ARCHAEOLOGICAL EXCAVATION AND WATCHING BRIEF AT SANCTUARY HOUSE, FARRIER STREET, WORCESTER

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Part 1 Project summary

An archaeological excavation and watching brief was undertaken on behalf of Langdon Davis LLP, on behalf of Sanctuary Housing Association at Sanctuary House, Farrier Street, Worcester (NGR SO 84790 55340; HER refs WCM 101768 and 101769). Twenty nine pile caps, foundation pads and soakaways were subject to the watching brief and seven trenches were archaeologically excavated during the construction of new offices. The project follows earlier investigations on the site in 1995 and 2009.

The site lies on the northern side of the Roman town in an area where previous archaeological intervention on sites along Castle Street have demonstrated that well preserved Roman layers survive, often of industrial character.

Heavy disturbance and truncation of the archaeological deposits associated with the construction and demolition of the previous building on the site, Cameo House, and the limited excavation area meant that many of the features identified in earlier works were not identified in this phase of work.

A varied pottery assemblage of both local and imported Samian ware was recovered from across the site, although the majority of this was residual and had been disturbed and re-deposited within the post-Roman dark earth which was frequently encountered across the site.

Only one trench (G) contained *in situ* Roman features, of *c* 2nd century date, consisting of two postholes, a possible furnace and two pits. No overall structural or relational patterns could be ascertained, although the postholes appeared to predate one of the pits.

Of particular interest was a charred hay deposit which was identified during plant macrofossil analysis. Sampled during excavation of one of the *c* 2nd century pits, the deposit has been interpreted as representing fodder which was deposited and burnt as part of its disposal. The plant material within the fodder was sourced from a variety of habitats including hay meadow, which tends to indicate that landscape management of floodplain grassland was occurring within the immediate environs of the site. Charred hay of this date is extremely rare nationally with this deposit representing the sole example from Worcestershire. The nearest comparable example is from Leicester.

Part 2 Detailed report

1. Background

1.1 Reasons for the project

An archaeological excavation and watching brief programme was undertaken at Sanctuary House, Farrier Street Worcester (NGR SO 84790 55340, Fig 1), for Davis Langdon LLP on behalf of Sanctuary Housing Association. They intend to erect two office blocks with associated landscaping and submitted a planning application to Worcester City Council (ref P09D0098), who considers that a site of archaeological interest (WCM 100182) may be affected.

1.2 Project parameters

The project conforms to the *Standard and guidance for archaeological excavation* (IfA 2008a) and the *Standard and guidance for an archaeological watching brief* (IfA 2008b). The project also conforms to a brief prepared by Worcester City Museum Archaeology Section (WCMAS 2009) and for which a project proposal (including detailed specification) was produced (HEAS 2009a).

1.3 Aims

The aims of the excavation and watching brief were to locate archaeological deposits and determine, if present, their extent, state of preservation, date, type, vulnerability and documentation. The purpose of this was to establish their significance, since this would make it possible to recommend an appropriate treatment which may then be integrated with the proposed development programme.

In particular, the project had the following aims, identified within *An archaeological resource assessment and research framework for the city of Worcester* (WCMAS 2007) relating to Roman activity in Worcester such as the

- Roman Road network (RP3.7)
- The Roman iron industry (RP3. 19-3.23)
- Other Roman industries (RP3.24)
- Sampling and analysis of late Roman dark earth (RP3.26)

2. Methods

2.1 Documentary search

A documentary search of Worcester Historic Environment Record (HER) and the first edition OS map was made in the evaluation stage of the project (WCM 101701; Mann 2009). In addition the site archive and reports which summarised the results of the watching brief and salvage recording previously undertaken were consulted (WCM 22105; Jackson 1995; Crawford 2007).

2.2 Fieldwork methodology

2.2.1 Fieldwork strategy

A detailed specification has been prepared by the Service (HEAS 2009a).

Fieldwork was undertaken between 4 November 2009 and 1 April 2010. The site reference numbers and site codes are WCM 101768 for the excavation and WCM 101769 for the watching brief.

The site was divided into three zones, in order of anticipated archaeological potential. The required archaeological works in Zones 1 and 2 involved excavation and watching brief of a proportion of the pile caps, foundation pads and soakaways. The works in Zone 3 involved solely watching brief of a smaller proportion of the groundworks. In Zone 1 nine areas were monitored (Trenches 1-9) and two long trenches archaeologically excavated (Trenches F and G). In Zone 2 eleven areas were monitored (Trenches 11-18 and 27-29) and five trenches were archaeologically excavated (Trenches A-E). In Zone 3 nine areas were monitored (Trenches 10, 19-26). The location of the trenches is indicated in Figure 2.

