology.

Proximal humerus

Partially intact left humerus, with head and partial proximal shaft present. Of particular interest is the above average prominence of all major muscle attachment and insertion sites. This is indicative of an individual who required considerable upper body strength in life, perhaps due to their occupation, and is usually associated with male individuals. There is evidence of active bone remodelling at many sites of muscle attachment which is consistent with osteon response to increased muscle mass. The rough, irregular surface of the new cortical bone in these areas suggests this individual maintained a regular pattern of muscular exertion in their upper body right up until death, which prevented the completion of the remodelling process.

Proximal ulna (A)

Partially intact left ulna, with trochlear notch and partial proximal shaft present. Marginal lipping of the trochlear and radial notches (located laterally in relation to the trochlear notch) suggests prolonged use of these articular surfaces and a steady erosion of their protective cartilage during life. This is consistent with early onset osteoarthritis. The presence of this, coupled with below average cortical bone thickness of the ulna shaft and unremarkable muscle attachment sites (indicative of low muscle mass/wastage), is consistent with what

might be expected in an older individual (50 yrs +). See proximal right ulna (B), belonging to a younger individual, for comparison.

Proximal tibia

Partially intact right tibia, with tibial plateau, proximal shaft and partial distal shaft present. The overall thickness of the cortical bone and size of the muscle attachment sites are above average, indicating an individual who was well-built and muscular in life (possibly linked to their occupation) and almost certainly male. See distal right tibia for comparison.

Of particular interest is an area on the medial proximal shaft where the cortical surface is raised and displays an irregular striated pattern. This is consistent with periostitis, an inflammation of the periosteum, a tissue layer which lies on the outermost surface of the cortical bone. In this instance a lack of porosity in the affected region would suggest a healed periosteal lesion. The prominence of the lesion would, however, indicate that this had occurred not long before death, as the normal processes of bone remodelling would have eventually smoothed this area out.

Periostitis is most often the result of trauma or infection. Interestingly one of the most common sites of periostitis in archaeological skeletons is the shaft of the tibia. It does, however, remain unclear why this is. Ortner (2003) speculates that the periosteal reaction in syphilis forms on bones that tend to be nearer the skin surface, such as the tibia and cranial vault. It is also true that bones near the skin are exposed to direct trauma more than bones protected by overlying muscle.

Pelvis

Partially complete right innominate, with ilium, acetabulum, ischium, and auricular surface present. The greater sciatic notch is clearly visible exhibiting a tight 'V' shape which is strongly indicative of a male individual.

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14. **Appendix 4 Lithic analysis, Hoarstone Farm, Trimpley Top, Worcestershire (WSM 38560) (by A Mora-Ottomano)**

Introduction

An archaeological prospection carried out by Lucille Scott during the 1980s, consisting of a random field walking surface collection, recovered 242 worked stones from Hoarstone Farm, Trimpley Top, Worcestershire (NGR: SO 790 771). The assemblage contains a small number of diagnostic dateable artefacts. Indeed, a substantial number of the analysed lithics exhibit manufacturing characteristics associated with Mesolithic stone tool typology. There are also some lithics of Neolithic and Bronze Age dates. Because the lithic scatters are unstratified, it is assumed that they represent only a portion of some prehistoric activities. Post-depositional movement may have had an effect on its wider redistribution. Although the state of the assemblage is generally patinated, the lithics do not exhibit clear signs of weathering. This suggests that the lithic implements have not moved very far horizontally from their original position, and thus confirms the existence of prehistoric occupation on site. For detailed records of the lithics see appendix in archive.

Geology and archaeological background

The site is located in the Severn valley, *c* 2 miles north-west of Kidderminster, in Worcestershire, and lies at a height of approximately 100m AOD. The local soils are of the Middleton Association, which are seasonally wet, reddish fine silty and fine to coarse loam. The underlying geology consists of Keele Beds (Ragg *et al* 1984). The area roundabouts is used extensively for agriculture.

There is archaeological evidence for occupation in this area assigned to prehistoric periods. The best evidence comes from the adjacent site of Lightmarsh Farm, which produced a substantial lithic assemblage of Mesolithic date with associated negative features and organic remains dating to the 8th millennium BC during a watching brief on a pipeline (Jackson *et al* 1996: 97-106). Surface finds have also been recovered from the actual site of Hoarstone Farm (HWCM 8159), including a core, a microlith and a microburin (Jackson *et al* 1994: 3); and a backed point (WSM 15301). Other archaeological interventions in the vicinity have identified lithic artefacts of various dates ranging from the Mesolithic to the Bronze Age (*ibid*).

Aims

This study attempts to establish the *chaîne opératoire* (operational sequences), concept first formulated by Leroi-Gourhan (1943). This approach examines the different stages of lithic exploitation. The sequence begins with the acquisition of raw material, followed by the reduction of nodules and cores, the removal of blanks from cores, and the manufacture and use of tools and finally, the discard of the artefacts (Bar-Yosef *et al* 1992). An addition to these sequences is the post-depositional disturbance of the site and even excavation strategy, as these will have an effect on our understanding of the *chaîne opératoire*. This lithic analysis hopes to characterise the type of site, and to determine the lithic techno-complexes, functionality and chronology.

Method

The worked stones recovered during fieldwalking were subject to metrical and attribute analysis. A range of attributes was recorded following standard systems (eg Inizan *et al* 1992) to explore knapping technology. These relate to the characteristics of technological category, tool type, portion, reduction sequence, raw material, colour, condition and type of butt. The assemblage was examined under a x10 magnification hand lens. All the worked lithics were weighed individually in grams (g). Dimensions were measured in millimetres, and were divided into length (L): the distance between the proximal and distal ends; width (W: the maximum distance between the two sides of the artefact measured perpendicular to the length); and thickness (T: the maximum thickness of the artefact perpendicular to the length). A comments field was used to record various attributes such as thermal alteration, post-depositional breakage, retouch, wear, scar direction, type of bulb, and blank termination failures (ie non-feather termination). The micro-debitage was not recorded.

For a detailed record of the assemblage see Mora-Ottomano (2007) and the digital archive, where any individually identified pieces referenced in text are also listed.

Lithic assemblage

The lithic assemblage consists of 242 worked stones whose total weight is *c* 900g. They are divided into 18 tools (7%), 27 cores (11%), 7 blades (3%), 15 bladelets (6%), 142 flakes (59%), 2 spalls (<1%), 1 microburin and 30 general micro debitage (13%) (Tables 1-3). There are also 144 natural flint gravels (*c* 870g in total). Some of these might have been utilised, but are severely damaged to recognise any technological attribute. Virtually all of the worked stone recovered from the site is flint. The only exceptions to this pattern are a scraper of white fine grained chert, and two bladelets, a blade and five flakes of whitish cherty flint. The pieces are generally in moderate to fairly good condition, although, as they were found on the ploughsoil surface, some damage is apparent. The assemblage includes 51% whole pieces, the rest of them are 21% distal ends, 14.5% proximal ends and 13.5% are medial portions. These frequencies may suggest that approximately 50% of the debitage was discarded after breakage. Dorsal coverage of cortex is found amongst 66 pieces, which relates mainly to secondary reduction sequence (24%) and fewer pieces of primary stage (3%). Artefacts of tertiary reduction sequence predominate with 73%. These frequencies indicate that most of the roughing out of flint nodules took place elsewhere.

