

ARCHAEOLOGICAL
EXCAVATION AND WATCHING
BRIEF
AT THREE SPRINGS ROAD,
PERSHORE,
WORCESTERSHIRE



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Archaeological excavation and watching brief at Three Springs Road, Pershore, Worcestershire

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With contributions by Laura Griffin and A. J. Clapham

Summary

An archaeological excavation and watching brief were undertaken on land off Three Springs Road, Pershore, Worcestershire (NGR SO 937 454). They were undertaken on behalf of JS Bloor Ltd and Bellway Homes Ltd and were required as a condition of planning permission (Planning reference W/10/2127) from Wychavon District Council for the construction of 132 dwellings including 40 affordable homes with associated access and works.

The aims of the project were to investigate archaeological remains of Romano-British date identified in an archaeological evaluation of the site. The site is located on the western side of Three Springs Road which lies on the western edge of Pershore, on a gravel terrace above the floodplain of the River Avon which flows 500m to the south. Prior to the excavation the site consisted of small paddocks under pasture with permanent and temporary farm buildings accessed by several tracks.

Three excavation areas were stripped by mechanical excavator to the top of archaeological deposits and subsequently sampled by hand excavation and recorded. Subsequent groundworks on the site were subject to a watching brief.

The most significant period for evidence of occupation was from the Late Iron Age and early Roman periods, with a peak in the 1st – 2nd centuries AD. This activity comprised two parallel ditches forming a droveway, aligned east-west across the site, flanked by a number of enclosures and ditches of varying sizes forming pounds and stockades with a function likely to be related to the husbandry of livestock. Material recovered from the ditches indicated the presence of an occupation site in the close vicinity, possibly of high status, though no structures were observed within the excavation area. The droveway is likely to have led from the higher ground to the east of the site, to the edge of the River Avon floodplain to the west. A number of undated pits and possible post-holes were also recorded as well as post-medieval furrows the remnants of strip-field agriculture.

Report

1 Background

1.1 Reasons for the project

An archaeological excavation was undertaken on land off Three Springs Road, Pershore, Worcestershire (NGR SO 937 454) (Fig 1). It was commissioned by JS Bloor Ltd and Bellway Homes Ltd.

The survival of archaeological remains within the site was established by evaluation of the site carried out in 2009. Planning permission for residential development of the site was granted by Wychavon District Council (Planning reference W/10/2127) subject to conditions including a programme of archaeological works. A brief was prepared by the Planning Advisory Service of Worcestershire County Council (the Curator) in January 2011 (WCC 2011), for which a project proposal (including detailed specification) was produced, (WA 2011) which set out the requirement for excavation of part of the site.

The project also conforms to the *Standard and guidance for archaeological excavation* (IfA 2008) and *Standards and guidelines for archaeological projects in Worcestershire* (WCC 2010). The event reference for the excavation element of the project is WSM44967 and WSM44968 is the event record for the watching brief.

2 Aims

The aims of the excavation were as follows:

- To examine the archaeological resource within the defined area within a framework of defined research objectives, to seek a better understanding of them and compile a lasting record of that resource, to analyse and interpret the results and disseminate them;
- Following preliminary assessment of the results from the evaluation that the site represented Late Iron Age – early Roman activity, to further characterise and define the nature and dating of these.
- To consider all results within regional and national research frameworks as appropriate.

3 Methods

3.1 Personnel

The fieldwork element of the project was led by Simon Sworn (BA (Hons) Archaeology who has been practicing archaeology since 1999. The report was written by Andrew Mann, who joined Worcestershire archaeology in 2004 and has been practicing archaeology since 2001 and Pete Lovett who joined the service in 2012 and has been practising archaeology since 2004. The project manager responsible for the quality of the project was Tom Rogers M.Sc. Illustrations were prepared by Carolyn Hunt.

3.2 Documentary research

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER).

3.3 Fieldwork strategy

A detailed specification was prepared by Worcestershire Archaeology (WA 2011a). Fieldwork was undertaken between 11th April and 5th September 2011. The site reference number and site code is WSM 38434.

The excavation area amounted to just over 5500m² within a development site of 5ha. The location of the excavated areas are shown in Figure 2. Deposits considered not to be significant were removed using a 360° tracked excavator, employing a toothless bucket and under archaeological

supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2011).

For the watching brief, observation of the excavated areas was undertaken during and after machine excavation. The exposed surfaces were, in general, sufficiently clean to observe well-differentiated archaeological deposits, although in the event, no significant archaeological deposits were observed outside the areas of excavation.

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. The drawn record from the main excavation has been digitised and amalgamated with the site survey to provide an overall digital drawn record of the site. Context data was entered into a Microsoft Access 2000 database.

A stratigraphic matrix has been created and integrated with dating information based on the finds analysis to produce a phased plan.

3.5 Artefact methodology, by Laura Griffin

3.5.1 Artefact recovery policy

The artefact recovery policy conformed to standard Service practice (CAS 1995, appendix 4).

3.5.2 Method of analysis

All finds from fieldwork were retained in accordance with the County Archaeological Service manual (CAS 1995, as amended). Finds were processed as appropriate to their material type; for example ceramics were washed, marked, catalogued, bagged and boxed while metal work and other delicate finds were carefully packed and stored following guidelines in *First Aid for Finds* (Watkinson 1998).

All hand-retrieved finds were examined and a primary record was made on a Microsoft Access 2000 database. Artefacts were quantified and, where possible, provisionally identified and dated, providing a terminus post quem date for each stratified context. These spot dates have been used to determine the broad date of phases defined in the stratigraphic sequence.

3.6 Environmental archaeology methodology, by Alan Clapham

3.6.1 Sampling policy

The environmental sampling strategy conformed to standard Service practice (CAS 1995, appendix 4). Large animal bone was hand-collected during excavation. Samples of up to 40 litres were taken from 11 contexts, from ditch, pit and stakehole fills which were of Iron Age/Romano-British date.

The samples were processed by flotation using a Siraf tank. The flot was collected on a 300µm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residues were fully sorted by eye and the abundance of each category of environmental remains estimated. The flots were scanned using a low power MEIJI stereo light microscope and plant remains identified using modern reference collections maintained by the Service, and seed identification manual (Cappers *et al* 2006). Nomenclature for the plant remains from Stace (1997).

A magnet was also used to test for the presence of hammerscale.

Samples were taken according to standard Worcestershire Archaeology practice (2011). A total of 11 samples (each up to 40 litres) were taken by the excavator from deposits considered to be of high potential for the recovery of environmental remains.

3.6.2 Processing and analysis

For each of the samples a sub-sample of 1 litre was processed by the wash-over technique as follows. The sub-sample was broken up in a bowl of water to separate the light organic remains from the mineral fraction and heavier residue. The water, with the light organic fraction was decanted onto a 300µm sieve and the residue washed through a 1mm sieve. The remainder of the bulk sample was retained for further analysis.

The samples were processed by flotation using a Siraf tank. The flots were collected on a 300µm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residues were fully sorted by eye and the abundance of each category of environmental remains estimated. A magnet was also used to test for the presence of hammer scale. The flots were scanned using a low power MEIJI stereo light microscope and plant remains identified using modern reference collections maintained by Worcestershire Archaeology, and a seed identification manual (Capper *et al* 2006). Nomenclature for the plant remains follows the *New Flora of the British Isles*, 3rd edition (Stace 2010).

3.7.3 Discard policy

The samples will be discarded after a period of 6 months after the submission of this report, unless there is a specific request to retain them.

3.7 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4 The application site

4.1 Topography, geology and archaeological context

The Parish of Pershore lies in a meander of the River Avon and the site lies to the south-west corner of the town on a terrace above the north bank of the river valley (Fig 1). The site is bounded to the east by Three Springs Road (A4104), leading from Pershore to Defford, to the south by a cemetery, to west by open fields and to the north by a housing estate.

The site drops from about 32m AOD in the north to approximately 23m AOD in the south. The covering soils are of the Evesham 2 Soil Association (411b) comprising slowly permeable calcareous clayey soils and some slowly permeable seasonally waterlogged non-calcareous clayey and fine loamy or fine silty soils over clay. The underlying geology of the site comprises of the Charmouth Mudstone Formation. In the south-eastern part of the site (on the lower ground) the drift geology comprises of the gravels of the 2nd gravel terrace of the River Avon. Topsoil and subsoil horizons are deeper to the west of the site due to the presence of hillwash (colluvium) from higher ground on this side.

Iron Age and Romano-British settlements are known to have existed on the gravel terraces along this stretch of the Avon Valley, the closest being at Defford to the south west of Pershore (NMR 1053752) and at Allesborough to the north (WSM 20060). The former is represented in the form of rectilinear enclosures and trackways seen as cropmarks, the latter has been partially excavated and identified as an area of Iron Age activity, specifically the Dobunnic period continuing into the Roman 'era' (Hurst *et al* 1993).

Prior to the evaluation, no previous archaeological work is known to have taken place on the site but finds, mainly of early Roman date, have been recovered from the adjacent cemetery (WSM 38433 and 38434; Fig 1). Over 60 sherds of pottery were retrieved during excavation for five new graves in the churchyard and the fragments represent a range of domestic vessels, chiefly in Severn Valley wares (SVW).

Archaeological investigations (WSM 39879 and 40600; Fig. 1), to the south of the cemetery, uncovered an enclosed settlement, bounded by large rectilinear ditches, with zones of activity defined by smaller internal ditches. Occupation of the settlement was probably from the Late Iron Age to the 3rd century (Hughes and Vaughan, 2009).

To the south-east of the site a cropmark of an enclosure, identified from an aerial photograph, probably dates from the Iron Age or Roman period (WSM 40861; Fig. 1).

Evidence of medieval or post-medieval ridge and furrow is visible at the site in several of the paddocks especially in the northern part of the site. Other areas of ridge and furrow have been identified in the vicinity of the site (WSM 02685; Fig. 1). The 1885 1st edition 1:2500 Ordnance Survey Map (not illustrated) shows the site as an orchard.

4.2 Current land-use

The development site of approximately 5 hectares consisted of small paddocks under pasture with several permanent and temporary farm buildings accessed by several small tracks.

5 Structural analysis

The archaeological site area and features recorded are shown in Figs 2-5.

5.1.1 Phase 1: Natural deposits

Natural deposits were noted in all the trenches and excavation areas, and consisted of yellowish orange sands and gravels.

5.1.2 Phase 2: Prehistoric deposits

No features, layers or structures of prehistoric date were identified although several fragments of flint were recovered as a residual component of later assemblages. This included a possible piece of débitage from the base of a furrow 103 recorded in evaluation Trench 1.

5.1.3 Phase 3: Late Iron Age - Roman deposits

An early layer 1068 to the very east of the site lying directly above the natural geology and below the subsoil 1014 has been interpreted as an early soil horizon dating to either the Iron Age or very early Roman periods. It was up to 0.18m thick and its survival within the eastern edge of the site is likely to have resulted from its burial below colluvium.

Droeway/parallel ditches

Running across the site were numerous east to west aligned ditches, set roughly 4.5 – 5.0m apart. These ditches defined various phases of a droeway leading from the higher ground to the north, towards the flood plain on the western reaches of the River Avon (Plates 2-5). The droeway is thought to have originated in the Late Iron Age and had been re-cut numerous times prior to abandonment.