Deposits considered not to be significant were removed using a 360º 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 Service practice (CAS 1995a). On completion of excavation to the required depth, trenches were left open to be shuttered and filled with concrete.

2.2.2 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was affected through a combination of structural and artefactual evidence, allied to the information derived from other sources.

2.3 Artefact methodology, by Dennis Williams and Laura Griffin

2.3.1 Artefact recovery policy

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

2.3.2 Method of analysis

All hand-retrieved finds were examined and a primary record made on a Microsoft Access 2000 database. The finds were identified, quantified and dated to period, and a *terminus post quem* date produced for each stratified context. These dates were used as a means of determining the broad chronology of the site.

The pottery and ceramic building materials were examined under ×20 magnification and recorded by fabric type according to the reference series maintained by the Service (Hurst and Rees 1992; HEAS 2009b).

2.4 Environmental archaeology methodology

2.4.1 Sampling policy

The environmental sampling strategy conformed to standard Service practice (CAS 1995a, appendix 4). Large animal bone was hand-collected during excavation. Three samples were taken for assessment from contexts (605), (615) and (616) identified in Trench G.

2.4.2 Method of analysis

The samples were processed using standard Siraf flotation methods. The residues were scanned 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 follows Stace (1997). A magnet was also used to test for the presence of hammerscale.

3. Topographical and archaeological context

The following is taken from the evaluation report (Mann 2009):

"The site lies on the second terrace of the River Severn, which consists of sand and gravel that overlies Mercian Mudstone (Keuper Marl). The terrace underlies the whole historic city of Worcester and rises to a maximum height of *c* 26m AOD. The site lies to the north of the medieval city wall and is adjacent to Foregate Street/The Tything, a medieval suburb."

"Roman occupation within Worcester is thought to be focussed around a 'small town' whose core is located beneath the southern part of the medieval city. A Roman road running approximately north-south identified within excavations at Broad Street and Blackfriars is thought to form an axis for Roman settlement evidence in the area. To the north, Roman activity is dominated by areas of industrial activity, predominantly the production of iron interspersed with areas of domestic occupation. Early occupation within the area was intermittent during the 1st and 2nd centuries, with more intensive occupation and industrial activity occurring during the 3rd and 4th centuries No Roman archaeology has yet been identified to the east of Foregate Street within the area to the north of the medieval city walls. Late Roman occupation is thought to have contracted during the 4th century."

"The development area lay just outside the core medieval and post-medieval town and was used for agricultural and possibly horticultural use until the late 18th century. No buildings are present on the site on the first edition OS map (1887)."

A watching brief undertaken by the Service on the site in 1995 (Mann 2009) during the excavation of 33 foundation pits found that Roman deposits dominated, with frequent slag layers and metalled surfaces. Roman features such as pits, ditches and postholes both pre-dated and post-dated the industrial deposits. Particularly significant features were a substantial ditch which truncated a metalled surface, a hearth or furnace of clay construction associated with a stone surface, and five postholes which are considered to represent a structure which encompassed the surface and the hearth.

The evaluation undertaken by the Service (*ibid*) revealed remains primarily Roman in date with the 1st-4th century pottery assemblage interpreted as being utilitarian in nature. This supported the agricultural/industrial interpretation indicated during the 1995 investigations. Postholes were identified although due to the limited scale of the excavated area, no structures or buildings could be defined (*ibid*).

4. Results

4.1 Structural analysis

The trenches and features recorded are shown in Figs 2. The results of the structural analysis are presented in Appendix 1.

4.1.1 Excavation

Trench A

A 19th century pit (003) had been heavily truncated by modern disturbance. A dark earth (004) 0.60m deep was discovered above the natural sands (006) and included 19th century debris. Modern wall footings were also discovered cut into the natural sands. The dark earth deposit was overlain by modern demolition and levelling material consisting of brick fragments, gravels and concrete. The natural (006) lay at 21.34 AOD.

Trench B

The natural stratum (103) was at 21.49m AOD. This had been disturbed previously, with indentations of excavator bucket teeth marks in the base of the trench in the southwest corner. There was also a modern spread of brick and demolition material in the southeast corner of the trench. Above the natural was a subsoil (102) where leaching, worm and root action were visible. A dark earth, (101) also present in Trenches A and C, was a maximum of 0.80m thick and overlaid by modern levelling aggregates (100).