	Tool	Core	Blade	Bladelet	Flake	Spall	Totals
Primary		1			6		7
Secondary	5	13	3	6	30	1	58
Tertiary	13	13	4	9	106	1	146
Totals	18	27	7	15	142	2	211

Table 1 Reduction sequence (excluding micro debitage)

	Tool	Blade	Bladelet	Flake	Spall	Totals
Proximal	2		1	24		27
Medial	1	1	2	21		25
Distal	4	2	6	25	1	38
Whole	11	5	7	72	1	96
Totals	18	7	15	142	2	186

Table 2 Portion of artefacts (excluding cores)

	Tool	Blade	Bladelet	Flake	Spall	Totals
Cortical	1			4		5
Flat	4	3	1	51		59
Facetted	4	2	3	15		24

Dihedral				7		7
Punctiform				5		5
Winged		1		10		11
Linear	1					1
Totals	10	6	4	92		112

Table 3 Type of butt (when present)

Microolith

Two obliquely blunted microliths have been identified in the assemblage. Artefact no. 1 is a nearly whole bladelet with the butt missing and has direct total abrupt retouch on the left lateral edge and partial right to form a point, and it falls in the type B2 as classified by Clark (1934). Artefact no. 2 is the tip of an obliquely blunted microlith type A2, with right direct and left inverse abrupt retouch. These tools are characteristic of early Mesolithic industry.

Point

Two points are included. Artefact no. 3 is a broken bladelet with distal right direct abrupt retouch and shows sign of impact wear. Artefact no. 5 is a projectile point made on a transversely snapped blade with bilateral abrupt retouch. The snapped end was also retouched in order to allow hafting, and it also has wear impact traces. Blade segments are found on many Mesolithic sites (Palmer 1999) and this has all the characteristics to assign it to such a date.

Scraper

Six scrapers have been recognised (artefact nos 12, 15, 16, 18, 19 & 20). Artefact no. 12 is a convex end scraper on a white chert blade and it may date to the Mesolithic/Early Neolithic (eg Mithen 1999: 39-40; Radley and Mellars 1964: 1-24; Wymer 1977). No 15 is a side scraper with direct abrupt retouch. No 16 is a small discoidal scraper and may be Bronze Age in date. Nos 18 and 19 are Bronze Age button/thumb nail type. Finally no 20 is a side scraper possibly from an exhausted core.

Notch

There are six notched flakes (nos. 4, 6, 7, 8, 9 & 10). Most of the notches were executed employing abrupt careful retouches, rather than creating them using Quina or Clactonian methods (Inizan *et al* 1992).

Knife

Artefact no. 14 is a proximal portion of a naturally backed knife (*couteau à dos naturel*; Bordes 1979), on a bladelet with use wear.

Piercer

Artefact no. 27 is a distal spall with distal left direct thin retouch and shows evidence of having been used in a rotating manner.

Miscellaneous retouched

A total of eight retouched artefacts have also been identified. This classification corresponds to the debitage, which shows signs of having been deliberately retouched by percussion or pressure flaking along one or more edges or part of edges, but no specific purpose can be defined from the nature of the retouch. Amongst them, there are seven produced on flakes (artefact nos 11, 24, 26, 29, 61, 62 & 65), and one on a distal bladelet (no 130). Some of these trimmed pieces were modified from their original blank forms with abrupt, semi-abrupt and fine retouch technique. It is likely that most of these pieces were utilised for cutting, scraping and similar activities and were manufactured for immediate tasks without the need of working the edges in a meticulous manner.

Utilised waste

Flint is an ideal stone for cutting activities without any further retouch to the sharp edges created by knapping, and it is estimated that at least 8 blanks were used or damaged by utilisation. This consists of 6 flakes (nos 17, 25, 30, 71, 83 & 100) and 2 blades (nos 28 & 165). This utilisation is indicated by a series of small irregular spalls, which have flaked off the edges of the flakes/blades. Although the majority of the assemblage is in moderate to fairly good condition (despite patination), with practically no ridge damage, some of the edge wear could have been the result of accidents (eg a flake being stood on). However, the wear produced by the utilisation of an artefact's edge is more consistent than the completely irregular unsystematic removal of a number of spalls resulting from an accident.

Core

A total of 27 cores have been identified. The large majority of them are micro-blade cores. These cores are characteristic of Mesolithic assemblages (Wymer 1977), and they are predominantly prismatic and conical, of which 20 have single platform, 5 have two opposed platforms and 2 multi-platform examples are also present. The cores range from 16 to 67 mm long (mean 31.5 mm) and 10 to 41 mm wide (mean 28 mm). Although the cores could have been larger and thus enabling greater dimensions for the blanks, most of them seem to originate from pebbles whose maximum lengths are clearly exhibited from their cortical coverage and roughly match the average length of the cores themselves. The production of large core tools as well as long/broad blades would not have been possible from this raw material. The cores include some exhausted examples, fragments and those from which control has been lost. Three core rejuvenation flakes (nos. 23, 49 & 50) are included, which exhibit negative scars of micro blade production.

The cores provide very reliable technological evidence. The platforms were carefully prepared by removal of flakes. The exploitation of ridges combined with narrow butts, made possible by platform abrasion, which removes overhang and strengthens the edges of the striking platform, was used to produce bladelets. The resulting bladelets, showing regular parallel ridges and edges, fall within the metrical criteria selection for use as microliths. The debitage also helps with the assessment of the arrangement of core platforms, as 44% of the pieces with butts were prepared. The number of cores with two or more platforms suggests that the rejuvenation technique involved rotating the core and recommencing blade production from the opposed platform, rather than cresting technique. The frequency of cores compared with micro blades suggests that the majority of the blades/bladelets were utilised elsewhere.

Debitage

The rest of the assemblage consists of 15 bladelets (with a mean of 9.5mm wide). Six of them are whole blanks, which provide a mean of 22mm long. There are seven blades (with a mean of 18mm wide), of which four are whole specimens yielding a mean of 39mm long. There are also 142 flakes with a total weight of c 325g. A total of 72 flakes are whole portions which were divided into three groups according to their length (group 1: flakes up to 2 mm long, group 2: flakes between 21 and 30mm long and group 3: flakes longer than 31mm). The first group consists of 27 pieces (38%) with a mean of 14.3 mm. Group 2 includes a total of 31 flakes (43%) producing a mean of 26mm. Finally, group 3 contains 14 flakes (20%) with a mean of 40mm long. Amongst all the flakes, the overall width yields a mean of 18mm. It is estimated that the debitage from group 2 and 3, which form a total of 63%, is not typically Mesolithic, and thus it may date to later lithic prehistoric techno-complexes. The only type of debitage from the groups aforementioned that could be assigned to Mesolithic stone tools, would be the result of tranchet axe manufacture, but as most of the raw material used originated from nodular pebbles of small size, this could not have been possible.

The majority of the flakes correspond to general trimming with no ridge presence. Their size is unsuitable for large tools. The majority were probably produced as by-products of flake and blade production or during core preparation, thus they can be considered as waste. Most flakes show that they have been struck from cores worked in a single direction. Butt preparation (Table 3) is noticeably represented and also the removal of overhang by abrasion, technique probably employed in the production of deliberate blanks. Diffuse bulb of percussion, lipped butts, a low incidence of hinge fracture and a thin appearance has also been

recognised. Such knapping features are the result of careful production of blanks for conversion into tools, which is entirely in keeping with the Mesolithic (Pitts 1978, 179-97).

There are 14 flakes which show that a laminar knapping technique was employed, creating straight edges and parallel ridges, and often have triangular cross section. These blanks may have been blades instead, but after breakage they became 'flakes'. Indeed, a blade is generally regarded to be an artefact whose length is twice its width, whereas a flake has a lesser length to width ratio. These possible blades vary in width from 6 to 18mm with a mean of 11.6mm, which makes them comparable to bladelets. Certainly, a bladelet is essentially a small blade whose maximum width is of 12mm (Owen 1982, 2). Furthermore, three broken bladelets have also been recorded, but due to their present state they were categorised as flakes. Therefore, the average frequency of bladelets would have been larger.