The earliest phase of activity relating to the droeway appears to be the construction of two parallel ditches forming the droeway boundary, 1018 to the south and 1038 and 1233 to the north. Due to the early phase of these ditches they were heavily truncated by the later activity and only appeared in a fragmentary nature.

The northern side of the droveway was more complex, with up to seven visible re-cuts and the addition of a number of enclosures to the north (Fig 4). The longest surviving element of this part of the droveway was ditch 1012, the penultimate phase of re-cutting. This ran for approximately 49.0m and was up to 0.95m wide and 0.32m deep. This linear cut enclosure ditch 1010 and was subsequently cut by enclosure ditch 1027. The deepest section of the northern half of the droveway 1206 was 0.95m wide and 0.43m deep. These ditches ranged in shape from shallow U-shaped to steep V-shaped profiles and all contained similar greyish brown sandy clays. As the droveway extended to the higher ground to the west (into Field 3), the ditches become fewer in number and considerably shallower and as the droveway extended under the western baulk there was only a single ditch visible 1233. This appears deliberate as a number re-cuts terminated rather than a gradual petering out through later truncation or erosion, though this must have had some effect on the depth and width of the remaining ditches. There was little evidence for the upcast being used for an associated bank other than in 1206 where there appeared to be re-deposited natural slumping from the north.

The southern side of this droveway contained at least three visible phases. The earliest phase 1020 was heavily truncated by later ditches and little survived. The two later droveway ditches had shallow, slightly concave profiles and ran the length of the excavated area. As a group these ditches appeared less substantial than their northern equivalents but were a maximum of 1.28m wide and 0.30m deep. There was no evidence for an associated bank on this side of the droveway but the ditches were filled with similar homogenous greyish brown sandy clays.

In between the droveway ditches there was no sign of a track or other hard surface; this may have been due to later truncation through ploughing. The lack of any stone within the flanking ditches does however imply that the internal space may have just been earth.

Group of enclosures to north of droveway

Ditches 1040 and 1037

The earliest enclosure on the site was formed from ditch 1040, which extended from the eastern baulk of the excavation area following the alignment of the droveway, and then turned northwards to continue for about 13m. This ditch was heavily truncated by later enclosure ditches, as was the similarly aligned ditch 1037 suggesting that earlier enclosure circuits may have been more extensive than were visible and all three may represent the corner of a larger, truncated enclosure (Plate 6, Fig 5). Ditch 1040 was the more substantial of these with a steep v-shaped profile. It was a minimum of 1.40m wide and 0.65m deep and contained firm orangey brown silty clay.

Ditch 1010/1081/1222

The most complete enclosure circuit was ditch 1010/1081/1222 which formed an almost square enclosure to the north of the droveway. This 'V' shaped ditch was up to 1.35m wide and 0.80m deep and contained dark greyish brown clayey silts (Plate 7). The southern side of this enclosure truncated the earlier northern droveway ditch 1192 but was subsequently truncated by the droveway ditches 1012/1190/1198 and 1188 (Fig 4). This suggests that for a period the southern enclosure ditch also defined the droveway.

This enclosure was approximately 46m wide but appeared incomplete as the northern ditch turned south to form a smaller internal enclosure with ditch 1132 (Plate 8). This smaller internal enclosure was approximately 12m wide with a 1.40m wide entrance on the south west corner. The northern side of the main enclosure may have been bounded by a fence or hedge which is not visible in the archaeological record.

North-South aligned ditch 1055/1027

Located to the northeast of the site this ditch extended northwards for 48.50m, from the driveway after turning from an approximate east to west direction similar to the ditches 1037 and 1040. This ditch was not uniform and ranged from a shallow U-shaped profile to moderately steep V-shaped ditch (Plate 9). This ditch may have formed part of another large enclosure extending north of the driveway, however, only one side and a corner were visible so its form remains unclear. This ditch truncated earlier enclosure ditches 1040, 1037, 1038 and 1010, and was later cut by ditch 1127 (Fig 5).

Ditches 1078 and 1127

One of the later phases of construction at the site was the reinstatement of the small internal enclosure within the northeast corner of enclosure 1010/1081 (Plate 8). This included two ditches 1078 and 1127 which were very similar in form to the original internal enclosure including keeping a very small entrance on the south west corner, approximately 0.60m wide. Although these ditches reinstated the form of the earlier enclosure its eastern boundary is now likely to have been enclosure ditch 1027. These ditches had V-shaped profiles and measured up to 1.56m wide and 0.66m deep and contained homogenous reddish brown sandy silts. Re-deposited material from the original bank indicated that the up-cast was located on the internal east and southern side

Ditch 1008/1069

The final phase of alterations to the enclosures was the construction of ditch 1008/1069; this had the result of completing the circuit of enclosure ditch 1010 on its northern side. Its western extents were not established but it is likely to have been the remnants and bank of enclosure ditch 1222. This would have created a smaller enclosure approximately 38.0m wide. It would also have made the smaller internal enclosure 1078/1127 redundant while apparently creating another driveway with enclosure ditch 1077 running north to south off the original driveway. The extent of this enclosure was not fully determined in the excavation, though it could be seen extending from Field 2 into Field 3 and would appear to be the latest of the enclosures, although it may represent the reuse of part of the 1010 enclosure circuit and permanent formation of a northern boundary (Plate 10, Fig 5).

Gullies 1022 and 1036

Within enclosure 1010 there were three small gullies. Both 1036 and 1022 appeared to form a small enclosure within the south east corner with an entrance to the north-west, while 1075 appeared to create a further partition within the small north-eastern internal enclosure. These gullies had U-shaped profiles and were up to 0.50m wide and 0.44m deep, containing greyish brown silty sands. Gully 1075, was cut by three sub-circular post holes running along its length 1138, 1147 and 1151 probably forming a fence line.

Pit 1065

A single isolated pit 1065 was located just to the north of ditch 1069. This wide, but shallow pit contained a large quantity of Roman pottery and may have acted as a rubbish pit.

5.1.4 Phase 4: Late post-medieval (Mid – late 18th century) deposits

Three east-west aligned furrows were noted in Field 1, to the south of the site, and ten furrows, aligned in the same direction, in Field 3. These furrows were roughly 0.75m wide and 0.10 – 0.15m deep, with irregular sides and bases. The furrows were spaced c7m apart in both fields. No furrows were recorded in Field 2, the likelihood being that the existing field boundary was also present at the time of the furrows origin, or that the depth of the underlying colluvium here reduced the visibility of the furrows. Only 7 out of the 13 furrows were excavated, pottery and clay pipe stems from these features indicate a post-medieval date.

5.1.5 Phase 5: Modern (19th century – 20th century) deposits

Also noted across the site were a number of recent services, including field drains, water pipes and electric cables associated with existing use of the land for animal paddocks and an above ground swimming pool, dumped waste building material and footings for earlier farm buildings.

5.1.6 Phase 6: Undated

Two postholes were located to the north of the driveway in Field 2. These postholes (1092, 1094), located 5m apart, were both circular and roughly 0.40m diameter but only 0.15m deep. Both contained no datable finds, but the fills appeared to be very similar to the overlying topsoil. There were no visible post pipes within these features, suggesting that these two features may relate to recent activity associated with the farm, possibly fence or gate posts where the post has been forced into the ground by machine.

Two pits were recorded in Field 3 that lay within the driveway. A sub-circular pit (406: Trench 4), 0.81m deep with fairly steep sides and containing 3 fills, was excavated during the evaluation phase. The second pit 1230 was recorded during the main excavation phase, this pit was considerably shallower. Neither pit contained any datable material, though their location within the driveway may suggest that they pre or post-date the main Roman activity.

To the north of Field 2 a sub circular pit with steep concave sides and a concave base, 1.20m in diameter and 0.56m deep (Plate 1) was recorded. This contained occasional fire-cracked stones within a compacted dark brown sandy silt. It is unlikely that this pit was used for the disposal of waste material due to the lack of any finds but may have originated as a gravel extraction pit as it was located in an area of high density gravels. In Field 3 a small shallow pit 1218 also contained high quantities of fire-cracked stones and charcoal, but no dateable material. The presence of fire-cracked stones implies that these pits may have been prehistoric in origin.

5.2 Artefact analysis, by Laura Griffin

The artefactual assemblage recovered is summarised in Tables 1 and 2.

All hand retrieved finds were examined and identified, quantified and dated to period. Where possible, a *terminus post quem* was produced for each stratified context, which was used for determining the broad date of structural phases. Records from both stages of fieldwork were entered into a Microsoft Access 2000 database. Artefacts from environmental samples were examined, but none were worthy of comment and are not included in the overall quantification.

Pottery was examined under x20 magnification and recorded by fabric type and form. All fabrics were referenced to the fabric reference series maintained by Worcestershire Archaeological Service (Hurst and Rees 1992; <http://www.worcestershireceramics.org>). Sherds that could not be identified or were too small to be identified accurately by fabric were grouped within miscellaneous prehistoric or Roman fabric categories 97 or 98. The pottery was classified into form types on the basis of shape, size, rim type and decoration. Where possible forms were categorised and dated using the appropriate published typology for the specific fabric type.

The preservation of sherds was varied with some display very high levels of abrasion and softening whilst others were virtually unaffected. This was most noticeable amongst the fine wares with some having no slip surviving, whilst others were still glossy in appearance. However, there does not appear to be any obvious correlation between level of preservation and feature type or date. The assemblage also contained a high enough number of diagnostic sherds to enable a measure of 'Estimated Vessel Equivalent' (EVE) using rim measurement.

Where possible, the results from analysis of this assemblage have been compared to assemblages from other local and regional sites in an attempt to identify any common themes.

A selection of forms is illustrated in Figs 6 and 7.

6 Results

6.1 The artefact assemblage

A substantial assemblage was recovered and is summarised in Table 1. Material could be dated from the Late Iron Age period onwards, but with the vast majority being of Roman date. Only a very small amount of later material was identified. Level of preservation was fair with the majority of material displaying moderate levels of abrasion. The most abundant material type recovered was pottery.

The pottery

The excavation and watching brief at Three Springs Road, Pershore produced a total of 1404 sherds of pottery weighing 19874g (Table 1). Of these, 1389 sherds (19696g), representing 99% of the assemblage, were in Iron Age and Roman fabrics (Table 2). Only these are discussed in detail in the report that follows. Sherds classed as late Iron Age/early Roman in date consisted primarily of handmade Malvernian ware (fabrics 3 and 3.1), with smaller quantities of palaeozoic limestone- (fabric 4.1), sand- (fabric 5.1), sandstone- (fabric 5.2) and mudstone- (fabric 9) tempered sherds also identified. These fabrics were produced into the Roman period and can be difficult to date if only base or body sherds were represented. It was not always possible, therefore, to separate Iron Age and Roman assemblages for quantification; some of the above wares from Roman contexts may be residual.