Trench C

The natural sand and gravel (204) was present at 21.69m AOD. Above this was a subsoil (203) where leaching and root action had occurred, 0.20m in thickness. The dark earth (202), a dark grey brown to black silty clay, with inclusions of residual Roman pottery in the lower half and 19th century material at the top, was a maximum of 0.70m thick. The ground had been heavily truncated by modern disturbance in the western half of the trench, including concrete foundation beams, gravel hardcore and brick rubble (200 and 201). A concrete foundation was also cut into the natural on the eastern side at the base of the trench.

Trench D

The stratigraphy was heavily truncated by modern service trenches and foundations for the demolished Cameo House building (301). Only a limited amount of the natural strata (302) was observed in the base of the trench with a number of brick rubble and pipe trenches cut into the base at 21.60m AOD. The base was later excavated to 1.80m below ground level, to a maximum depth of 20.87m AOD to the natural sands found in the other trenches. Any archaeology had been truncated by later intrusions. The modern hardcore lay directly above the modern disturbed ground, to a maximum of 0.40m thick.

Trench E

Modern hardcore (400), 0.80m deep, overlay the dark earth (403), which was a maximum of 1.25m deep. This was truncated by a 20th century trench (402) to the west and backfilled demolition rubble to the east (406). Underlying the dark earth was a subsoil (404) of yellow silty sand to a maximum of 0.50m thick over the natural red sands and river gravels (407), which lay at 21.31m AOD. Due to the depth of the trench, sides were stepped for safety. No significant archaeological deposits were recorded below the dark earth.

Trench F

Trench F revealed a sequence consisting of 0.50m of modern hardcore (500) and demolition material (501) which overlay the dark earth cultivation soil (502) which had been frequently disturbed by modern building activity. The dark cultivation soil became cleaner with depth, until a diffuse lower boundary with the underlying natural orange sand (504) was reached, at 21.32m AOD. No subsoil was identified. The natural contained frequent rounded to sub-angular gravels and occasional heavily reworked fragments of the underlying Mercian Mudstone.

Through the dark earth and natural, four prominent modern intrusions were identified, these related to the construction of Cameo House in 1995 and the subsequent removal of its foundations prior to the current works being undertaken.

Trench G

Similarly to Trenches E and F, the upper deposits consisted of modern hardcore (600) and demolition material (601) of 0.83m thickness, overlying a dark earth/cultivation soil (602). This dark earth/cultivation soil once again had a very diffuse and mixed upper surface with (601) yet became cleaner with depth, especially to the south of the trench where the stratigraphy appeared deeper and less disturbed. This southern trend for better preservation was also witnessed in the underlying context (603) which was an undisturbed deposit of Roman date, interpreted as an accumulation of waste and debris upon the desertion of the site.

Sealed by this deposit were several features, including a possible furnace [606] (Fig 3) which was filled by a basal band of charcoal rich sand (615) and a lighter greyish brown sandy silt (605). Context (605) was very similar in appearance and texture to (603) above, although it contained a greater quantity of charcoal, suggesting that (605) accumulated or was deposited at a similar time to (603) and incorporated charcoal from within the furnace (615).

To the north of the furnace, two postholes (614) and (618) were identified, which had been truncated by a pit (617) (Fig 3). The fill (613) of the pit contained occasional slag and Roman pottery and was very similar to the overlying deposit (603), indicating that the deposits accumulated at a similar time, possibly gradually upon the desertion of the site. It is unclear whether (617) was deliberately located to truncate the earlier posts (possibly to aid in the removal of the posts) or whether its location is purely coincidental.

The final feature of significance was pit (619), immediately adjacent, to the north of the aforementioned pit and postholes. The fill (616) contained frequent Roman pottery and was similar to the overlying deposit (603) although (616) was darker and contained a greater quantity of charcoal.

The natural orange sand (604) was encountered at 21.35m AOD.

4.1.2 **Watching Brief**

Zone 1

In the southwest corner of the site, seven pile caps were monitored (Trenches 1-7), all with a similar stratigraphy (see Appendix 1). A modern compact hardcore gravel surface recently laid to level and raise the site, lay above a dark greyish brown silty clay with frequent modern brick, tarmac, concrete and metalwork from the demolition of the previous building on site. This lower soil may represent the post-Roman dark earth layer, although it contained 19th century material to a maximum depth of 20.85m AOD and was heavily truncated by modern demolition deposits and services across the area. The trenches were dug to a maximum of between 21.80m and 22.00m AOD, at which depth the natural matrix had not been exposed.

Trenches 8 and 9 lay to the northeast side of Zone 1 and revealed modern overburden of sand and gravel with moderate brick, metal and plastic inclusions), over as heavily disturbed dark earth layer at 22.45m. The natural was not identified in either of these two pile cap trenches, which were dug to a maximum depth of 21.95m and 21.85m AOD respectively.