Raw material

The raw material used was almost exclusively flint. This was of moderate to good quality and light mottled grey to grey colour seems to predominate. There are also a few chert artefacts. The mottled grey flint may originate from the chalk lands of Lincolnshire (Barfield 2002, 3; Pierpoint 1981) and/or the Yorkshire Wolds (Pierpoint 1981). Dorsal coverage of cortex is found amongst 66 pieces, which relates mainly to secondary reduction sequence (24%) and fewer pieces of primary stage (3%). Cortex type can allow sourcing of the raw material, but the nature of the cortical surfaces, with a rolled and washed appearance, suggests that this material was obtained from secondary derived sources. The precise location of the source(s) has not been identified but may lie in the gravels of the boulder clay deposits near Wolverhampton (Jackson *et al* 1996) and/or the drift deposits of the Warwickshire Avon (Buteux *et al* 2004, 28), or possibly of Worcestershire (R Jackson, pers comm). The use of flint pebbles for prehistoric artefact production has been documented in several Mesolithic sites in the West Midlands (Jackson *et al* 1996). Such pebbles would have determined the dimensions of the cores and subsequently the knapped blanks. It is possible that the chert may have been obtained more locally as the pebble content of the gravels within the nearby river Severn third and second drift deposits includes some chert amongst other type of rocks (Mitchell *et al*, 1962, 113-115).

Knapping technology

The blades and bladelets (including tools) were removed by indirect percussion. This method involves striking a punch-like object, often made of antler or wood, with a hammer. This technique requires a carefully prepared core with an even platform and regular ridges (Whittaker 1994, 33). The indirect percussion is also perceivable from the type of butts that the blades/bladelets have. The butts are mainly faceted, which indicates that the core platforms were prepared to prevent the punch from slipping. Alternatively they may have been struck with a pressure flaking pectoral crutch, which also necessitates such meticulous arrangements. Deliberate retouch was probably done by direct percussion, although some implements were surely shaped by using pressure flaking. Soft hammers seem to have been largely employed; as lipped butts, vague point of percussion and diffuse bulbs predominate amongst this type of debitage. Scraper edges were achieved by low angle direct percussion using probably a hard hammer stone. The core platforms allow us to further understand the striking techniques employed. Most blanks were struck from cores worked in a single direction. Butt preparation dominates with 67% of the total (when present). There are only ten pieces with opposed scar orientation which suggests that accidents of debitage, like hinge fracture, may have been corrected from an opposed platform core which was created later in the knapping sequence.

Discussion

Although post-depositional disturbance, such as plough damage, is evident in a number of artefacts, careful inspection of the assemblage indicates that the lithic artefacts have not moved very far horizontally from their original position. However, the plough must have exposed the lithics towards the surface, as being a valley, the soil accumulation is sufficient to conceal the site horizon. Because the lithics were scattered on the surface and not individually located, little can be understood in terms of distribution of specific tools, layout of archaeological features associated with the lithics, selectivity in the disposal of the debitage, etc. Indeed, this assemblage represents a potentially very small sample of what may be an

extensive area of activity. The assemblage is probably derived from small-scale production and craft activities within a domestic context.

Although the overall frequency of tools, retouched flakes/blades, and utilised blanks is low, the assemblage contains a little evidence for industrial activities. Indeed, the tools and miscellaneous retouched pieces imply a wide diversity of activities. The presence of microlithics and points may indicate that hunting took place on site, but tools such as scrapers and notches indicate that some specialised domestic crafts, such as engraving, cutting were also carried. The repairing and re-sharpening of artefacts may have also occurred. In addition to this, some of the general debitage shows signs of having been extensively utilised. These blanks might have been employed in several occasions for the execution of some particular tasks. Furthermore, due to the low frequency of flakes from primary reduction sequence, it is believed that the roughing-out of the cores took place elsewhere. It is estimated that most of the artefacts have been discarded after breakage. Indeed, there are 94 intact pieces (excluding cores and micro-debitage), and the rest of the assemblage consists of 38 distal ends, 27 proximal ends and 25 medial fragments.

The information discussed in the preceding sections may indicate that the site was occupied by small group of people in the Mesolithic period. Some of the activities employed may be connected with domestic specialised activities. The location where the lithic scatters were retrieved from may shed light into the type of site, as Mesolithic base camps appear generally in river valley locations (Barton 1992). However, the presence of microlithics and projectile points are mainly associated with short-term hunting camps, although such activities were often carried out on higher grounds (*ibid*). The frequency of tool variability is low, thus it is problematic to establish site functionality. The interpretation of such a limited collection is indeed difficult, but the date of at least most of the artefacts is likely to be of the Mesolithic period. Although the occurrence of typically Mesolithic tools, such as microliths, is relatively low, a substantial number of debitage falls into the leptolithic category representative of the later Upper Palaeolithic industries of the continent (Magdalenian and Azilian), and the Mesolithic techno-complexes in general (Laplace 1966). Furthermore, the presence of chert amongst the artefacts is often associated with the Mesolithic, and allows us to differentiate the Mesolithic from later lithic industries (Barfield 2002, 3). Nonetheless, lithics of Neolithic and Bronze Age typologies have also been identified.

It is assumed that this assemblage only constitutes a small fraction of the tools and debitage used and discarded by prehistoric people in this area. Indeed, small pieces, such as microburins are likely to be underrepresented. Nonetheless, this assemblage enhances the poor lithic record of the county and may encourage other professionals and amateurs to conduct further research and fieldwork; and it allows scholars to integrate the data within a broader archaeological framework. Indeed, however detailed our descriptions may be, they contribute little to our understanding of how societies in the past behaved under particular conditions, so long as they are studied in isolation.

Conclusion

This study has attempted to characterise the site of Trimpley Top, Hoarstone Farm, based on a lithic assemblage recovered from its surface. A standard analytical approach has been employed and it has been established that some stone artefacts may have been utilised to execute specialised domestic tasks. Some retouched pieces may have been utilised to carry out further work. Even unretouched blanks were also of considerable value as they have distinctive use wear patterns. Some knapping, such as retouching and re-sharpening was also conducted on site, and moreover the roughing-out of the cores was undertaken elsewhere. The artefacts were manufactured employing skilful techniques, such as indirect percussion, and prismatic cores were used to obtain small blades. The most substantial proportion of the lithic artefacts consists of industrial waste or debitage (ie blade, bladelet, flakes, cores), with or without areas of cortication. A large proportion of the artefacts are generally in keeping with Mesolithic techno-complexes. Despite the limited information available, it is discernible that the site was occupied and possibly used as a base camp by people in the Mesolithic period, although Neolithic and Bronze Age occupation is also attested. The nature of the assemblage and its unstratified state has made it difficult to interpret such matters. However, it has provided further evidence for the exploitation of resources in the valley which seems to have been the subject of many repeated visits as part of a broadly based exploitation strategy.

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15. **Appendix 5 Lithic analysis, King's End, Worcestershire (WSM 38558) (by A Mora-Ottomano)**

Introduction

Archaeological prospection carried out by Don Williams in 1981-82, and in 2002, consisting of a random fieldwalking surface collection, recovered 106 worked stones from King's End, Worcestershire (NGR: SO 8160 5240). Although the assemblage contains little diagnostic dateable artefacts, a substantial number of the analysed lithics exhibit manufacturing characteristics associated with Mesolithic stone tool typology. Because the lithic scatters are unstratified, it is assumed that they represent only a portion of some prehistoric activities. Post-depositional movement may have had an effect on its wider redistribution, however the assemblage is generally in good state. This suggests that the lithic implements have not moved very far horizontally from their original position. It is difficult to recognise whether multiple occupations occurred, but the assemblage seems to represent a fairly homogeneous industry. Indeed, the industry seems to be primarily based on blades/bladelets and other possible predetermined tool blank forms, which are associated with activities conducted in Mesolithic base camps. For detailed records of the lithics see appendix in archive.

Aims

This study attempts to establish the *chaîne opératoire* (operational sequences), concept first formulated by Leroi-Gourhan (1943). This approach examines the different stages of lithic exploitation. The sequence begins with the acquisition of raw material, followed by the reduction of nodules and cores, the removal of blanks from cores, and the manufacture and use of tools and finally, the discard of the artefacts (Bar-Yosef *et al* 1992). An addition to these sequences is the post-depositional disturbance of the site and even excavation strategy, as these will have an effect on our understanding of the *chaîne opératoire*. This lithic analysis hopes to characterise the type of site, and to determine the lithic techno-complexes, functionality and chronology.