Material type	Total	Weight (g)
Pottery	1404	19874
Ceramic building material	20	462
Fired clay	252	4668
Loomweights	3	1047
Oven material	23	589
Copper Alloy	2	5
Iron	63	239
Iron slag	4	818
Flint	6	14
Fire-cracked stone	9	708
Glass	3	4

Table 1: Quantification of the artefactual assemblage

fabric code	Fabric common name	Count	Weight (g)
3	Malvernian ware	81	959
3.1	Slab-built Malvernian ware	54	1291
4.1	Palaeozoic limestone	7	54
4.7	Fossil shell and grog (Earlier prehistoric)	1	34
5.1	Sand	1	3
5.2	Sandstone	5	26
9	Mudstone tempered ware; Group D)	22	433
12	Severn Valley ware	298	2786
12.1	Reduced Severn Valley ware	27	234

12.2	Oxidised organically tempered Severn Valley ware	90	1652
12.24	Fine oxidised Severn Valley organic variant	90	1412
12.3	Reduced organically tempered Severn Valley ware	13	453
12.5	Oxidised Severn Valley ware variant, sandy and micaceous	149	2410
12.6	Oxidised Severn Valley ware variant, common white inclusions	342	4776
12.7	Oxidised Severn Valley ware variant, vesicular	26	1040
12.8	Oxidised Severn Valley ware variant, vesicular	57	961
13	Sandy oxidized ware	12	37
14	Fine sandy grey ware	12	148
16	Grog tempered ware (BD32/33)	4	80
16.2	Handmade grog tempered ware	2	9
22	Black-burnished ware, type 1 (BB1)	47	174
29	Oxfordshire red/brown colour coated ware	1	24
32	Mancetter/Hartshill mortarium	1	24
33.1	Oxfordshire white mortaria	3	229
42.1	Dressel 20 type	12	278
43	Samian ware	2	6
43.1	Southern Gaulish samian ware	4	19
43.2	Central Gaulish samian ware	5	45
69	Oxidized glazed Malvernian ware	1	11
78	Post-medieval red wares	13	150
91	Post-medieval buff wares	1	17
97	Miscellaneous prehistoric wares	6	22
98	Miscellaneous Roman wares	7	20

Table 2: *Quantification of the pottery by fabric type*

The dating of diagnostic sherds indicated that occupation of the site probably started during the late Iron Age. However this is difficult to ascertain due to the vast majority of this material being residual within contexts of Roman date. The range of fabrics and forms was fairly standard for a lower order rural site in this region.

Catalogue of the illustrated pottery (Figures 6 and 7)

1. Small bowl with flat-topped rim in fossil shell and grog-tempered ware (fabric 4.7), Early Iron Age, context 1076
 2. Jar with simple everted rim in Palaeozoic limestone tempered ware (fabric 4.1), Late Iron Age, context 1130
 3. Large storage jar with grooved rim in mudstone tempered ware (fabric 9), Late Iron Age, context 1080
 4. Large storage jar in handmade Malvernian ware (fabric 3), Late Iron Age/early Roman, context 1064
 5. Jar with near-upright sides in handmade Malvernian ware (fabric 3), Late Iron Age/early Roman, context 1142
 6. Tubby cooking pot in handmade Malvernian ware (fabric 3), 1st-2nd century AD, context 1064
-

7. Plain rimmed bowl imitating BB1 form in handmade Malvernian ware (fabric 3), early-late 2nd century AD, context 1083
 8. Lower portion of a flagon with distinct rilling in oxidised Severn Valley ware (fabric 12), mid 1st- 2nd century AD, context 1076
 9. Flagon in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), 2nd century AD, context 1225
 10. Jar in oxidised organically tempered Severn Valley ware (fabric 12.2), 2nd-3rd century AD, context 1052
 11. Jar in reduced organically tempered Severn Valley ware (fabric 12.3), 2nd-3rd century AD, context 1080
 12. Jar in oxidised Severn Valley ware variant, sandy and micaceous (fabric 12.5), mid 1st-3rd century AD, context 1144
 13. Jar in oxidised Severn valley ware variant, common white inclusions (fabric 12.6), mid-late 2nd century AD, context 1057
 14. Jar in oxidised Severn Valley ware variant, vesicular (fabric 12.8), 2nd-3rd century AD, context 1064
 15. Bowl in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), 2nd-3rd century AD, context 1187
 16. Bowl in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), 2nd-3rd century AD, context 1185
 17. Bowl in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), mid 3rd-4th century AD, context 1225
 18. Bowl in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), mid 3rd-4th century AD, context 1154
 19. Bowl in oxidised Severn Valley ware variant, grog (fabric 12.7), 3rd century AD, context 1052
 20. Dish in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), mid 1st-2nd century AD, context 1044
 21. Dish in oxidised Severn Valley ware variant, grog (fabric 12.7), mid 1st-2nd century AD, context 1142
 22. Miniature carinated beaker in oxidised Severn Valley ware variant, common white inclusions (fabric 12.6), mid 1st-2nd century AD, context 1142
 23. Tankard in oxidised Severn Valley ware (fabric 12), late 2nd-3rd century AD, context 1057
 24. Tankard in oxidised Severn Valley ware (fabric 12), 3rd-4th century AD, context 1073
 25. Tankard in organically tempered oxidised Severn Valley ware (fabric 12.2), mid-late 1st century AD, context 1142
 26. Everted jar rim in Black-burnished ware I (fabric 22), early-mid 2nd century AD, context 1142
 27. Mortarium in Oxfordshire ware (fabric 33.1), AD100-170, context 1113
 28. Early Oxfordshire bowl in oxidised fabric with barbotine decoration (fabric 98), mid 1st-2nd century AD, context 1205
-

Late Iron Age/early Roman

Sherds classed as late Iron Age/early Roman in date were all of local production and consisted primarily of handmade Malvernian ware (fabrics 3 and 3.1), with smaller quantities of palaeozoic limestone- (fabric 4.1), sand- (fabric 5.1), sandstone- (fabric 5.2) and mudstone- (fabric 9) tempered sherds also identified. These fabrics were produced into the Roman period and can be difficult to date if only base or body sherds were represented. It was not always possible, therefore, to separate Iron Age and Roman assemblages for quantification; some of the above wares from Roman contexts may be residual.

Malvernian wares (fabric 3 and 3.1)

Vessels of handmade Malvernian ware (fabrics 3 and 3.1) comprised 106 sherds. The diagnostic sherds identified were all from jar forms and could be dated between the late Iron Age and 2nd century AD (fig. 6, nos. 4 and 5)

Palaeozoic limestone tempered ware (fabric 4.1)

A total of 7 sherds could be identified as of this fabric type. All were small and highly abraded but one was a rim sherd from a jar which could be dated to the Late Iron Age (context 1130; fig. 6 no.2).

The source of this pottery is still uncertain but has usually been ascribed to the Woolhope area of Herefordshire (Morris 1983, 120) with sherds generally found within a 40 mile radius of this location. This fabric is only found in small amounts in Worcestershire.

Fossil shell and grog tempered ware (fabric 4.7)

A single sherd of this fabric type was identified (context 1076) and came from a small, roughly formed bowl with a flat-topped rim (fig.6, no.1) similar to one found at Clifton Quarry which could be dated to the Early Iron Age (Griffin 2011).

Sand-tempered ware (fabric 5.1)

Just a single body sherd of sand-tempered ware was identified (context 1087). No production site for this fabric has yet been located but it is thought that it may have originated from South Worcestershire.

Sandstone tempered ware (fabric 5.2)

Five sherds of this fabric were present (contexts 1072, 1104 and 1148). None were diagnostic and therefore only datable between the late Iron Age and early Roman periods (Peacock 1967).

Again, no production sites have been identified for this fabric type but it is thought that they were located either in Worcestershire or Herefordshire.

Mudstone tempered ware (fabric 9)

A total of 22 sherds of this fabric were identified. All were highly abraded due to the soft nature of the fabric and frequent voids where the mudstone temper has been lost. A single rim sherd was present and came from a large storage jar with two grooves running around the top (fig. 6, no.3). Similar forms have been recorded at Beckford (J Wills in prep) and at Aston Mill Farm (Evans 1990) where they were dated to the Late Iron Age.

Roman

Roman pottery formed the largest material group within the assemblage, amounting to 1350 sherds and weighing 19.2kg. Spot dating of the sherds indicated occupation of the site up until the 3rd century with a peak between the 1st and 2nd centuries.

Typically for a rural site in Worcestershire, the group was dominated by locally produced vessels of Severn Valley ware and handmade Malvernian ware. Oxidised Severn Valley ware (fabrics 12, 12.2, 12.24, 12.5, 12.6, 12.7 and 12.8) formed the largest proportion of these totalling 1056 sherds. A significant number of these sherds were also diagnostic and could therefore be dated accordingly. Those that were undiagnostic were dated to the general established date range for the production of Severn Valley ware between the mid 1st and 4th centuries. The range of forms which could be identified was narrow, consisting of commonly identified vessel types.

These wares dominated the assemblage throughout the period of occupation, although the variations could be seen to peak at different intervals. In general, sherds of the organically tempered and grog tempered types (fabrics 12.2, 12.24, 12.7 and 12.8) were earlier being of 1st-2nd century date. Fabrics mainly identified within contexts of 2nd-3rd century included the most commonly identified fine Severn Valley ware (fabric 12) and variants containing sand and mica (fabric 12.5) and also non reactive white inclusions (fabric 12.6).

Reduced Severn Valley wares (fabrics 12.1 and 12.3) formed a far smaller proportion of the assemblage than their oxidised counterparts at just 36 sherds. However, the similarity in inclusions between some of the oxidised and reduced fabrics would indicate that a number were produced on the same kiln sites using the same clay source under different firing conditions. Once more, those of the organically tempered variant (fabric 12.3) are thought to be of earlier date.

Remaining coarseware fabrics were identified in smaller quantity but all were of types commonly found in rural assemblages of this period and included sandy oxidised wares (fabric 13), sandy greywares (fabric 14), grog-tempered ware (fabric 16) and Black-burnished ware I (fabric 22). Both the sandy oxidised and grey wares are thought to have been produced in either Gloucestershire or Warwickshire, although no production sites have yet been located. Sherds of both fabrics are routinely identified within assemblages from Worcestershire, albeit in relatively small amounts. Diagnostic sherds indicated that vessels of both fabrics were of 1st-2nd century date. The six fragments of grog tempered ware were also of similar date.

Dorset Black-burnished ware 1 was the only non-regional coarseware present within the assemblage and amounted to 47 sherds. The majority of these were undiagnostic and therefore only datable to AD120+, the accepted date for the first occurrence of this ware in the region. Those which were diagnostic were generally from 2nd-early 3rd century form types. A large proportion of sherds displayed sooting and/or evidence of burning attesting to use of the vessels over a fire, presumably for cooking purposes.

Specialised wares consisted of four sherds of mortaria, of Hartshill-Mancetter and Oxfordshire manufacture (fabrics 32 and 33.1) and 12 of amphora. As typical of this region, the amphorae sherds were of Dressel 20 type. Samian ware formed only a small proportion of the group, amounting to just 11 sherds. All were highly abraded fragments and initial identification indicated that all were of South or Central Gaulish production (fabrics 43.1 and 43.2 respectively).

Perhaps most notable within the assemblage was the distinct lack of Oxfordshire colour-coated ware (fabrics 29 and 30), of which just a single sherd was noted. This, along with the low proportion of Black-burnished ware present, further strengthens the theory that occupation of the site had ceased by the mid 3rd century.

Dating

Although dating of the stratified pottery ranges from the Early Iron Age through to the mid 3rd century, the features themselves can only be dated to the Roman period. The quantity of Iron Age pottery, particularly that of Late Iron Age date, clearly suggests pre-Roman activity on the site. However this cannot be identified stratigraphically. One plausible explanation for this is that repeated re-cutting of the boundary ditches has led to the mixing of the fills and their associated

finds. This has resulted in a high level of residuality and no clear sequence identifiable through the artefacts.