Zones 2 and 3

In Zone 2 on the east side of the site 16 foundation pads were monitored (Trenches 10-25). The maximum depth excavated was 20.65m AOD and the natural orange sand was reached at 21.50m AOD. The northeast of the site had been heavily disturbed by the foundations of the previous building on site which the new foundation pads frequently encountered, such as concrete beams, charcoal and ash dumps and other demolition rubble. There were also a number of disused services, mostly aligned east to west along the line of Trenches 20, 24 and 25 which accord with Trench 1 from the 1995 investigations (). The dark earth had thus been heavily disturbed and also contained frequent 19th century material.

Only modern deposits were exposed during the excavation of the foundation pads, which were dug to a maximum depth of 20.65m AOD. Modern levelling hardcore and demolition material lay above disturbed dark greyish brown silty clay with brick and iron metalwork inclusions. No significant archaeological deposits or artefacts were observed during this phase of groundworks.

Four soakaways were monitored (Trenches 26-29). No significant archaeological remains were identified. The post-Roman dark earth was found to have been truncated and to contain post-medieval material, indicating that it had been disturbed and reworked. Natural sands lay at 20.93m AOD, 2.20m below the ground surface and sloped down to the west. The trenches were excavated to a maximum depth of 19.13m AOD.

4.2 Artefact analysis, by Dennis Williams and Laura Griffin

Material class	Period	Count	Weight (g)
Bone	Undated	112	1808
Ceramic	Undated	19	256
Ceramic	Roman	206	3205
Ceramic	Post-medieval	64	2078
Ceramic	Post-med/modern	3	45
Ceramic	Medieval	7	62
Glass	Post-medieval	4	144
Glass	Modern	6	26
Metal	Undated	1	2
Metal	Post-medieval	1	66
Shell	Undated	4	50
Slag	Roman	18	2012
Totals:		445	9754

Table 1: Quantification of the assemblage

4.3 The artefact assemblage

The assemblage recovered during the excavation and watching brief is summarised in Table 1. The finds included pottery, ceramic building materials, glass, metal, shell and slag, with preservation conditions on the site being generally good. Identifiable finds from the watching

brief from disturbed buried soil contexts (1003, 8002, 9002, 21002, 23002, 28003) and the subsoil (29003) were all post-medieval or modern, whilst Roman, medieval and post-medieval material was recovered during the excavation. Animal bone, from cattle, sheep and pigs, was also recovered during both the watching brief and excavation. These were recorded, but have not been analysed in detail.

4.4 Pottery

Pottery sherds were grouped and quantified according to fabric type, as shown in Table 2. Most sherds were datable by fabric type to general production spans. More precise dating evidence was obtained from Roman diagnostic forms, particularly for Samian vessels.

Period	Fabric code	Fabric common name	Count	Weight (g)
Medieval	56	Malvernian unglazed ware	1	10
Medieval	69	Oxidized glazed Malvernian ware	6	52
Post-medieval	78	Post-medieval red wares	8	478
Post-medieval	81	Stonewares	1	14
Post-medieval	81.2	Westerwald stoneware	1	14
Post-medieval	81.4	Miscellaneous late stoneware	1	6
Post-medieval	91	Post-medieval buff wares	1	20
Post-medieval/ modern	100	Miscellaneous post-medieval/ modern wares	2	14
Post-medieval/ modern	85	China	10	106
Roman	3	Malvernian ware	23	420
Roman	12	Severn Valley ware	109	1618
Roman	12.1	Reduced Severn Valley ware	4	370
Roman	12.2	Oxidised organically tempered Severn Valley ware	4	60
Roman	12.3	Reduced organically tempered Severn Valley ware	1	2
Roman	14	Fine sandy grey ware	2	38
Roman	15	Coarse sandy grey ware	3	24
Roman	22	Black-burnished ware (BB1)	17	256
Roman	38	Oxfordshire white ware	4	26
Roman	43	Samian ware	11	96
Roman	43.1	South Gaulish Samian ware	18	84
Roman	43.2	Central Gaulish Samian ware	5	41
Roman	98	Miscellaneous Roman wares	2	30
Totals:			234	3779

Table 2: Quantification of the pottery by period and fabric-type.

4.4.1 Roman

Roman pottery was recovered from layer 603, furnace/kiln fill 605, pit fills 613 and 616, and also as residual material from the dark earth, 004, 403, 502 and 602.