Method

The worked stones recovered during field walking were classified individually. A range of attributes was recorded following standard systems (e.g. Inizan *et al* 1992) to explore knapping technology. These relate to the characteristics of technological category, tool type, portion, reduction sequence, raw material, colour, condition and type of butt. All the pieces were weighed individually apart from one chip, and recorded in grams (g). Dimensions were measured in millimetres, and were divided into L (length): the distance between the proximal and distal ends; W (width): the maximum distance between the two sides of the artefact measured perpendicular to the length; and T (thickness): the maximum thickness of the artefact perpendicular to the length. Chunks, pebbles and chips were not measured. The comments category was used to record various attributes such as thermal alteration, post-depositional breakage, retouch, wear, scar direction, type of bulb, and blank termination failures (ie non-feather termination).

For a detailed record of the assemblage see Mora-Ottomano (2007) and the digital archive, where any individually identified pieces referenced in text are also listed.

Raw material

The site of King's End lies on the alluvial fan deposits of the Teme valley (British Geological Survey, England and Wales Sheet 199, Solid and Drift Edition, 1:50,000 Series), whose lithology is very limited. However, there are some pebbles within the river terraces, which include red sandstone, rubbly limestone, cornstone, white quartz, grey grit, fine-grained basic igneous rock, Brockhill dolerite, rhyolite and Eskdale granite (Mitchell *et al*, 1962, 117-21). In addition there are a few erratics such as white sandstone, pink granite, porphyrite, Silurian limestone and tuffs within the High Level Drifts (*ibid*). The lithic assemblage contains mainly good quality flint from several sources but it does not occur naturally in this area. The only exceptions to this pattern are four white/grey and six beige/brown fine-grained cherts, also not locally derived. The state of the artefacts is generally good.

The worked flint can be divided into two major categories: translucent mottled grey (46%) and brown (46%); but there are also a few black pieces (8%). The mottled grey flint may originate from the chalk lands of Lincolnshire (Barfield 2002, 3; Pierpoint 1981) and/or the Yorkshire Wolds (Pierpoint 1981); and the brown flint could be of East Anglian origin (Barfield 2002: 4), although there are a variety of brown pebbles which may originate from the glacial British East Coast erratic (Pierpoint 1981). Indeed, a large number of the flint seem to come from secondary geological deposits, as cortical pieces have a rolled and washed appearance, which indicates that they originated from drift deposits. In this case, the Warwickshire Avon, whose lower sediments have flint from Anglian glacial sources (Buteux *et al* 2004, 28), might have provided some of the raw material procured. The use of flint pebbles for prehistoric artefact production has been documented in several Mesolithic sites in the West Midlands (Jackson *et al*, 1996, 97-106). Such pebbles would have determined the dimensions of the cores and subsequently the knapped blanks. There are also some black flint pieces, which is generally located within the chalk lands of south and southeast England.

The source of chert commonly derives from the Pennine limestone (Williams *et al* 1987, 366), but also in southern areas such as Portland limestone (Palmer 1970, 82-115; Palmer 1999, 53-54). However, although petrography studies have recognised some Portland cherts found as near to the site concerned as Gloucestershire (Palmer 1970, 82-115), this type of chert is found in only very small frequencies in assemblages even from sites at distances less than 80km from its source (Mithen 1999, 51). It is possible that the chert may have been obtained more locally as the pebble content of the gravels within the nearby river Severn third and second drift deposits includes some chert amongst other type of rocks (Mitchell *et al* 1962, 113-115).

The provenancing of the lithic raw material indicates movement of the stones themselves. However it is not suggested here that the people, who occupied the site concerned, would have necessarily extracted the natural stones from their source of origin. Indeed, available drift deposits may have provided the required nodular pieces, and curation of the lithic may have occurred through time. Dorsal coverage of cortex is found amongst 54 pieces (excluding chunks and pebbles), which relates mainly to secondary reduction sequence (32%) and fewer pieces of primary stage (14%). Cortex type can allow sourcing of the raw material, but the majority of these cortical pieces originate from flint gravel. Dark brown, reddish brown and white constitute the main groups in this assemblage, and so they may have originated from the Warwickshire Avon drift deposits.

Lithic assemblage

The lithic assemblage consists of 106 worked stones whose total weight is c 800g. They are divided into ten tools, 13 cores, eight bladelets, nine blades, 55 flakes, ten chunks and a chip. Four unworked pebbles are also included in the assemblage. The worked stone is generally in good condition, although as they were found on the ploughsoil surface some damage is recognised. It is suggested that the assemblage is predominantly a blade industry. Although blades/bladelets form only 20% (including tools), the large amount of micro-blade cores indicates that the majority of the blanks were used elsewhere. The raw material of the following categories is flint unless otherwise stated.

Burin

Four burins have been identified in the assemblage and these are as follows: artefact no 11 is an angle burin on a transverse hinge terminal of a chert bladelet, which exhibits use wear on the tip of the burin facet. No 17 is another angle burin on a bladelet, which has micro wear trace on the tip of the burin facet. No 102 is a combined angle burin on a snapped laminar blank and a notch. Finally, no 105 is an angled burin re-facetted on snapped piece. Burins first appeared in large numbers in Upper Palaeolithic assemblages and were used in quantity during the Early Mesolithic, becoming rare in Late Mesolithic, and were not commonly made in the Neolithic or later periods (Brézillon 1968; Wymer 1977). The archaeological record identifies several varieties of burins in the Upper Palaeolithic, but in the Mesolithic there are only two or three types. The commonest is the angle burin, followed by the dihedral burin, which was used in much higher frequency in earlier periods (Palmer 1999).

Scraper

Three scrapers have been recognised. Artefact no. 63 is a side scraper with direct total semi-abrupt retouch but has severe post-depositional damage. No. 61 is a combined concave side scraper and notch with direct semi-abrupt retouch for scraper edge and anvil/bipolar technique for notch. Finally no 94 could be regarded as semi-keeled convex end scraper with very abrupt parallel direct retouch, which originates from a rolled white flint pebble. This end scraper bears high resemblance with other specimens found in several Mesolithic industries (eg Mithen 1999, 39-40; Radley and Mellars 1964, 1-24; Wymer 1977), but this type of implement could also date to the early Neolithic.

Notch

Apart from the combined side scraper and notch (no 61) and angle burin and notch (no 102), classified in the above categories, there is another notch (artefact no 19), which is manufactured on a blade with direct thin retouch. The notches were executed employing careful retouch, rather than creating them using Quina or Clactonian methods. Often the carefully trimmed notches are early stages of the microburin technique to produce microliths.

Knife

Artefact no. 10 is a whole naturally backed knife (*couteau à dos naturel*; Bordes 1979), whose back is cortical and originates from a rolled dark brown flint pebble. Direct parallel retouch along the distal end was employed in order to sharpen the knife. Use wear is also identified. Two backed fragments should be included in this category. Artefact no 12 is a proximal portion of a blade, which was burnt prior to secondary retouching and has a medial direct left abrupt retouch, and the right cutting edge has continuous microscopic wear traces. Artefact no 42 is a laminar flake, which may be a medial portion of a backed blade with direct continuous right abrupt retouch and was also fired before knapping. The whole left lateral edge has signs of severe use. None of these knives bear similarities with microlith typology, but may fall into the 'broad blade assemblage' of the Early Mesolithic such as the Maglemosian industry (Adkins and Adkins 1999, 21; Mithen 1999: 38).

Hammer stone

Artefact no. 80 is a large flake which displays numerous small and overlapping flake scars caused by a hitting motion, but the battered surface is very large indicating that this hammer stone was used for purposes others than for knapping. It seems that a flint nodule was initially used as a hammer but later on the damaged tip was flaked off in order to create probably a core with flat platform. In this case, this specimen may be considered as a damaged end of a hammer, which became a core rejuvenation flake.