Functional composition of the assemblage

The rim sherds present within the assemblage amounted to a Rim Equivalent (RE) total of 9.54. Eight main categories were identified and classified according to the accepted definitions (Millet 1979; Evans 1993). These were beaker, cup, bowl, dish, flagon, jar, mortaria and tankard.

Range of forms

The relative proportions of vessels of each form as established by EVE rim equivalent (RE) can be seen in Table 3 below. From these figures, it can be clearly seen that the jar was the dominant vessel type present, accounting for 51% of diagnostic forms identified. This figure, along with the relatively small proportion of bowl and dishes at just 15.9%, is consistent with that frequently noted within assemblages from rural sites where jars commonly constitute over 50% and bowls under 30% of forms identified (Jeremy Evans pers comm.). This high frequency of jar forms can be attributed to the versatile nature of the form serving a variety of functions including the storage, cooking and serving of foodstuffs.

Drinking vessels constituted 22.2% of EVE's by RE. This figure includes tankards, by far the most common type, as well as cups and beakers. This figure is high for established patterns of rural assemblages, the presence of an unusually large proportion of tankard forms having significantly increased the total. Tankards are a regional anomaly, their production being confined largely to the Severn Valley area (Evans 2001, 30). As illustrated in the case of this site, the occurrence of this vessel type in rural assemblages from this region can raise the drinking vessel proportion of an assemblage to the point where it no longer fits into established functionality patterns.

Form	EVE by RE
cup	0.09
beaker	0.60
bowl	0.98
dish	0.56
flagon	0.87
jar	4.82
mortarium	0.16
tankard	1.46

Table 3: *Functional composition of assemblage based on EVE by RE*

Vessel form in relation to fabric

Analysis of diagnostic sherds within the assemblage revealed only a narrow range of forms, even in locally produce fabrics. A table displaying the relationship between fabric and form by EVE RE measurement can be seen in Table 4. Forms of Severn Valley ware, the most commonly identified fabric type are discussed in more detail below.

pot form type	Fabric number														
	Total EVE	3	12	12.1	12.2	12.24	12.3	12.5	12.6	12.7	12.8	14	22	33.1	43.2
cup	0.09					0.09									
beaker	0.60		0.18		0.07				0.35						
bowl	0.98	0.06	0.22	0.06					0.35	0.17					0.06
dish	0.56								0.07	0.43					0.06
flagon	0.87		0.30						0.57						
jar	4.82	0.40	0.11	0.15	0.20	0.59	0.46	0.74	1.18		0.45	0.29	0.25		
mortarium	0.16													0.16	
tankard	1.46		0.45		0.50	0.14		0.09	0.28						
Total EVE	9.54	0.46	1.26	0.21	0.77	0.82	0.46	0.83	2.80	0.60	0.45	0.29	0.25	0.16	0.12

Table 4: Functional composition of assemblage by fabric

6.2 Severn Valley ware

Vessel forms within these locally produced fabrics were identified according to the main groups identified by Webster (1976). The variety of forms recorded was relatively wide with a variety of common and more specialised form types identified (see Table 5 below).

Forms comprised mainly narrow-mouthed jars, wide-mouthed jars, tankards, dishes and bowls, with more specialised forms including carinated cups and flagon forms. Jars were the most common form type amongst the Severn Valley ware fabrics with the occurrence of narrow-necked types only marginally greater than that of the wide-mouthed variety. In contrast to the more versatile jar forms only 9 bowls and dishes could be identified, possibly as a result of wide-mouthed jars being able to serve the same function adequately.

Tankards of Severn Valley ware were the main specialised drinking vessel form retrieved from the site, with five carinated cups being the only additional specific drinking form, although other vessels may have doubled up to serve this function also. Other specialised forms amongst the Severn Valley wares consisted of two flagons.

Form	Total	12	12.1	12.2	12.2 4	12.3	12.5	12.6	12.7	12.8
Bowl	8	2	1					4	1	
Dish	2							1	1	
Jar	18			2	3	3	3	5		1
Wide-mouthed jar	14	3			2		5	2	1	1
Tankard	13	4		2	2	1	1	3		
Carinated cup	5	2		1				2		
Flagon	2							2		

Table 5: Quantification of Severn Valley ware forms by fabric (minimum no. of vessels)

Pottery supply to Three Springs, Pershore

Characterisation of the assemblage from Three Springs has been aided over recent years by an increase in comparable data resulting from the excavation of similar Late Iron Age-early Roman rural sites across South Worcestershire, such as those along the Wyre Piddle Bypass (Griffin 2011), Throckmorton Airfield (Griffin 2005) and most recently, Bengeworth School, Evesham (Griffin, forthcoming). The results from this assemblage will continue to add to and build on this growing body of published, quantified data and contribute to future syntheses.

Comparison with these assemblages has indicated that the relative proportions of fabrics from Three Springs are of a standard pattern for a lower order rural site of this type within the region, with an overwhelming dominance of locally produced wares throughout the period of occupation. These local wares are supplemented by smaller amounts of more specialised non-local types such as mortaria from Hartshill-Mancetter and also cooking wares such as Black-burnished ware I – all of which are known to have been widely available in the area and are regularly found within other assemblages from around Worcestershire. Likewise, the paucity of imported and fine wares within the assemblage is consistent with the pattern which has been noted on other nearby sites.

As noted above, the narrow range of form and fabric types, coupled with an absence of those commonly associated with later assemblage would indicate that settlement did not continue beyond the mid 3rd century at the latest.

Other finds

6.3 Ceramic building material

Ceramic building material amounted to 20 fragments weighing 462g. Of these, just four could be securely dated to the Roman period (contexts 1079, 1085 and unstratified). The remaining fragments were medieval or later in date or too small to firmly identify.

Loom weights

Three substantial pieces of loom weight were retrieved from a single ditch (context 1080). All represented individual objects and the most complete of the three could be identified as triangular in form. The other two were more fragmentary and it was not possible to assign a specific form type to them. However, all have a single hole, although whether there were originally more it is not possible to ascertain. Likewise, none of the examples were complete enough for dimensions to be recorded.

Although almost certain to be Late Iron Age in date, the ditch from which the objects were retrieved also contained a good amount of Roman pottery dating between the 1st and 2nd century and it would appear that these weights are a result of rubbish disposal rather than any form of structured deposition.

6.4 Fired clay

A substantial assemblage of 252 pieces of fired clay weighing 4668g was retrieved, all of which is thought to be from a local source and of Late Iron Age or early Roman date. The majority of fragments were largely undiagnostic but many had distinctive smoothed surfaces. Possible explanations for this is that they may come from oven superstructures similar to the near complete

example previously identified within the assemblage from Childswickham villa site (Patrick and Hurst 2004) or from loom weights similar to those described above.

6.5 Ceramic oven material

In addition to the possible fired clay superstructure fragments above, a small group of oven material was also identified. This amounted to 23 fragments, all of slab built Malvernian ware (fabric 3.1). All were flat and tile-like in appearance and diagnostic sherds all had straight edges with squared-off profiles.

Similar material has been identified within a number of assemblages locally, including Beckford (D Hurst pers comm.), Hindlip (Griffin 2010) and George Lane, Wyre Piddle (Griffin 2011). Examples from outside of the county seem to be confined to Oxfordshire and Warwickshire and all are Roman in date with the majority dating to the latter half of the period, although they are present in smaller number in assemblages of the late 1st century onwards, as is the case on this site. In addition, they are more common on rural sites (Cool 2006, 41).

6.6 Metalwork

Copper alloy

Copper alloy from the site consisted of a 1st century brooch of Polden Hill type (context 1195; Hattatt 2000, fig.159) and a fragment of armband (context 1070).

The armband was highly corroded but could be seen to be crudely decorated with an incised zigzag pattern. Similar examples from elsewhere are commonly dated from the 3rd century onwards (Crummey 1981, 37), which is consistent with the date of the pottery from the same context.

Iron

Remaining metalwork was all of iron and consisted of three highly corroded, unidentified objects (contexts 1070, 1085 and 1088) and approximately 60 hobnails from a pair of decayed shoes discovered in-situ within context (1057). All are thought to be Roman based on associated artefacts.

6.7 Other finds

Flint

Six pieces of worked flint were identified (contexts 1034, 1070, 1080, 1105, 1134 and 1153). All were flakes and none displayed retouch (R Jackson pers comm.).

Heat-cracked stone

Nine pot-boilers were retrieved from the site and are consistent with an assemblage of Late Iron Age/Early Roman date (contexts 1032, 1079, 1136, 1138 and 1154).

Slag

Four pieces of iron slag were retrieved. All were undiagnostic but within firmly Roman contexts (1130, 1152 and 1160).

Glass

Three fragments of vessel glass were recovered, all were modern in date.

6.8 Environmental analysis, by A. J. Clapham

The environmental evidence recovered is summarised in Tables 6 and 7.

Wet-sieved samples

Categories represented and abundance

Of the eleven contexts sampled for environmental remains, seven were selected for analysis (see Table 6) and of these five produced charred plant remains (see Table 8). Overall the preservation of the charred plant remains was good enough to permit identification to species where feasible. Charcoal was present in most of the samples but was too fragmented to be identified with any confidence.

Context 1057

This context was the fill of ditch 1055 which was part of context group 1027. This ditch fill provided the richest and most diverse charred plant assemblage of those analysed from this site.

Cereal crops were represented by wheat (*Triticum* sp) grains, as well as chaff in the form of glume bases, spikelet forks and rachis fragments of spelt wheat (*Triticum spelta*). Therefore it is most likely that the wheat grains were of spelt wheat. Barley (*Hordeum vulgare*) was represented by the presence of chaff remains but due to the poor preservation it was not possible to determine if 6- or 2-row barley was represented. Other food crops identified from this context were cotyledons of broad bean (*Vicia faba*) and pea (*Pisum sativum*).

The weed assemblage was diverse and the majority of the taxa recovered are usually found in agricultural environments; these include fat hen (*Chenopodium album*), common chickweed (*Stellaria media*), corn cockle (*Agrostemma githago*), pale persicaria (*Perisicaria lapathifolia*), black bindweed (*Fallopia convolvulus*), sheep's sorrel (*Rumex acetosella*), docks (*Rumex* sp), vetch/pea (*Vicia/Lathyrus* sp), clover (*Trifolium* sp), cleavers (*Galium aparine*), cotton thistle (*Onopordum ananthium*), scentless mayweed (*Tripleurospermum inodorum*), spike-rush (*Eleocharis* sp) and darnel (*Lolium temulentum*).

Non weed taxa identified included a fragment of sloe stone (*Prunus spinosa*).

Context 1080

Context 1080 was a fill of a ditch 1081 within context group 1010. This context was the second richest both in terms of numbers and diversity of the plant remains.

Cereal remains were represented by the presence of wheat and barley grains and the chaff suggests that the wheat was of the spelt type. An oat grain was identified but without the diagnostic floret base it was not possible to determine if it represents a crop or a wild species. No other cereal or crop species were identified from this context.

Weed seeds were present in smaller numbers than the previous context and consisted of maple-leaved goosefoot (*Chenopodium hybridum*), common chickweed, shepherd's-purse (*Capsella bursa-pastoris*), vetch/pea, clover, red bartsia (*Odontites vernus*), ox-eye daisy (*Leucanthemum vulgare*), scentless mayweed, spike-rush, darnel and small grasses.