Local coarsewares

These accounted for 79% (by weight) of the Roman pottery. Malvernian ware (fabric 3) was found in the dark earth 602, layer 603 below, and pit fills 613 and 616, comprising body and rim sherds from cooking pots, some with signs of external sooting. Where found in Roman contexts, the date range for this hand-made pottery, described by Peacock (1968), is likely to extend through the late 1st into the early 2nd century (as a continuation of production in the Iron Age). Peacock 3, 12 and 42 forms were indicated by three of the rim sherds (the first two in pit fill 613; the last in the dark earth 602), while a further rim sherd, slightly more everted and squared off than the Peacock 7 form, came from layer 603 below the dark earth.

Severn Valley ware was present in the dark earth, 403, 502, 602, layer 603, furnace fill 605, and pit fills 613 and 616. Oxidised Severn Valley ware (fabric 12) dominated this local coarseware group, with a few sherds of oxidised, organically tempered (fabric 12.2), reduced (fabric 12.1) and reduced, organically tempered (fabric 12.3) materials also being found. Bowl, flagon, jar and tankard forms were all represented, although the bowl and tankard sherds were too fragmentary to be diagnostic in terms of form. Forms that could be identified, primarily jars, could all be dated to the 2nd century, with the exception of a pulley rim from a storage jar, found in dark earth 502, which was similar to Webster 11, and was of 3rd century date. The slightly hooked rim of large storage jar, from layer 603, was similar to the Type 2, JLS4, described by Evans *et al* (2000), and probably 2nd century in date. The most distinctive of the Severn Valley ware finds was a rim sherd, with part of a handle attached, found in pit fill 616. From an open-necked flagon (probably double-handled), this is similar to forms No.19 (Waters 1976), and Type 2, F11 (Evans *et al* 2000), which may be associated with 2nd century sites.

Non-local coarsewares

These consisted mainly of Black-burnished ware, BB1 (fabric 22), found in dark earth 004, 602, layer 603, and pit fills 613 and 616. This pottery was present mostly as either small body sherds, or sections of everted rims from jars. As a deposit containing solely Roman finds, layer 603 below the dark earth yielded small, undecorated Black-burnished sherds that could only be assigned to AD120 onwards, whereas pit fills 613 and 616 produced more datable sherds. A flanged rim sherd with a shallow top groove, from a deep bowl, was found in 613. Traces of wavy decoration survived on this, which was from a deep, Type 24 bowl (Seager Smith and Davies 1993) produced during the 2nd century. A plain, upright rim sherd from a round-bodied bowl (e.g. Type 13), also found in context 613. This was decorated with intersecting arcs, and of 2nd century in date.

Black-burnished sherds, residual in dark earth 004 and 602, were small and undiagnostic, but a bowl side, complete from base to rim, was recovered from an unstratified deposit. This was decorated with intersecting arcs, and had a poorly-produced, part-beaded rim (broadly similar to the Type 20 form), indicating an early 2nd century date.

Small sherds of uncoated Oxfordshire white ware (fabric 38) were recovered from furnace fill 605 and pit fills 613 and 616. These included parts of two handles, probably from flagons, which were common forms from the 2nd to 4th centuries. However, based on associated pottery of other fabrics, a 2nd century date could be allocated to these sherds.

Sherds of fine sandy grey wares (fabric 14) were recovered from pit fill 616, including a small section of an inverted and hooked rim, from a storage jar, and a body sherd exhibiting lattice decoration. Coarse grey ware sherds (fabric 15) were found in dark earth 502, 602 and furnace fill 605, including an everted rim sherd from a storage jar in the first of these contexts. Both these fabrics differed from the reduced Severn Valley ware (fabric 12) in having significantly greater contents of quartz inclusions, but the forms observed were not in themselves diagnostic.

Samian ware

Samian pottery (fabric 43) was recovered from dark earth 602, layer 603, furnace fill 605 and pit fills 613 and 616. Parts of the rims and foot-rings of Dr.18 bowls were found in context 603. These vessels had bright orange fabrics, but without white, calcareous inclusions. Their forms and fabrics suggest, therefore, that they were South Gaulish and 1st century in date, but from Montans, rather than the major production area around La Graufesenque. A rim sherd, with similar Dr.18 form and production date range, was found in pit fill 616, but had the pinkish-brown La Graufesenque fabric (43.1). Other sherds with the La Graufesenque fabric were from Dr.33 cups (layer 603 and pit fill 613) and part of a Dr.37 decorated bowl (furnace fill 605).

Central Gaulish Samian pottery, with the orange-brown Lezoux fabric (43.2), was recovered from dark earth 602, furnace fill 605 and pit fills 613 and 616. The first of these yielded a rim sherd from a Dr.18/31 dish probably of early 2nd century date. A foot-ring fragment found in pit fill 613 was from a similar vessel.