Further implement

An additional tool should be included here. Artefact no. 95 is a slightly trapeze-shaped piece left from a blade after the bulbar and tip ends have been removed by snapping. Blade segments are found on many Mesolithic sites (Palmer 1999) and this has all the characteristics of a *petit tranchet* arrowhead without the final blunted retouch to facilitate hafting.

Core

A total of 13 cores have been identified. All, with the possible exception of one which may have produced flakes, are micro-blade cores. These cores are characteristic of Mesolithic assemblages (Wymer 1977), and they are predominantly prismatic and conical, of which six have single platform, five have two opposed platforms and two multi-platform examples are also present. The cores produce a mean of 25mm wide and 34mm long. Although the cores could have been larger and thus enabling greater dimensions for the blanks, most of them seem to originate from pebbles whose maximum lengths are clearly exhibited from their cortical coverage and roughly matches the average length of the cores themselves. The production of large core tools as well as long/broad blades would not have been possible from this raw material. The cores include some exhausted examples and those from which control has been lost.

The cores provide very reliable technological evidence. The platforms were carefully prepared by removal of flakes. The exploitation of ridges combined with narrow butts, made possible by platform abrasion, which removes overhang and strengthens the edges of the

striking platform, was used to produce bladelets. The debitage also contributes to assessing the arrangement of core platforms, as the prepared butts, when present, seem to dominate with 67%. Narrow butts are also consistent and are often abraded. The number of cores with two or more platforms suggests that the rejuvenation technique involved rotating the core and recommencing blade production from the opposed platform, rather than cresting technique, was also employed. Different forms of blank production are recognised, small blanks for composite tools, burins and others; and large blanks for scrapers. However, these cores from pebbles of relatively small size, were not large enough to provide blanks for some type of tools. It is, therefore, very likely that some of the blanks were manufactured from other cores. The number of cores compared with micro blades suggests that the majority of the blades/bladelets may have been utilised elsewhere.

Miscellaneous retouched

A total of 15 retouched artefacts have also been identified. This classification corresponds to the debitage, which shows signs of having been deliberately retouched by percussion or pressure flaking along one or more edges or part of edges, but no specific purpose can be defined from the nature of the retouch. Amongst them three have been produced on bladelets, four on blades and nine on flakes. Some of these trimmed pieces were considerably modified from their original blank forms, as abrupt and semi-abrupt retouch technique constitutes the majority of this group. It is likely that most of these pieces were utilised for cutting, scraping and similar activities, and were manufactured for immediate tasks without the need of working the edges in a meticulous manner.

Utilised waste

Flint is an ideal stone for cutting activities without any further retouch to the sharp edges created by knapping, and it is estimated that at least 16 blanks (1 bladelet, 3 blades, 11 flakes and 1 chunk) were used or damaged by utilisation. This utilisation is indicated by a series of small irregular spalls, which have flecked off the edges of the flakes/blades. Although the majority of the assemblage is in fairly fresh condition, with practically no ridge damage, some of the edge wear could have been the result of accidents (eg a flake being stood on). However, the wear produced by the utilisation of an artefact's edge is more consistent than the completely irregular unsystematic removal of a number of spalls resulting from an accident.

Debitage

The rest of the assemblage consists of 8 bladelets (with a mean of 10.5 mm wide). Two of them are whole blanks whose lengths are 25 and 17mm and provides a mean of 21mm long. There are 9 blades (with a mean of 18.3mm wide), of which 3 are whole specimens yielding a mean of 54.6mm long. The dimensions of the blades do not correspond with the micro-blade cores found. In this case it is suggested that the broad/long blades were manufactured elsewhere, or the larger cores were exhausted and subsequently knapped into core tools or they simply have not been found. At any rate, the presence of the blade/bladelet demonstrates the control and predetermination of blank forms, although the low percentage suggest that utilisation was done elsewhere.

There are also 55 flakes with a total weight of c 250g. Amongst them, 20 are whole pieces and provides a mean length of 26.6mm and the overall width yields a mean of 21.5mm. These flakes are fairly small and unsuitable for larger tools. At least 22 flakes correspond to general trimming with no ridge presence. The majority were probably produced as by-products of flake and blade production or during core preparation, thus they can be considered as waste. Most flakes show that they have been struck from cores worked in a single direction. Butt preparation is highly represented and also the removal of overhang by abrasion, technique probably employed in the production of deliberate blanks. Diffuse bulb of percussion, lipped butts, a low incidence of hinge fracture and a thin appearance is also a common characteristic of them. Such knapping features are the result of careful production of blanks for conversion into tools, which is entirely in keeping with the Mesolithic (Pitts 1978, 179-197).

There are 10 flakes which show that a laminar knapping technique was employed, creating straight edges and parallel ridges. These blanks may have been blades instead, but after breakage they became 'flakes'. Indeed, a blade is generally regarded to be an artefact whose length is twice its width, whereas a flake has a lesser length to width ratio. These possible

blades vary in width from 12 to 16mm (apart from three which may have been long blades of *c* 20mm wide), which makes them comparable to bladelets. Certainly, a bladelet is essentially a small blade whose maximum width is of 12mm (Owen 1982, 2).

Other stone object

Four unstruck or non-knapped pebbles were recovered and their total weight is *c* 126g. One of these pebbles (no 78) shows sign of usage and may have been utilised for direct flaking percussion, but the others have no clear indication of purpose. There are also ten flint chunks, which could have been exhausted cores or core tools, but are severely damaged to recognise any technological attribute.

Knapping technology

The blades and bladelets (including tools) were removed by indirect percussion. This method involves striking a punch-like object, often made of antler or wood, with a hammer. This technique requires a carefully prepared core with an even platform and regular ridges (Whittaker 1994, 33). The indirect percussion is also perceivable from the type of butts that the blades/bladelets have. The butts are mainly faceted, which indicates that the core platforms were prepared to prevent the punch from slipping. Alternatively they may have been struck with a pressure flaking pectoral crutch, which also necessitates such meticulous arrangements. Deliberate retouch was probably done by direct percussion, although some implements were surely shaped by using pressure flaking. Soft hammers seem to have been largely employed; as lipped butts, vague point of percussion and diffuse bulbs predominate amongst the debitage. Scraper edges were achieved by low angle direct percussion using a hard hammer stone. The core platforms allow us to further understand the striking techniques employed. Most blanks were struck from cores worked in a single direction. Butt preparation is found amongst 44% of the total (when present). There are only 10 pieces with opposed scar orientation which suggests that accidents of debitage, like hinge fracture, may have been corrected from an opposed platform core which was created later in the knapping sequence.

Discussion

Although post-depositional disturbance, such as plough damage, is evident in a number of artefacts, careful inspection of the assemblage indicates that the lithic artefacts have not moved very far horizontally from their original position. However, the plough must have exposed the lithics towards the surface, as being a valley, the soil accumulation is sufficient to conceal the site horizon. Because the lithics are scattered on the surface and not individually located, little can be understood in terms of distribution of specific tools, layout of archaeological features associated with the lithics, selectivity in the disposal of the debitage, etc. Indeed, this assemblage represents a potentially very small sample of what may be an extensive area of activity. The assemblage is probably derived from small-scale production and craft activities within a domestic content.

Although the overall frequency of tools, retouched flakes/blades, and utilised blanks is low, the assemblage contains a little amount of evidence for industrial activities. Indeed, the tools and miscellaneous retouched pieces imply a wide diversity of activities. The presence of burins, scrapers, and notches indicates that some specialised domestic crafts, such as engraving and/or cutting, were carried out on site. The repairing and re-sharpening of artefacts may have also occurred. In addition to this, some of the general debitage shows signs of having been extensively utilised. These blanks might have been employed on several occasions for the execution of some particular tasks. Furthermore, due to the low frequency of flakes from primary reduction sequence, it is believed that the roughing-out of the cores took place elsewhere. It is estimated that most of the artefacts have been discarded after breakage. Indeed, there are only 28 intact pieces (including tools), and the rest of the assemblage consists of 42 distal ends, 34 proximal ends and 32 medial fragments.