Context 1105

This context was the fill of ditch 1078 of context group 1078.

Plant remains were scarce in this context and consisted of single finds of a hulled barley grain, vetch/pea, narrow-fruited cornsalad (*Valerianella dentata*), scentless mayweed, darnel and small grass fruits.

Context 1118

This context was a fill of stakehole 1119 and was basically a very small sample and this is reflected in the small number of charred plant remains recovered which consisted of two *Prunus* sp, most likely sloe, thorns.

Context 1217

This context a fill of pit 1218 contained a single find of a dock nutlet.

Overview of environmental evidence

The charred plant remains identified from this site provide limited evidence for economic activity at the site. The charred remains found in 1105, 1118 and 1217 most likely represent a 'background flora' whilst the other two contexts 1057 and 1080 can provide some insight into the economic activity of the site.

Contexts 1057 and 1080 were both ditch fills and therefore it is most likely that the presence of the charred plant remains indicates the dumping of waste material. The presence of cereal chaff and weed seeds suggests that crop processing activities occurred on the site and were most likely grown locally. Other crops such as peas and beans were also grown.

The majority of the weed seeds are most likely to be associated with the cereal remains but the presence of cotton thistle and oxeye daisy may have a different origin.

Cotton thistle is classified as an archaeophyte (Preston et al 2002) which has been introduced by man but naturalised before AD 1500. There are archaeobotanical records from the Iron Age onwards (Preston et al 2002). The dating of this site to the late Iron Age/early Roman suggests that cotton thistle may have been grown as an ornamental rather than a weed. Cotton thistle is a striking 3 metre plant with grey or white-felted stem with single large purple or white thistle-like flowerheads. Therefore its presence here may suggest some horticultural activity.

Oxeye daisy is most often found in meadows and other grasslands and when associated with the small grass seeds that are found in the assemblage may indicate the presence of hay.

The presence of possible sloe thorns in stakehole 1118, suggest that this may have been the burnt remains of a small shrub rather than a stakehole.

Context	Sample	Feature type	Fill of	Context group	Sample volume (l)	Volume processed (l)	Analysis
1105	3	Ditch	1078	1078	40	10	Yes
1118	4	Stakehole	1119	0	0.3	0.3	Yes
1146	6	Pit	1147	0	0.5	0.5	Yes
1155	8	Ditch	1040	1040	20	20	Yes
1217	11	Pit	1218	0	40	20	Yes
1148	5	Pit	1149	0	15	0	No
1104	7	Ditch	1069	1069	40	0	No
1130	9	Ditch	1127	1127	40	0	No
1163	10	Ditch	1010	1010	40	0	No
1057	1	Ditch	1055	1027	40	40	Yes
1080	2	Ditch	1081	1010	40	20	Yes

Table 6: Samples processed and analysed from Three Springs Road, Pershore, Worcestershire

Context	Sample	large mammal	fish	charcoal	charred plant	hammersc	ale	Comment
1057	1	occ		occ				occ pot, burnt flint, flint waste

Context	Sample	large mammal	fish	charcoal	charred plant	hammersc ale	Comment
1080	2	occ		occ	occ		occ ash, pot, daub, fe nail, heated stone, waste flint
1105	3	occ		occ	occ	occ	occ pot, heated stone, burnt flint
1118	4			occ			occ burnt flint
1146	6	occ		occ	occ		occ ash, burnt flint
1155	8	occ burnt	occ	occ	occ		occ coal, heated stone, waste flint
1217	11	occ burnt		occ			abt heated stone

Table 7: Environmental summary of environmental remains recorded in the sample

Latin name	Common name	Habitat	1057	1080	1105	1118	1217
Charred							
<i>Triticum spelta</i> glume base	spelt wheat	F	15	2			
<i>Triticum spelta</i> rachis	spelt wheat	F	3				
<i>Triticum spelta</i> spikelet fork	spelt wheat	F	1				
<i>Triticum</i> sp grain	wheat	F	8	2			
<i>Triticum</i> sp spikelet fork	wheat	F	1				
<i>Hordeum vulgare</i> grain (hulled)	barley	F		2	1		
<i>Triticum</i> sp glume base	wheat	D	25	4			
<i>Hordeum vulgare</i> rachis	barley	F	2				
Cereal sp indet grain (fragment)	cereal	F	67	32			
Cereal sp indet culm node	cereal	F		1			
<i>Poa</i> sp grain	meadow-grass	ABCD	4	1			
<i>Bromus</i> sp grain fragment	brome grass	AF	1				
<i>Avena</i> sp grain	oat	AF		1			
<i>Avena</i> sp awn fragments	oat	AF		1			
Poaceae sp indet stem frags	grasses	ABCD		2			
<i>Ranunculus acris/repens/bulbosus</i>	buttercup	CD	1				
<i>Chenopodium hybridum</i>	maple-leaved goosefoot	AB		1			
<i>Chenopodium album</i>	fat hen	AB	8				
<i>Stellaria media</i>	common chickweed	AB	1	1			
<i>Agrostemma githago</i> fragments	corn cockle	AB	1				
<i>Persicaria lapathifolia</i>	pale persicaria	AB	1				
<i>Fallopia convolvulus</i> fragment	black bindweed	AB	1				

Latin name	Common name	Habitat	1057	1080	1105	1118	1217
<i>Rumex acetosella</i>	sheep's sorrel	ABD	3				
<i>Rumex</i> sp	dock	ABCD	2				1
<i>Rumex</i> sp fragment	dock	ABCD	1				
<i>Capsella bursa-pastoris</i>	shepherd's-purse	AB		6			
<i>Potentilla</i> sp	cinquefoil	BCDE	1				
<i>Prunus spinosa</i> (fragment)	sloe	C	1				
<i>Vicia faba</i> cotyledon	broad bean	AF	3				
<i>Vicia/Lathyrus</i> sp	vetch/pea	ABCD	12	1	1		
<i>Vicia/Lathyrus</i> sp (fragment)	vetch/pea	ABCD	21	6			
<i>Pisum sativum</i> cotyledon	garden pea	AF	1				
<i>Trifolium</i> sp	clover	ABD	8	1			
<i>Odontites vernus</i>	red bartsia	ABD		1			
<i>Galium aparine</i> fragment	cleavers/goosefoot	ABC	8				
<i>Valerianella dentata</i>	narrow-fruited cornsalad	AB			1		
<i>Onopordum acanthium</i>	cotton thistle	AB	1				
<i>Leucanthemum vulgare</i>	oxeye daisy	BD		1			
<i>Tripleurospermum inodorum</i>	scentless mayweed	AB	1	3	1		
<i>Eleocharis</i> sp	spike-rush	E	2	2			
<i>Lolium temulentum</i>	darnel	AB	19	7	1		
Poaceae sp indet (small)	grasses	E	8	3	1		
unidentified thorn						2	
unidentified bud					1		

Table 8: Charred plant remains from Three Springs Road, Pershore, Worcestershire

Habitat
A= cultivated ground
B= disturbed ground
C= woodlands, hedgerows, scrub etc
D = grasslands, meadows and heathland
E = aquatic/wet habitats
F = cultivar

Key to Table 8

7 Synthesis

7.1 Prehistoric

Two possible pits and the seven flint flakes recovered from the site suggest that there was local activity in the Neolithic or Bronze Age periods, but further inference is otherwise restricted

7.2 Late Iron Age/Roman Period

The sub-rectangular enclosure system and associated east-west aligned driveway occupied the majority of the excavated area. With a probable Late Iron Age origin, the site was predominantly a Romano-British settlement which was occupied until the mid-3rd century AD.

The earliest ditch emerged from the eastern baulk, on the same alignment as the driveway, before quickly returning north, where it terminated after about 13m. This was then cut by another ditch, which was visible only as it emerged from the eastern baulk and at its corner, as it too turned north. Both of these ditches suffered heavy truncation from later linear features, and, coupled with the fact that they extended beyond the limits of the excavation, it is difficult to determine their exact form. However, their emergence from the eastern edge suggests a further enclosure lay in that direction, and if its use wasn't entirely contemporary with the western one, it must likely have alternated with it. Indeed, Moore (2006, p.46) suggests that enclosures may have moved across small areas as they were successively being rebuilt. Additionally, such enclosures should not always be taken as discrete; conjoined enclosures or conglomerated settlements may lie beyond the often limited scope of the excavation area (ibid).

The most complete enclosure circuit visible was the second phase ditch which formed a rectangular enclosure, with an internal enclosure formed off its northern side. The western side ran beyond the limits of excavation, and no return was found to form the northern edge from this direction. It is possible that the northern side of the enclosure was formed by a fence or hedge that was not visible in the archaeological record. The southern edge of the enclosure truncated the existing northern gully of the driveway, and was in turn truncated by a later reinstatement of it, suggesting that this enclosure phase defined and acted as part of the driveway.

The small internal enclosure created in the north east corner of the enclosure was completed by a small ditch, running east to west. It was heavily masked by a later equivalent ditch, but formed a space approximately 12m across, with an entrance to the south west measuring 1.4m wide. Within this space was a small gully, running north-south, parallel to the western side of the enclosure ditch, and forming a further partition. It was cut by three postholes along its length, probably forming a fence line. In the south east corner of the circuit, there are two small gullies, which form a similar pen to that in the north east.

Running north-south along the eastern side of the site, and truncating that part of previous enclosure, was a third phase ditch. It followed the same path as the earliest seen linear, but where as that terminated, this one continued north beyond the limit of excavation. It is likely to have formed a large enclosure to the east, reinforcing the proposition stated earlier regarding the migratory nature of enclosures within a small area. This switching of site is reminiscent of crop rotation, allowing the ground to recover from intensive human and animal occupation, and if the ditches defining the enclosure are becoming tired too, it is logical to allow one site to lie 'fallow' for a period. It may have still had a function for activity on the western side, however. The small internal enclosure that was part of the second phase had by this point silted up and was replaced with new ditches.

The final phase of enclosure alteration involved the digging of ditch 1069, effectively cancelling out the internal enclosures in both the north east and south east. Running north-south just west of the first, second and third phase ditch line, before turning west in the north, it actually terminated in the southern extent of the second phase ditch, suggesting that the earlier enclosure was still partially extant in the landscape. This ditch also potentially formed a new driveway with the existing third phase ditch, which ran parallel.

A single isolated pit was located just outside the northern extent of the enclosure. This wide, but shallow pit contained a large quantity of Roman pottery and may have been used for disposal of refuse, at least as a secondary function

The droveways that ran to the south of the enclosure ditches featured numerous reinstatements, from a late Iron Age origin through to the early Roman period. Set roughly 4.5 to 5m apart, they connected the higher ground to the northwest with the flood plains of the River Avon in the southeast.

The earliest visible phase of the droveway consisted of parallel gullies; both were heavily truncated by later cuts. The northern side of the droveway contained the highest number of ditches, as it was a boundary with the enclosure. Of the seven visible recuttings, the longest ran for up to 49m, replacing the second phase enclosure ditch as the northern limit of the droveway. It in turn was truncated by a later ditch in the eastern extent of the site. The various other recuts gave the impression of being repairs rather than entirely new demarcations, as they were seen to truncate within existing ditches, and were not of a great length.