4.4.2 Medieval

Medieval pottery finds were confined to six sherds of Oxidized glazed Malvernian ware (fabric 69) and a single sherd of Malvernian unglazed ware (fabric 56). All were small and undiagnostic in terms of form. The glazed pottery could have been from a wide 14th to16th date range, while the thick-walled, unglazed example retrieved from context (502) was more likely to have been from a 13th-14th century cooking pot.

4.4.3 Post-medieval and modern

The post-medieval pottery covered a small range of common earthenware forms and fabrics. Red ware (fabric 78) sherds, 17th to 19th century in date, were found in dark earth contexts 403 and 502 and disturbed soil 1003. These were mainly black-glazed internally. Although several rims of bowls or pancheons were noted, no other diagnostic forms were identified. A single sherd of a brown-glazed buff ware (fabric 91), found in dark earth 101, was likely to have been made in the 18th century. Unglazed orange earthenware (fabric 100) sherds, found in dark earth 101 and modern fill 607, were probably from late post-medieval or modern flowerpots.

Stonewares were recovered from dark earth 602 and disturbed soils 9002 and 21002. The most notable was a sherd of Westerwald stoneware (fabric 81.2) found in 9002. Decorated blue-on-grey, this was 17th or early 18th century in date. The other stonewares, from dark earth 602 and disturbed soil 21002, were decorated with mottled (fabric 81.4) and plain brown (fabric 81) glazes, respectively, and both were probably 18th-19th century in date.

Various sherds of china (fabric 85), mass-produced during the 19th and 20th centuries, were found in dark earth contexts 502, 602 and 28003, disturbed soil 21002. These finds were plain white or decorated, and mainly from tea or dinner services.

4.5 Other artefacts

Ceramic building materials

No complete bricks were presented for examination, but small undiagnostic fragments (which could have been either brick or tile) were retrieved from dark earth 101, 202, 403, 502 and 602, and pit fill 613, disturbed soil 1003 and 21002. All these contexts contain other material identifiable as post-medieval, except pit fill 613, which produced purely Roman finds.

Flat roof tile fragments, ranging in thickness from 13 to 21 mm, were recovered from contexts dark earth 004, 101, 202, 403, 502 and 602, pit fill 613, disturbed soil 1003, 8002 and 9002.

Most had sandy oxidised fabrics typical of post-medieval manufacture, but the fragment found in pit fill 613 and had a hard, reddish-brown fabric, with Malvernian inclusions. This was 21mm thick, which is within the size range commonly used for Roman *tegulae*, but in the absence of any diagnostic features, e.g. flanges or cutaways, could not be positively identified as such. A tile fragment, 15mm thick, found in dark earth 602 also had a hard, reddish-brown matrix, but with ill-sorted quartz inclusions, typical of Malvernian rock. It was more likely that this tile was medieval.

Fragments of drain pipes were found in dark earth 602, modern fill 607 and disturbed soil 23002. All of these were glazed and of late 19th-20th century date. A fragment of a machine-made, glazed floor tile found in soil 23002 would have been produced during a similar date range.

Clay pipes

Fragments of clay tobacco pipes were recovered from dark earth 004, 403, 602, disturbed soil 9002, 21002 and 23002. A bowl with a broad heel was found in dark earth 403. Its overall form indicated a date range of 1660-80, while two bowls with distinct heels, found in 9002 and an unstratified deposit, were dated to *c* 1690-1720 (Oswald 1975; Higginson 2009).

Glass

The base of a hand-made, dark green bottle, found in dark earth 602 was probably 18th century in date, while part of a bottle base, moulded from thick, clear glass, and found in disturbed soil 21002 may have been made during the 19th century. Other pieces of pale blue-green vessel glass, from dark earth 101 and 502 were undiagnostic, but possibly 19th century or early 20th century in date. Small fragments of modern window glass were recovered from dark earth 502 and disturbed soil 1003.

Metal

The only metal items recovered were a small, irregular piece of copper alloy, found in pit fill 613 (in which the ceramic evidence indicated a late 3rd to 4th century *terminus post quem*), and a hexagon-headed, steel bolt (probably modern) from dark earth 502.

Shell

A total of five oyster shells were retrieved from dark earth 403 and disturbed soil 9002, and unstratified deposits.

Slag

Eighteen fragments of slag, with a total weight of 2012g were recovered from dark earth 101, 502, 602 and pit fill 613. With the exception of one porous piece found in 613, all this material was high in density, being therefore typical of waste from Roman iron smelting. As well as tap slag, exhibiting pre-solidification flow lines, there were also sizeable blocks that had probably solidified inside the base of a smelting furnace.