The information discussed in the preceding sections may indicate that the site was occupied by a small group of people in the Mesolithic period. Some of the activities employed may be connected with domestic specialised activities. The absence of projectile points and the location where the lithic scatters were retrieved from may shed light into the type of site, as Mesolithic short-term hunting camps were often situated on higher grounds and base camps generally in river valley locations (Barton 1992). The interpretation of such a limited

collection is indeed difficult, but the date of at least most of the artefacts is likely to be of the Mesolithic period. Although no typically Mesolithic tools, such as microliths, have been found, some of the artefacts fall into the leptolithic category representative of the later Upper Palaeolithic industries of the continent (Magdalenian and Azilian), and the Mesolithic techno-complexes in general (Laplace 1966). Furthermore, the presence of chert amongst the artefacts is often associated with the Mesolithic, and allows us to differentiate the Mesolithic from later lithic industries (Barfield 2002, 3)

It is assumed that this assemblage only constitutes a small fraction of the tools and debitage used and discarded by prehistoric people in King's End. Nonetheless, this assemblage enhances the poor lithic record of the county and may encourage other professionals and amateurs to conduct further research and fieldwork; and it allows scholars to integrate the data within a broader archaeological framework. Indeed, however detailed our descriptions may be, they contribute little to our understanding of how societies in the past behaved under particular conditions, so long as they are studied in isolation.

Conclusion

This study has attempted to characterise the site of King's End based on a limited lithic assemblage recovered from its surface. A standard analytical approach has been employed and it has been established that some stone artefacts may have been utilised to execute specialised domestic tasks. Some retouched pieces may have been utilised to carry out further work. Even unretouched blanks were also of considerable value as they have distinctive use wear patterns. Some knapping, such as retouching and re-sharpening was also conducted on site, and moreover the roughing-out of the cores was undertaken elsewhere. The artefacts were manufactured employing skilful techniques, such as indirect percussion, and prismatic cores were used to obtain small blades. The assemblage seems to be fairly homogeneous and its typology is generally in keeping with Mesolithic techno-complexes. Despite the limited information available, it is discernible that the site was occupied and used as a base camp by people in the Mesolithic period. The nature of the assemblage and its unstratified state has made it difficult to interpret such matters. However, it constitutes an important prehistoric data within the County.

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16. **Appendix 6 Lithic analysis from Bevere, Worcestershire (WSM 38559) (by A Mora-Ottomano)**

Introduction

Archaeological prospection carried out by Don Williams in 1982, consisting of a random fieldwalking surface collection, recovered 31 knapped stones and a hammer stone from Bevere, Worcestershire (NGR: SO 8410 5960). Although the assemblage contains no diagnostic dateable artefacts, a substantial number of the analysed lithics exhibit manufacturing characteristics associated with Mesolithic stone tool typology. It is assumed that the lithic scatters represent a portion of some prehistoric activities, but whether multiple occupations occurred is not recognised. An earlier prehistoric axe-hammer has previously been recorded from nearby (WCM 7895). For detailed records of the lithics reported here see appendix in archive.

Aims

This study attempts to establish the *chaîne opératoire* (operational sequences), concept first formulated by Leroi-Gourhan (1943). This approach examines the different stages of lithic exploitation. The sequences begin with the acquisition of raw material, followed by the reduction of nodules and cores, the removal of blanks from cores and the manufacture and use of tools and finally, the discard of the artefacts (Bar-Yosef *et al* 1992). An addition to these sequences is the post-depositional disturbance of the site and even excavation strategy, as these will have an effect on our understanding of the *chaîne opératoire*. The lithic analysis hopes to characterise the type of site, and to determine the lithic techno-complexes, functionality and chronology.

Method

The worked stones recovered during fieldwalking were classified individually. A range of attributes was recorded following standard systems (eg Inizan *et al* 1992) to explore knapping technology. These relate to the characteristics of technological category, tool type, portion, reduction sequence, raw material, colour, condition and type of butt. Dimensions were measured in millimetre, and were divided into length (L: the distance between the proximal and distal ends); width (W: the maximum distance between the two sides of the artefact measured perpendicular to the length); and thickness (T: the maximum thickness of the artefact perpendicular to the length). The comments category was used to record various attributes such as thermal alteration, post-depositional breakage, retouch, wear, scar direction, type of bulb, and blank termination failures (ie non-feather termination).

For a detailed record of the assemblage see Mora-Ottomano (2007) and the digital archive, where any individually identified pieces referenced in text are also listed.

Raw material

The site of Bevere lies on the third (main) terrace of the Severn valley (British Geological Survey. England and Wales Sheet 182, Solid and Drift Edition, 1:50,000 Series), which contains a variety of river gravels. This includes quartzite, hard sandstone, chert, grit, porphyrite and keratophyric tuff (Mitchell *et al* 1962, 113-115). Coarse gravels with abundant fragments of Eskdale and other northern granites are also present (*ibid*).

Virtually all of the worked stone recovered from the site is flint. The only exceptions to this pattern are one flake and one whole bladelet of white fine grained chert; and one granite (pegmatite) hammer stone. The majority of the worked flint has a translucent mottled grey appearance, whose provenance may come from the chalk lands of Lincolnshire (Barfield 2002, 3; Pierpoint 1981) and/or the Yorkshire Wolds (Pierpoint 1981). There are also some black pieces, which are generally located within the chalk lands of South and South-East England; and a variety of brown flints, which may originate from the glacial British East Coast erratic (*ibid*). The granite hammer stone is very different from the neighbouring igneous outcrops, such as the Malvern; but, as mentioned above, it is found within the valley deposits. The source of chert commonly derives from the Pennine limestone (Williams *et al* 1987, 366), but also in southern areas such as Portland limestone (Palmer 1999, 53-54). However, the pebble content of the gravels within the valley's third and second drift deposits

includes chert amongst other type of rocks (Mitchell *et al* 1962, 113-115), and thus it may have been obtained within the vicinity.

Provenancing lithic artefacts' raw material can recognise movement of the stone themselves. However it is not suggested here that the people, who occupied the site concerned, would have necessarily extracted the natural stones from their source of origin. Indeed, available drift deposits may provide the required nodular pieces, and curation of the lithic may have occurred through time. Dorsal coverage of cortex is found amongst twelve pieces, which relates mainly to secondary reduction sequence. Cortex type varies from thick (3mm) to very thin; and from light orange/brown to white, but none of them constitute a pattern in this assemblage.

Debitage

The lithic assemblage is very limited, consisting of 31 worked stones whose total weight is *c* 120g, and a granite hammer stone whose weight is *c* 300g and measures 600mm in diameter, and has one battered surface. The worked lithics are divided into three bladelets (with a mean of 9.6mm wide), three blades (with a mean of 15.6mm wide), 21 flakes and four chunks. Amongst the flakes, there are six pieces which show that a laminar knapping technique was employed, which created straight edges and parallel ridges. These pieces may have been blades instead, but after breakage they became 'flakes'. Indeed, a blade is generally regarded to be an artefact whose length is twice its width, whereas a flake has a lesser length to width ratio. These possible blades vary in width from 12 to 14mm (apart from one which may have been a long blade and is 32mm wide), which makes them comparable to bladelets. Certainly, a bladelet is essentially a small blade whose maximum width is of 12mm (Owen 1982, 2). In the assemblage there are also nine flint gravels, which do not exhibit clear pattern of manufacture nor use. The total weight of this flint gravel is *c* 70g.