The ditches forming the southern side of the droveway were considerably shallower than those on the northern side. The deeper ditches to the north were likely to have been because the enclosures bounded against the droveway and the animals would have been kept here for some period of time, whereas the southern side would have been used solely as part of the droveway and would have only acted to steer the animals whilst under guidance.

The minimal amount of animal bone from the record suggests that this was not a permanent area for either stock storage or processing. Rather, it was likely to be for the temporary management of animals, be it castration, counting or trading. Which animal is unknown, but the likelihood is that it was cattle; the increase in cattle production in Roman Britain is well attested to (Albarella 2007). It has been suggested that this increase is as a direct result of the need to supply the Roman army, and the West Midlands has often been touted as the main centre for that industry (Cleary 2011). The Iron Age and Roman site of Church Farm West, Worcestershire, has evidence that suggests a transhumant community based on cattle production occupied the area, with a visible increase in production, if not settlement, during the Roman period (Webster, forthcoming).

It is thus likely that the droveway and associated animal pens at the Three Springs Road site formed part of a network of cattle rearing and movement along the Avon valley to major depots. A similar combination of enclosure and droveway has recently been excavated at Bengeworth on the edge of modern day Evesham (Walsh and Lovett forthcoming). Here a large enclosure defined by a V shaped ditch up to 1.4m deep lay adjacent to a droveway similar to the example at Three Springs Road. The entrance to this enclosure lay adjacent to a gap in the droveway and one phase of its existence is clearly associated with the sorting of livestock. Here, as at Three Springs Road, both enclosure and droveways had been recut multiple times indicating that the system was in use over many years. Whilst the Bengeworth site is a Mid to Late Iron Age settlement, the Roman occupation did not result in an overnight change in rural production patterns. Indeed, an equally important social upheaval came in that transition from Mid to Late Iron Age that saw sites like Bengeworth diminish (Ibid.). The continuation of this type of cattle production from Mid to Late Iron Age and onwards into the Roman period can thus be seen at both Three Springs and Bengeworth. The lack of any notable features south of the droveway indicates that the settlement recorded to the south of the modern cemetery (Hughes and Vaughan 2009) and possibly within the cemetery itself did not extend as far north as the Three Springs Road site. The artefactual assemblage and lack of structural evidence suggests that the cattle pens and droveway lay some distance from the focus of settlement. The material may have originated from the previously noted occupation area to the south, or from a secondary area, as yet unidentified. The presence of a Polden Hill brooch, samian pottery and amphora may suggest a settlement of slightly higher status than would normally be associated with a Roman farmstead. The dating of the assemblage clearly indicates a discontinuation of settlement by the mid 3rd century at the latest. This ties into a general pattern for the county as a whole, with rural settlement reaching a peak by the late 2nd to mid 3rd centuries, before an apparent abandonment in the 4th century (Jackson and Dalwood, 2007). Three Springs

does buck the regional trend somewhat though, having survived an apparent re-ordering of the rural landscape in the first half of the 2nd century (Ibid.).

The environmental evidence is limited, but does suggest that crop processing activities were occurring on or near the site. Because the samples came from ditch fills, it is likely the charred plant remains recovered were part of a dumping of domestic waste. Given the nature of the site, it is presumed that the domestic waste, and crop processing, was being generated elsewhere, possibly in the known settlement to the south of the cemetery.

7.3 Post-Medieval

Three furrows were noted in Field 1, whilst there were ten in Field 3. All were on an east-west alignment. From the seven excavated, pottery and clay pipe stems were recovered, indicating a post-Medieval date.

7.4 Undated

Two postholes located in Field 2, 1092 and 1094, were filled with a material similar to the topsoil, and are likely to be quite modern, but they lacked any dating. There were also two pits within the driveway in Field 3, whose location suggests a non-contemporaneous date with the driveway.

7.5 Research frameworks

The Roman remains can be placed in a context established by previous research, primarily Cleary (2011) and Garwood ((ed) 2007). The morphology of the enclosure is not unusual, but the perceived function of it lends itself to wider implications. This part of the county provides the best evidence for larger scale crop processing as demonstrated at Clifton Quarry (Mann forthcoming), and has some of the most fertile land too, all of which is indicative of an important area of arable production, as it was during the prehistoric period (Garwood (ed) 2007).

It could be evidence for a network of driveways facilitating the movement of cattle on a large scale across the region, to supply the Roman army, as part of its conversion to the production centre of the province (Cleary 2011).

8 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

An archaeological excavation was undertaken on land off Three Springs Road, Pershore, Worcestershire (NGR SO 937 454). It was undertaken on behalf of JS Bloor Ltd and Bellway Homes Ltd and was required as a condition of planning permission (Planning reference W/10/2127) from Wychavon District Council for the construction of 132 dwellings including 40 affordable homes with associated access and works.

The aims of the project were to investigate archaeological remains of Romano-British date identified an archaeological evaluation of the site. The site is located on the western side of Three Springs Road which lies on the western edge of Pershore, on a gravel terrace above the floodplain of the River Avon which flows 500m to the south. Prior to the excavation the site consisted of small paddocks under pasture with permanent and temporary farm buildings accessed by several tracks.

Three excavation areas were stripped by mechanical excavator to the top of archaeological deposits and subsequently sampled by hand excavation and recorded.

The most significant period for evidence of occupation was from the Late Iron Age and early Roman periods, with a peak in the 1st – 2nd centuries AD. This activity comprised two parallel ditches forming a droveway, aligned east-west across the site, flanked by a number of enclosures and ditches of varying sizes forming pounds and stockades with a function likely to be related to the husbandry of livestock. Material recovered from the ditches indicated the presence of an occupation site in the close vicinity, possibly of high status, though no structures were observed within the excavation area. The droveway is likely to have led from the higher ground to the east of the site, to the edge of the River Avon floodplain to the west. A number of undated pits and possible post-holes were also recorded as well as post-medieval furrows the remnants of strip-field agriculture.

9 Acknowledgements

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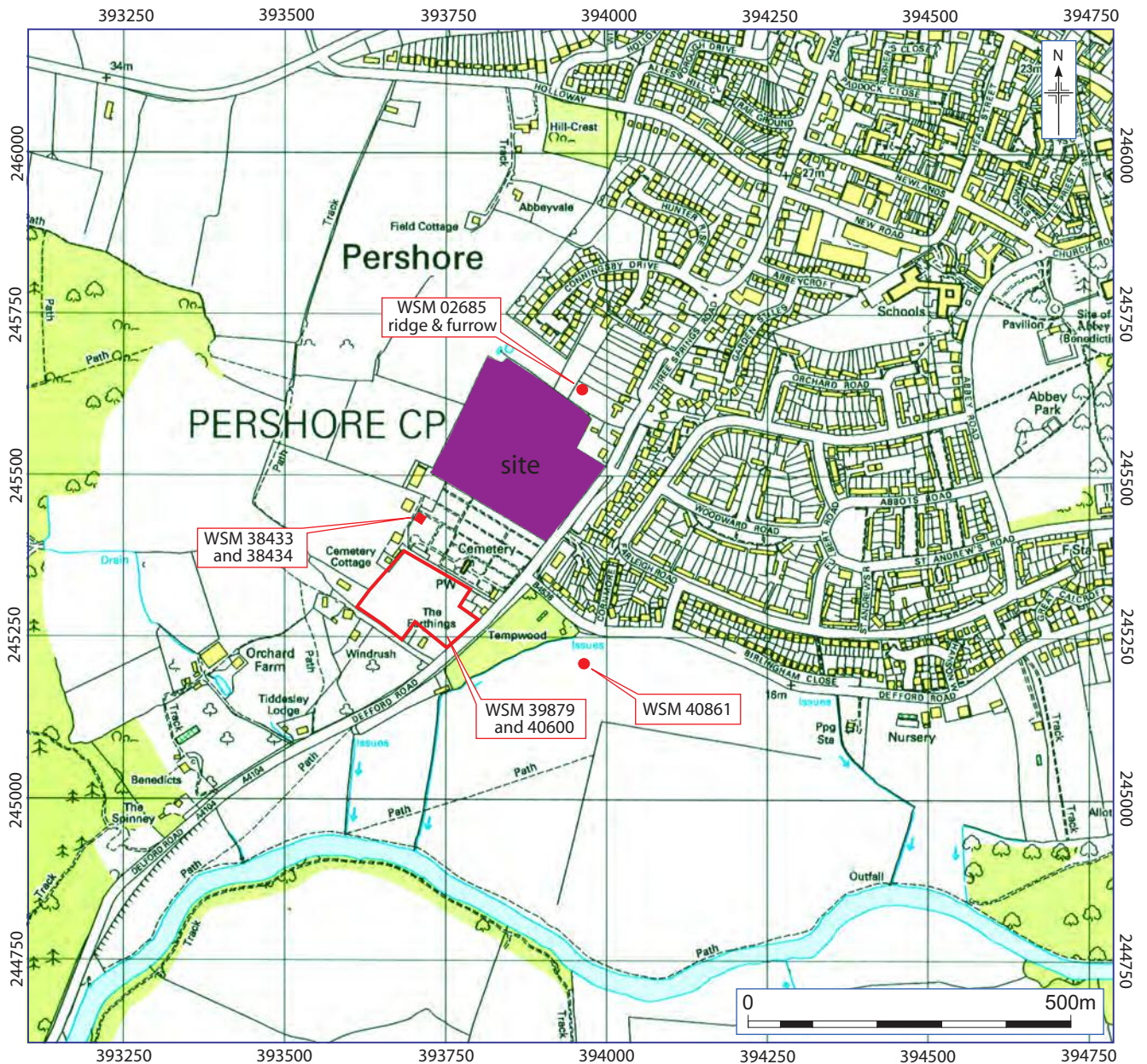
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Figures





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Location of the site and sites in the vicinity