4.6 Overview of artefactual evidence

The finds from this site provided evidence of occupation and use of this part of Worcester from the Roman period onwards. The *terminus post quem* dates deduced for the contexts are shown in Table 3.

Context	Material class	Object specific type	Fabric code	Count	Weight (g)	Start date	End date	*tpq* range
U/S	ceramic	brick	-	1	40	1600	1900	1600-1900
U/S	ceramic	brick/tile	-	2	44	-	-	-
U/S	ceramic	clay pipe	-	1	8	*c.*1690	1720	*c.*1690-1720
U/S	ceramic	pot	3	1	8	43	150	43-150
U/S	ceramic	pot	12	3	40	43	400	43-400
U/S	ceramic	pot	22	1	64	100	150	100-150
U/S	ceramic	pot	22	1	8	120	400	120-400
U/S	ceramic	roof tile	-	1	46	-	-	-
U/S	shell	-	-	2	20	-	-	-
004	ceramic	clay pipe	-	1	1	1600	1900	1600-1900
004	ceramic	pot	22	1	8	120	400	120+
004	ceramic	roof tile	-	1	88	-	-	-
101	ceramic	brick/tile	-	2	18	-	-	1800-1970
	ceramic	pot	91	1	20	1700	1800	
	ceramic	pot	100	1	6	1800	1970	
	ceramic	roof tile	-	1	26	-	-	
	glass	vessel	-	1	12	1800	1900	
	slag	smelting slag	-	1	128	43	400	
202	ceramic	brick/tile	-	2	14	1600	1900	1600-1900
	ceramic	pot	69	1	12	1200	1620	
	ceramic	roof tile	-	1	64	1600	1900	
403	ceramic	brick/tile	-	2	16	-	-	1660-1900
	ceramic	clay pipe	-	1	8	1660	1680	
	ceramic	pot	12	1	26	43	400	
	ceramic	pot	69	2	8	1200	1620	
	ceramic	pot	78	1	8	1600	1900	
	ceramic	roof tile	-	2	104	-	-	
	shell	-	-	1	6	-	-	
502	ceramic	brick/tile	-	3	22	1600	1900	1900-2000
	ceramic	pot	12	4	12	43	400	
	ceramic	pot	12	1	62	200	350	
	ceramic	pot	15	1	4	43	250	
	ceramic	pot	56	1	10	1200	1300	
	ceramic	pot	69	1	12	1200	1620	
	ceramic	pot	78	3	88	1600	1900	
	ceramic	pot	85	1	1	1800	2000	
	ceramic	roof tile	-	1	19	1600	1900	
	glass	vessel	-	1	4	1850	1950	
	glass	window	-	1	2	1900	2000	
	metal	bolt	-	1	66	1850	1950	

Context	Material class	Object specific type	Fabric code	Count	Weight (g)	Start date	End date	*tpq* range
	slag	smelting slag(tap)	-	6	268	43	400	
602	ceramic	brick/tile	-	5	56	-	-	1850-2000
	ceramic	clay pipe	-	2	2	1600	1900	
	ceramic	drain	-	1	104	1850	1950	
	ceramic	pot	-	1	44	43	100	
	ceramic	pot	6	1	112	43	150	
	ceramic	pot	12	23	522	43	400	
	ceramic	pot	12	2	40	200	400	
	ceramic	pot	12.2	1	10	43	400	
	ceramic	pot	15	1	12	43	400	
	ceramic	pot	22	1	12	120	400	
	ceramic	pot	43	1	2	43	200	
	ceramic	pot	43.1	1	6	43	110	
	ceramic	pot	43.2	1	20	100	150	
	ceramic	pot	69	2	20	1200	1620	
	ceramic	pot	78	3	356	1600	1900	
	ceramic	pot	81.4	1	6	1700	1900	
	ceramic	pot	85	5	16	1800	2000	
	ceramic	pot	98	1	12	43	400	
	ceramic	roof tile	-	6	252	-	-	
	ceramic	tile	-	1	42	0	0	
	glass	vessel	-	1	34	1700	1800	
	slag	smelting slag	-	7	842	43	400	
603	ceramic	pot	3	3	48	43	200	2nd century
	ceramic	pot	12	23	282	43	400	
	ceramic	pot	12	1	44	100	200	
	ceramic	pot	12.1	1	6	43	200	
	ceramic	pot	22	7	68	120+		
	ceramic	pot	43.1	1	8	43	100	
	ceramic	pot	43	5	58	43	100	
605	ceramic	pot	3	1	2	43	200	2nd century
	ceramic	pot	12	12	116	43	400	
	ceramic	pot	12.1	1	288	43	200	
	ceramic	pot	12.1	1	6	43	200	
	ceramic	pot	12.2	1	38	43	200	
	ceramic	pot	12.3	1	2	43	200	
	ceramic	pot	15	1	8	43	200	
	ceramic	pot	38	1	12	100	400	
	ceramic	pot	43	2	22	43	100	
	ceramic	pot	43.1	11	24	43	100	
	ceramic	pot	43.2	2	8	43	200	