At least two tools have been identified in the assemblage. Artefact no. 5 is a flint distal end of a bladelet point with a medial right direct fine retouch. This retouch may have modified the blank in order to facilitate its hafting into an organic shaft. This specimen may have been used as a projectile point as there are traces of impact against a hard surface. Artefact no. 17 is a borer on a flake with two perforating points. The points were shaped employing thin bifacial retouch along converging edges, and both appear to have been heavily utilised. There is another possible projectile point, artefact no. 2, which is a distal end of a flint blade with partial direct left edge wear, and also seems to have marks of impact on the tip (see Mora-Ottomano 2007).

A total of eight retouched artefacts have also been identified. This classification corresponds to thedebitage, which shows signs of having been deliberately retouched by percussion or pressure flaking along one or more edges or part of edges. Amongst them, there are three abrupt, two fine, one sub-parallel, one bifacial and one scraper retouch type.

It is estimated that most of the artefacts have been discarded after breakage. Indeed, there are only eight intact pieces (7 flakes, 1 bladelet), and the rest of the assemblage consists of four distal ends, six proximal ends and 13 medial fragments. Although post-depositional disturbance, such as plough damage, is evident in a number of artefacts, preliminary inspection of the assemblage suggests that a third of thedebitage have been utilised or damaged by utilisation. This utilisation is indicated by a series of small irregular spalls, which have flecked off the edges of the flakes/blades. Although the majority of the assemblage is in fairly fresh condition, with practically no ridge damage, some of the edge wear could have been the result of accidents (eg a flake being stood on). However, the wear produced by the utilisation of an artefact's edge is more consistent than the completely irregular unsystematic removal of a number of spalls resulting from an accident.

Knapping technology

The blades and bladelets (artefact nos 1, 2, 4, 5, 6, & 7) were removed by indirect percussion. This method involves striking a punch-like object, often made of antler or wood, with a hammer. This technique requires a carefully prepared core with an even platform and regular ridges (Whittaker 1994, 33). The indirect percussion is also perceivable from the type of butts that the blades/bladelets have. The butts are mainly faceted, which indicates that the core platforms were prepared to prevent the punch from slipping. This core preparation is also

exhibited within the butts of six laminar flakes. Alternatively they may have been struck with a pressure flaking crutch, which also necessitates such meticulous arrangements. Deliberate retouch was probably done by direct percussion, although some implements were surely shaped by using pressure flaking. Soft hammer seems to have been largely employed; as lipped butts, vague point of percussion and diffuse bulbs predominate amongst the debitage. Hard hammers were also used and this is apparent from the granite hammer stone included in the assemblage. Unfortunately the total absence of cores does not allow us to further understand the striking techniques employed. However, there are four pieces with opposed scar orientation which suggests that accidents of debitage, like hinge fracture, may have been corrected from an opposed platform core which was created later in the knapping sequence.

Discussion

Judging by the moderately fresh, unrolled appearance of the majority of the assemblage, it is estimated that the lithic artefacts have not moved very far horizontally from their original position or activity. This suggests that some form of occupation occurred in the area concerned. Although the overall frequency of tools, retouched flakes/blades, and utilised blanks is low, the assemblage contains little evidence for industrial activities. The presence of 1 or 2 points indicates that hunting may have taken place there. The borer and the rest of the debitage suggest that some domestic crafts, such as piercing, cutting, and the repairing/re-sharpening of artefacts may have happened. The absence of burins, scrapers, denticulates, and notches implies little diversity of activities. In addition to this, the debitage does not show signs of having been extensively utilised. The artefacts might have been employed on few occasions for the execution of one particular task. Furthermore, due to the virtual lack of flakes/blades from primary reduction sequence and cores, it is believed that the roughing-out and most of the knapping of the artefacts took place elsewhere.

The information discussed above may indicate that the site was sporadically visited by small group of people in the Mesolithic period. Some of the activities employed may be connected with hunting. Although Mesolithic short-term hunting camps were often situated on higher grounds and base camps generally in river valley locations (Barton 1992), this lithic assemblage does not necessarily represent *a priori* the waste of either type of sites. The interpretation of such a limited collection is indeed difficult, but the date of at least most of the artefacts is likely to be of the Mesolithic period. Although no typically Mesolithic tools, such as microliths, have been found, some of the artefacts falls in the leptolithic category representative of the later Upper Palaeolithic industries of the continent (Magdalenian and Azilian), and the Mesolithic techno-complexes in general. Furthermore, the presence of chert amongst the artefacts is often associated with the Mesolithic, and allows us to differentiate the Mesolithic from later lithic industries (Barfield 2002: 3).

Although it is assumed that this assemblage only constitutes a small fraction of the tools and debitage used and discarded by prehistoric people in Bevere, and therefore hinders our knowledge, it enables us to integrate the data within a broader archaeological framework, enhancing the poor lithic record of the county; and it may encourage professionals and amateurs to conduct further research and fieldwork. Indeed, however detailed our descriptions may be, they contribute little to our understanding of how societies behaved under particular conditions in the past, so long as they are studied in isolation.

Conclusion

This study has attempted to characterise the site of Bevere based on a limited lithic assemblage recovered from its surface. A standard analytical approach has been employed and it has been established that some stone artefacts may have been utilised for hunting in the Mesolithic period. Projectile points and a borer (used for piercing) show indications of having been used. Some retouched pieces may have been utilised to carry out further tasks. Even unretouched blanks were also of considerable value as they have distinctive use wear patterns. Some knapping, such as retouching and re-sharpening was also conducted on site, but only a small amount of activities have been recognised; and moreover the roughing-out of the artefacts may have been undertaken elsewhere. The artefacts were manufactured employing skilful techniques, such as indirect percussion, and prismatic cores were used to obtain small blades. Despite the limited information available, this analysis successfully identified manufacture and utilisation of Mesolithic stone tools.

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17.

Appendix 7 HER tabulated input data

This tabulated data is specifically designed for the HER to enable efficient data input. Within the WHEAS system the table can be imported directly from the Model finds database structure where it is also called 'summary of the assemblage', with the last two fields being filled in once the table has been created.

The basic table was created as part of the 2006-7 assessment (Stage 2) and is updated in 2007-8 (Stage 3) for Roman or earlier finds, and this is mainly for pottery only.

WSM 05900 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	3	35	Iron Age	N	N
Pottery	141	1939	2nd-3rd century	Y	N
Clay tile - roof	40	1185	Undated	N	N

WSM 05901 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	49	679	Roman	Y	N
Pottery	11	166	Medieval/post-medieval	N	N
Clay tile - roof	1	130	Undated	N	N
Flaked stone - flake	2	18	Prehistoric	N	N
Stone	1	125	Undated	N	N

WSM 05903 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	28	114	Late 3rd-4th century	Y	N
Clay tile - roof	1	50	Roman	N	N
Pottery	3	25	Post-medieval	N	N
Clay tile - roof	10	394	Post-medieval	N	N

Flaked stone - flake	2	15	Prehistoric	N	N
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WSM 05904 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	32	405	2nd-late 3rd/4th century	Y	N
Pottery	2	5	Post-medieval	N	N
Clay tile - roof	7	60	Post-medieval	N	N

WSM 05905 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	165	2044	2nd-3rd/4th century	Y	N
Pottery	176	893	Post-medieval/modern	N	N
Clay tile - roof	4	50	Undated	N	N
Clay tile - wall/	31	672	Undated	N	N
Clay pipe	13	34	Post-medieval	N	N
Glass	137	1344	Post-medieval/modern	N	N
Metal - other	7	277	Post-medieval/modern	N	N
Miscellaneous	4	45	Undated	N	N
Slag	2	56	Undated	N	N
Flaked stone - flake	1	14	Prehistoric	N	N
Bone	5	70	Undated	N	N

WSM 05906 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
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Pottery	6	102	2nd-3rd/4th century	Y	N
Pottery	1	15	Post-medieval	N	N
Clay tile - roof	3	50	Post-medieval	N	N

WSM 05907 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	6	74	2nd-3rd century	Y	N