Figure 1



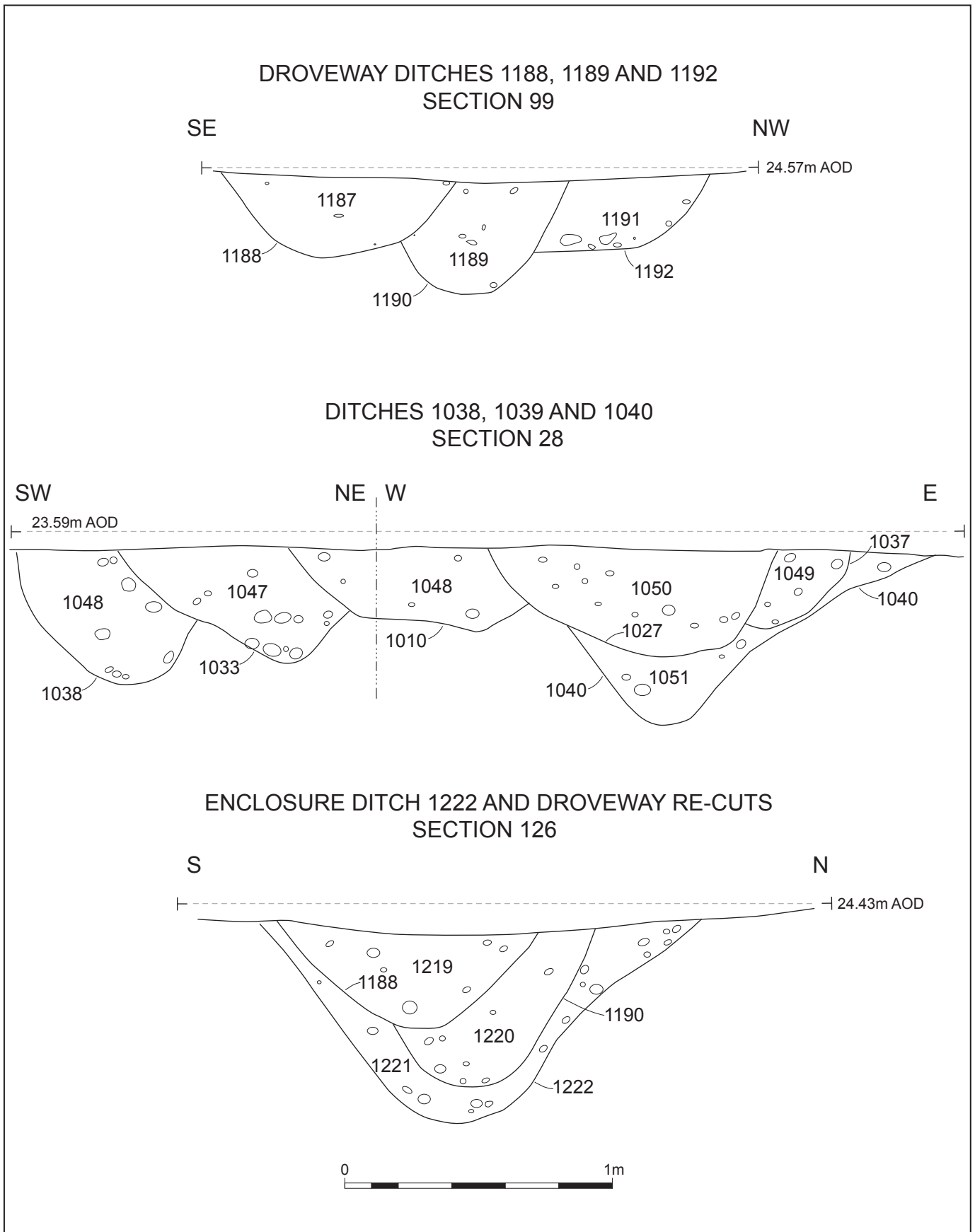
Overall plan of features

Figure 2



Droveway

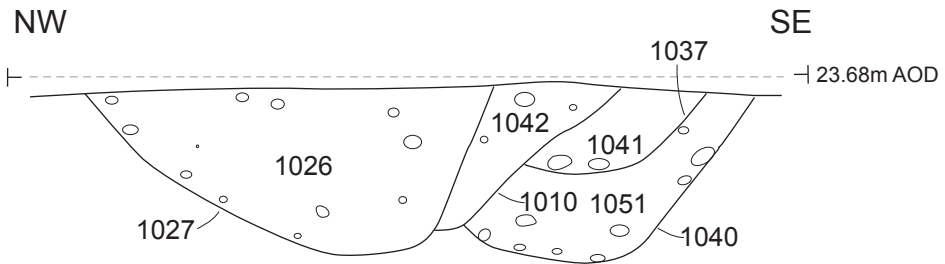
Figure 3a



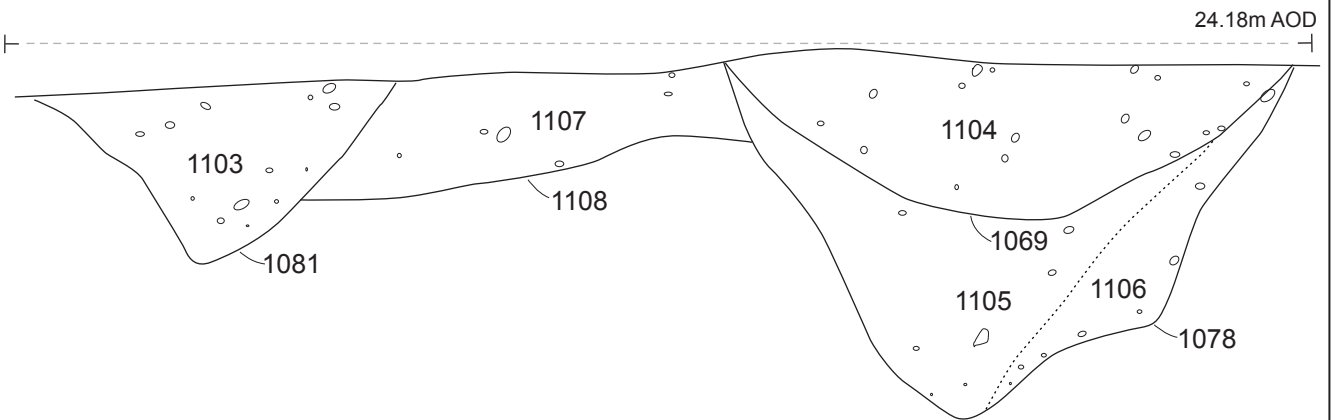
Sections 99, 28 and 126

Figure 4

ENCLOSURE DITCHES 1010, 1027, 1037 AND 1040
SECTION 9

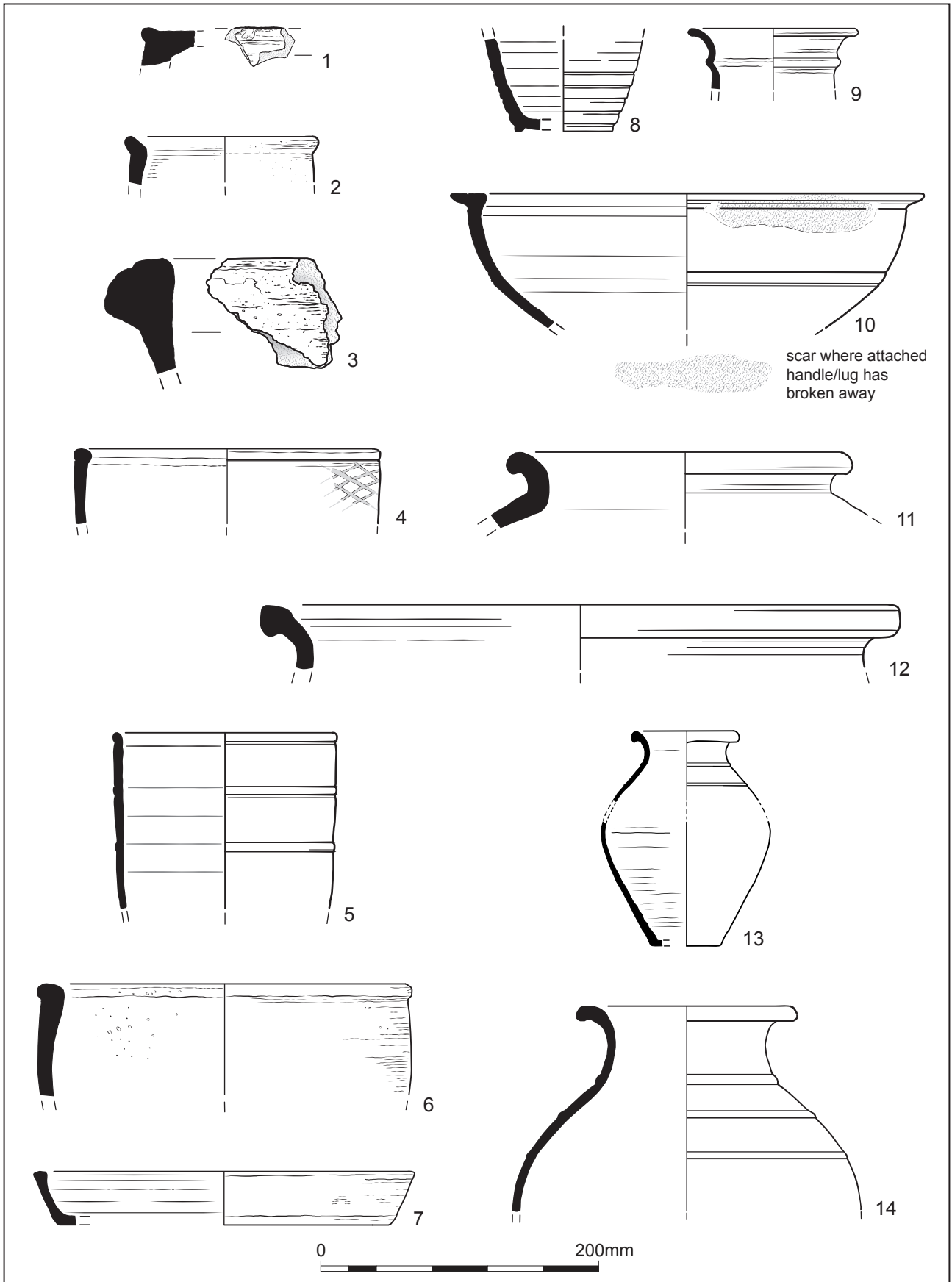


DITCHES 1069, 1078, 1081 AND 1108
SECTION 55



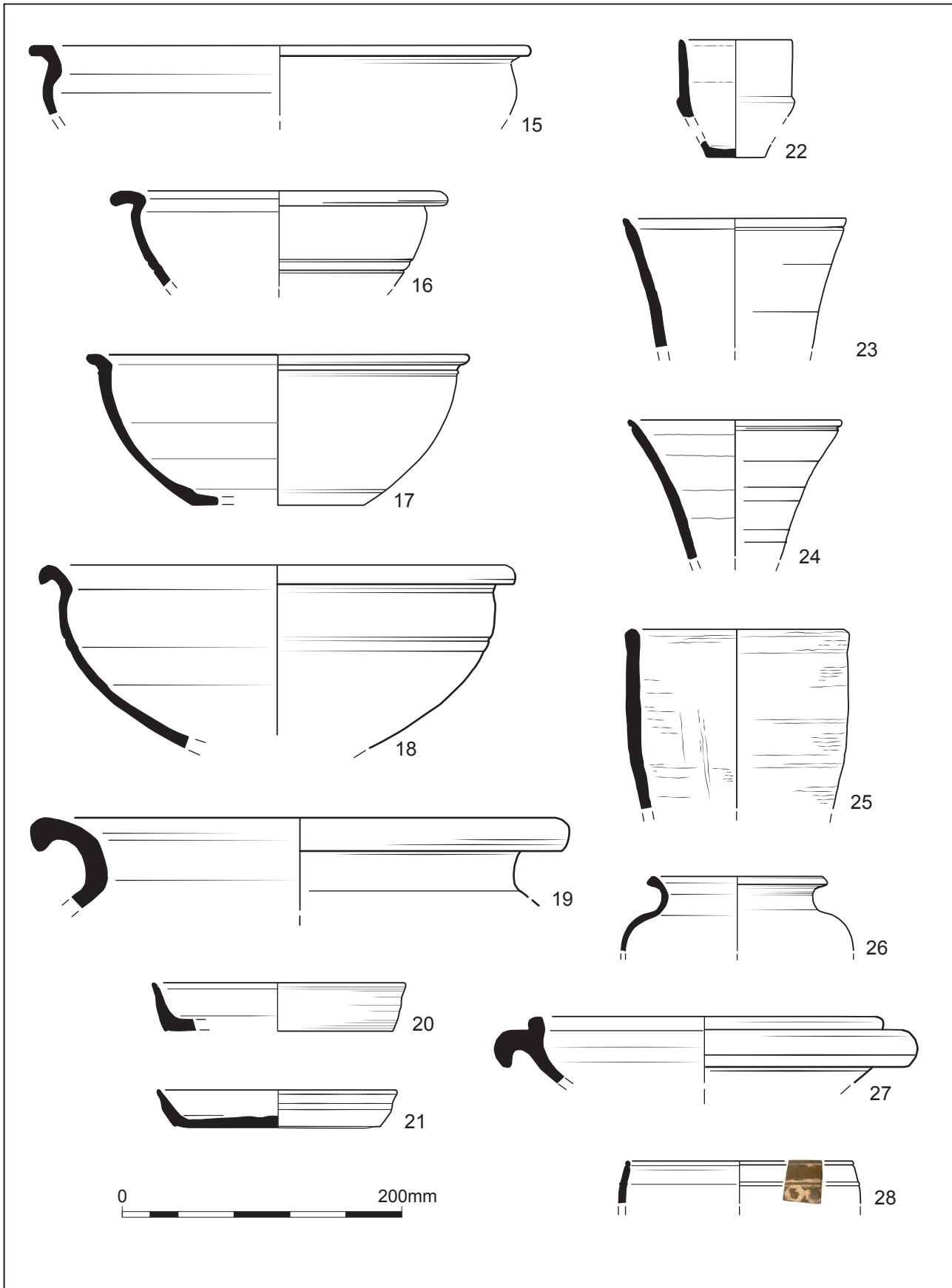
Sections 9 and 55

Figure 5



Pottery

Figure 6



Pottery

Figure 7

Plates



Plate 1: pit 1166



Plate 2: droveway in Field 2



Plate 3: driveway in Field 3



Plate 4: driveway in Field 3



Plate 5: typical driveway ditches



Plate 6: recut ditches in south-east corner



Plate 7: ditch 1222



Plate 8: small internal enclosure facing south



Plate 9: ditches 1027, 1010 and 1040 facing south, Section 8



Plate 10: ditch 1069

Appendix 2 Technical information

The archive (site code: WSM44967 and WSM44968)

The archive consists of:

- 1235 Context records AS1
- 24 Field progress reports AS2
- 9 Photographic records AS3
- 674 Digital photographs
- 3 Drawing number catalogues AS4
- 134 Scale drawings AS34
- 3 Context number catalogues AS5
- 1 Recorded finds records AS13
- 8 Sample records AS17
- 1 Sample number catalogues AS18
- 7 Flot records AS21
- 4 Levels records AS19
- 8 Trench record sheets AS41
- 5 Boxes of finds
- 1 CD-Rom/DVDs

1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416

Summary of data for Worcestershire HER

Material type	Total	Weight (g)
Pottery	1404	19874
Ceramic building material	20	462
Fired clay	252	4668
Loomweights	3	1047
Oven material	23	589
Copper Alloy	2	5
Iron	63	239
Iron slag	4	818
Flint	6	14
Fire-cracked stone	9	708
Glass	3	4

Table 1: Quantification of the artefactual assemblage

fabric code	Fabric common name	Count	Weight (g)
3	Malvernian ware	81	959
3.1	Slab-built Malvernian ware	54	1291
4.1	Palaeozoic limestone	7	54
4.7	Fossil shell and grog (Earlier prehistoric)	1	34
5.1	Sand	1	3
5.2	Sandstone	5	26
9	Mudstone tempered ware; Group D)	22	433
12	Severn Valley ware	298	2786
12.1	Reduced Severn Valley ware	27	234
12.2	Oxidised organically tempered Severn Valley ware	90	1652
12.24	Fine oxidised Severn Valley organic variant	90	1412
12.3	Reduced organically tempered Severn Valley ware	13	453
12.5	Oxidised Severn Valley ware variant, sandy and micaceous	149	2410
12.6	Oxidised Severn Valley ware variant, common white inclusions	342	4776
12.7	Oxidised Severn Valley ware variant, vesicular	26	1040
12.8	Oxidised Severn Valley ware variant, vesicular	57	961
13	Sandy oxidized ware	12	37
14	Fine sandy grey ware	12	148
16	Grog tempered ware (BD32/33)	4	80
16.2	Handmade grog tempered ware	2	9
22	Black-burnished ware, type 1 (BB1)	47	174
29	Oxfordshire red/brown colour coated ware	1	24
32	Mancetter/Hartshill mortarium	1	24
33.1	Oxfordshire white mortaria	3	229
42.1	Dressel 20 type	12	278
43	Samian ware	2	6
43.1	Southern Gaulish samian ware	4	19
43.2	Central Gaulish samian ware	5	45
69	Oxidized glazed Malvernian ware	1	11

78	Post-medieval red wares	13	150
91	Post-medieval buff wares	1	17
97	Miscellaneous prehistoric wares	6	22
98	Miscellaneous Roman wares	7	20

Table 2: Quantification of the pottery by fabric type

Form	EVE by RE
cup	0.09
beaker	0.60
bowl	0.98
dish	0.56
flagon	0.87
jar	4.82
mortarium	0.16
tankard	1.46

Table 3: Functional composition of assemblage based on EVE by RE

pot form type	Total EVE	Fabric number													
		3	12	12.1	12.2	12.24	12.3	12.5	12.6	12.7	12.8	14	22	33.1	43.2
cup	0.09					0.09									
beaker	0.60		0.18		0.07				0.35						
bowl	0.98	0.06	0.22	0.06					0.35	0.17					0.06
dish	0.56								0.07	0.43					0.06
flagon	0.87		0.30						0.57						
jar	4.82	0.40	0.11	0.15	0.20	0.59	0.46	0.74	1.18		0.45	0.29	0.25		
mortarium	0.16													0.16	
tankard	1.46		0.45		0.50	0.14		0.09	0.28						
Total EVE	9.54	0.46	1.26	0.21	0.77	0.82	0.46	0.83	2.80	0.60	0.45	0.29	0.25	0.16	0.12

Table 4: Functional composition of assemblage by fabric

Form	Total	12	12.1	12.2	12.24	12.3	12.5	12.6	12.7	12.8
Bowl	8	2	1					4	1	
Dish	2							1	1	
Jar	18			2	3	3	3	5		1
Wide-mouthed jar	14	3			2		5	2	1	1
Tankard	13	4		2	2	1	1	3		
Carinated cup	5	2		1				2		
Flagon	2							2		

Table 5: Quantification of Severn Valley ware forms by fabric (minimum no. of vessels)

Context	Sample	Feature type	Fill of	Context group	Sample volume (l)	Volume processed (l)	Analysis
1105	3	Ditch	1078	1078	40	10	Yes
1118	4	Stakehole	1119	0	0.3	0.3	Yes
1146	6	Pit	1147	0	0.5	0.5	Yes
1155	8	Ditch	1040	1040	20	20	Yes
1217	11	Pit	1218	0	40	20	Yes
1148	5	Pit	1149	0	15	0	No
1104	7	Ditch	1069	1069	40	0	No
1130	9	Ditch	1127	1127	40	0	No
1163	10	Ditch	1010	1010	40	0	No
1057	1	Ditch	1055	1027	40	40	Yes
1080	2	Ditch	1081	1010	40	20	Yes

Table 6: Samples processed and analysed from Three Springs Road, Pershore, Worcestershire

Context	Sample	large mammal	fish	charcoal	charred plant	hammersc ale	Comment
1057	1	occ		occ			occ pot, burnt flint, flint waste
1080	2	occ		occ	occ		occ ash, pot, daub, fe nail, heated stone, waste flint
1105	3	occ		occ	occ	occ	occ pot, heated stone, burnt flint
1118	4			occ			occ burnt flint
1146	6	occ		occ	occ		occ ash, burnt flint
1155	8	occ burnt	occ	occ	occ		occ coal, heated stone, waste flint
1217	11	occ burnt		occ			abt heated stone

Table 7: Environmental summary of environmental remains recorded in the sample

Latin name	Common name	Habitat	1057	1080	1105	1118	1217
Charred							
<i>Triticum spelta</i> glume base	spelt wheat	F	15	2			
<i>Triticum spelta</i> rachis	spelt wheat	F	3				
<i>Triticum spelta</i> spikelet fork	spelt wheat	F	1				
<i>Triticum</i> sp grain	wheat	F	8	2			
<i>Triticum</i> sp spikelet fork	wheat	F	1				
<i>Hordeum vulgare</i> grain (hulled)	barley	F		2	1		
<i>Triticum</i> sp glume base	wheat	D	25	4			
<i>Hordeum vulgare</i> rachis	barley	F	2				
Cereal sp indet grain	cereal	F	67	32			

Latin name	Common name	Habitat	1057	1080	1105	1118	1217
(fragment)							
Cereal sp indet culm node	cereal	F		1			
<i>Poa</i> sp grain	meadow-grass	ABCD	4	1			
<i>Bromus</i> sp grain fragment	brome grass	AF	1				
<i>Avena</i> sp grain	oat	AF		1			
<i>Avena</i> sp awn fragments	oat	AF		1			
Poaceae sp indet stem frags	grasses	ABCD		2			
<i>Ranunculus acris/repens/bulbosus</i>	buttercup	CD	1				
<i>Chenopodium hybridum</i>	maple-leaved goosefoot	AB		1			
<i>Chenopodium album</i>	fat hen	AB	8				
<i>Stellaria media</i>	common chickweed	AB	1	1			
<i>Agrostemma githago</i> fragments	corn cockle	AB	1				
<i>Persicaria lapathifolia</i>	pale persicaria	AB	1				
<i>Fallopia convolvulus</i> fragment	black bindweed	AB	1				
<i>Rumex acetosella</i>	sheep's sorrel	ABD	3				
<i>Rumex</i> sp	dock	ABCD	2				1
<i>Rumex</i> sp fragment	dock	ABCD	1				
<i>Capsella bursa-pastoris</i>	shepherd's-purse	AB		6			
<i>Potentilla</i> sp	cinquefoil	BCDE	1				
<i>Prunus spinosa</i> (fragment)	sloe	C	1				
<i>Vicia faba</i> cotyledon	broad bean	AF	3				
<i>Vicia/Lathyrus</i> sp	vetch/pea	ABCD	12	1	1		
<i>Vicia/Lathyrus</i> sp (fragment)	vetch/pea	ABCD	21	6			
<i>Pisum sativum</i> cotyledon	garden pea	AF	1				
<i>Trifolium</i> sp	clover	ABD	8	1			
<i>Odontites vernus</i>	red bartsia	ABD		1			
<i>Galium aparine</i> fragment	cleavers/goosefoot	ABC	8				
<i>Valerianella dentata</i>	narrow-fruited cornsalad	AB			1		
<i>Onopordum acanthium</i>	cotton thistle	AB	1				
<i>Leucanthemum vulgare</i>	oxeye daisy	BD		1			
<i>Tripleurospermum inodorum</i>	scentless mayweed	AB	1	3	1		
<i>Eleocharis</i> sp	spike-rush	E	2	2			
<i>Lolium temulentum</i>	darnel	AB	19	7	1		
Poaceae sp indet (small)	grasses	E	8	3	1		
unidentified thorn						2	
unidentified bud				1			

Table 8: Charred plant remains from Three Springs Road, Pershore, Worcestershire

Habitat

Habitat
A= cultivated ground
B= disturbed ground
C= woodlands, hedgerows, scrub etc
D = grasslands, meadows and heathland
E = aquatic/wet habitats
F = cultivar

Key to Table 8