WSM 5908/9 - Eckington

Type	Total	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	751	12,332	2nd-4th century	Y	N

WSM 07281 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	2	10	Iron Age	Y	N
Pottery	142	1226	Roman	Y	N
Pottery	35	355	Modern	N	N
Clay tile – wall/roof	39	1382	Undated	N	N
Clay pipe	6	14	Post-medieval	N	N
Pottery	31	666	Post-medieval	N	N
Glass	2	93	Post-medieval/modern	N	N
Metal	1	27	Undated	N	N
Stone tile - roof	7	72	Undated	N	N
Flaked stone - flake	12	258	Prehistoric	N	N

WSM 07582 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Flaked stone - flake	25		Prehistoric	N	N
Pottery	280	1517	Roman	Y	N
Pottery	148	449	Medieval/undated	N	N
Pottery	146	990	Post-medieval	N	N
Clay tile - roof	42	1568	Medieval	N	N
Clay tile - roof	22	476	Modern	N	N
Clay pipe	11	40	Post-medieval/modern	N	N
Glass	15	150	Post-medieval/modern	N	N
Metal	1	0	Modern	N	N
Slag	2	14	Undated	N	N
Stone tile - roof	5	85	Post-medieval/modern	N	N

WSM 35844 - Eckington

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	12	346	Late 1st/2nd – late 3rd/4th century	Y	N

WSM 32286 - Eckington unlocated finds

Type	Count	Weight (g)	Date	Specialist rep?	Key assemblage?
Pottery	563	2983	Later 1st – late 3rd-4th century	Y	N

WSM 07517 - Excavation at Sedgeberrow

Type	Count	Weight (g)	Date	Specialist	Key
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				report?	assemblage?
Pottery	1	12	Iron Age/ Roman	Y	N
Pottery	20	221	2nd-late 3rd/4th century	Y	N

WSM 07578 - Excavation at Groatens, Ashton under Hill

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	11	97	2nd-late 3rd/4th century	Y	N

WSM 10943 - Excavation at gravel pits, Broadway

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	3	100	Neolithic	Y	Y
Pottery	1	137	Iron Age/Roman	Y	N
Pottery	14	358	2nd-late 3rd/4th century	Y	N

WSM 28767 - Fieldwalk at Hawford

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	120	461	Mid 1st-2nd century	Y	N
Flaked stone - flake	12	45	prehistoric	Y	N

WSM 28780 - Fieldwalk at Kemerton

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	1	14	Iron Age/ Roman	Y	N

Pottery	12	114	2nd century	Y	N
Clay tile - wall	1	73	Roman	Y	N
Clay tile - roof	4	72	Roman	Y	N
Flaked stone - flake	11	2100	Prehistoric	Y	N

WSM 29550 - Fieldwalk at Pirton

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	161	1663	2nd-3rd century	Y	N
Clay tile/Brick	28	421	Roman	Y	N
Clay tile - roof	3	100	Roman	Y	N

WSM 30360 - Fieldwalk S of Lower End Farm, Great Comberton

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	9	61	Mid 1st-4th century	Y	N
Clay tile/brick	16	160	Roman	Y	N
Flaked stone - flake	2	13	Prehistoric	Y	N

WSM 30370- Fieldwalk at Defford

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Clay tile - brick/tile	3	22	Roman	Y	N
Pottery	206	1744	Mid 1st-4th century	Y	N

WSM 30567 - Fieldwalk at Baughton

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Flaked stone - flake	2	12	Prehistoric	Y	N
Pottery	30	196	Prehistoric	Y	N
Brick/tile	1	35	Roman	Y	N
Pottery	53	463	Roman	Y	N

WSM 31634 - Fieldwalk SE of Lower End Farm, Great Comberton

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	30	170	2nd-3rd century	Y	N
Clay tile/brick	3	18	Roman	Y	N
Metal	2	8	Roman	Y	N
Flaked stone - flake	2	4	Prehistoric	Y	N

WSM 34238 - Fieldwalk at Pensham

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	18	188	2nd-3rd century	Y	N
Clay tile/brick	1	24	Roman	Y	N
Clay tile - roof	1	2	Roman	Y	N
Flaked stone - flake	6	33	Prehistoric	Y	N

WSM 34322 - Fieldwalk at Smallbrook Farm, Broadway

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	1	11	Prehistoric	Y	N
Pottery	5	45	IronAge/ Roman	Y	N
Pottery	1728	13408	2nd-4th century	Y	N
Clay tile/brick	1	11	Roman	Y	N
Clay tile - roof	3	231	Roman	Y	N
Flaked stone - flake	10	60	Prehistoric	Y	N

WSM 34855 - Elmont Coppice, Bredon Hill

Artefact type	Total	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	836	15135	1st-4th century	y	N
Clay tile - roof	1	425	Roman	Y	N
Organic - bone	13	230	undated	N	N
Organic - worked bone	1	8	?Roman	N	N

WSM 35828 - Excavation at Murcot

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	1	11	Iron Age/ Roman	Y	N
Pottery	40	826	2nd-late 4th century	Y	N
Clay tile - roof	5	248	Roman	Y	N

WSM 35834 - Fieldwalk at Ponderosa, Evesham

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	361	2971	1st-3rd century	Y	N
Clay tile/brick	24	322	Roman	Y	N
Clay tile - roof	4	223	Roman	Y	N

WSM 35836 – Bredons Norton 1912 excavations

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	61	752	1st-4th century	Y	N
Iron	60	638	undated	N	N

WSM 35838 and 38363 – Bredon Hill excavations 1912-44

Type	Count	Weight (g)	Period	Specialist report?	Key assemblage?
Pottery	5639	107,891	mid 1st-4th century	Y	N
Pottery	8	152	Medieval	N	N
Pottery	18	429	Post-medieval	N	N
Clay - object	1	12	Post-medieval	N	N
Iron - object	66	1089	Undated	N	N
Cu alloy - object	18	56	Undated	N	N
Cu alloy	2	8	Modern	N	N
Lead	5	105	Undated	N	N
Slag	6	44	Modern?	N	N
Mineral - painted plaster	1	2	?Roman	N	N

Organic bone -	48	791	Undated	N	N
Organic worked bone	2	4	Undated	N	N
Organic -shell	23	271	Undated	N	N
Flaked stone - flake	1	7	Prehistoric	N	N

WSM 35839 - Elmont Field, Bredon Hill

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	1110	12,301	2nd – late 4th century	Y	N

WSM 35840 – Nettlebeds Field, Bredon Hill

Artefact type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	134	1910	2nd-3rd century	Y	N
Clay tile	1	-	Roman	N	N

WSM 35841-2 – Overbury and Overbury Park, Bredon Hill

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Pottery	11,094	65,024.5	2nd-4th century	Y	Y
Organic bone/ other finds	10,935	47,441	Mixed mostly Roman	Y	N

WSM 35845 - Fieldwalk at 'Five Acres' field, Glenmore Farm, Wick

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Flaked stone - flake	1	2	Prehistoric	Y	N
Clay	3	19	Roman	Y	N

tile/brick					
Pottery	19	270	2nd-3rd century	Y	N

WSM 38560 – Hoarstone Farm, Trimpley Top

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Flaked stone - object	15		Mesolithic	Y	N
Flaked stone - object	1		Mesolithic/early Neolithic	Y	N
Flaked stone - object	3		Bronze Age	Y	N
Flaked stone - flake	223		Mesolithic	Y	N

WSM 38558 – King's End, Worcestershire

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Flaked stone - object	10		Mesolithic	Y	N
Flaked stone - flake	96		Mesolithic	Y	N

WSM 38559 – Bevere, Worcestershire

Type	Count	Weight (g)	Date	Specialist report?	Key assemblage?
Flaked stone - object	2		Mesolithic	Y	N
Flaked stone - flake	29		Mesolithic	Y	N
Stone - object	1		Prehistoric	N	N