Context	Material class	Object specific type	Fabric code	Count	Weight (g)	Start date	End date	*tpq* range
	ceramic	pot	98	1	18	43	400	
607	ceramic	drain	-	1	36	1850	1950	1850-1950
	ceramic	pot	100	1	8	1800	1970	
613	ceramic	brick/tile	-	2	20	-	-	2nd century
	ceramic	pot	3	5	130	43	200	
	ceramic	pot	12	6	126	43	400	
	ceramic	pot	12	1	54	100	200	
	ceramic	pot	22	1	54	120	200	
	ceramic	pot	22	1	8	120	200	
	ceramic	pot	22	1	6	120		
	ceramic	pot	22	1	16	120		
	ceramic	pot	38	1	2	100	200	
	ceramic	pot	43.1	2	28	43	100	
	ceramic	pot	43.2	1	12	100	150	
	ceramic	roof tile	-	1	34	-	-	
	metal	unident	-	1	2			
	slag	slag	-	1	16			
	slag	smelting slag (tap)	-	1	94			
	slag	smelting slag (block)	-	1	494			
	slag	smelting slag (tap)	-	1	170			
616	ceramic	-	-	1	50	-	-	2nd century
	ceramic	pot	3	11	120	43	200	
	ceramic	pot	12	29	216	43	400	
	ceramic	pot	12	2	48	100	200	
	ceramic	pot	12	1	30	43	400	
	ceramic	pot	12.1	1	70	43	200	
	ceramic	pot	12.2	2	12	43	200	
	ceramic	pot	14	3	38	43	200	
	ceramic	pot	22	1	2	120		
	ceramic	pot	38	2	12	100	200	
	ceramic	pot	43	1	6	43	100	
	ceramic	pot	43.1	3	18	43	100	
	ceramic	pot	43.2	1	1	100	200	
	ceramic	unident	-	2	14	-	-	
1003	ceramic	brick/tile	-	3	46	-	-	1900-2000
	ceramic	brick/tile	-	1	108	1600	1900	
	ceramic	pot	78	1	26	1600	1900	
	ceramic	roof tile	-	1	34	1600	1900	
	glass	vessel	-	1	16	1900	2000	
	glass	window	-	4	8	1900	2000	

Context	Material class	Object specific type	Fabric code	Count	Weight (g)	Start date	End date	*tpq* range
8002	ceramic	roof tile	-	4	316	1600	1900	1600-2000
9002	ceramic	clay pipe	-	1	21	1600	1900	*c*.1690-1900
	ceramic	clay pipe	-	1	8	*c*.1690	1720	
	ceramic	pot	81.2	1	14	1600	1750	
	ceramic	roof tile	-	1	80	1600	1900	
	shell	-	-	1	24	-	-	
21002	ceramic	brick/tile	-	1	2	1600	1900	1800-1950
	ceramic	clay pipe	-	1	1	1600	1900	
	ceramic	pot	81	1	14	1700	1900	
	ceramic	pot	85	1	78	1800	1950	
	glass	vessel	-	1	94	1800	1900	
23002	ceramic	clay pipe	-	1	6	1600	1900	1870-1950
	ceramic	floor tile	-	1	12	1870	1950	
	ceramic	drain	-	1	32	1850	1950	
28003	ceramic	pot	85	4	12	1800	2000	1800-2000

Table 3: Summary of context dating based on artefacts

4.7 Environmental analysis, by Alan Clapham

Three contexts from Trench G were analysed for charred plant remains. These are listed in Table 4and the results are displayed in Table 6. Contexts 605 and 625 from a possible Roman furnace, 606, produced very little charred plant remains but did contain other archaeological material such as pottery, slag and glass fragments, while a nail was recovered from 615 (see Table 5). Large mammal bone fragments were also recorded in the sample residues. Some fish bone was recorded in pit fill 616. All contexts were dated to the Roman occupation of the site. It is likely that the plant remains recorded in 605 and 615 represent a 'background' flora and may be residual in nature, this cannot be said of context 616.

Context 616, a fill of pit 619, did produce a large number of charred plant remains and was dominated by thousands of fragments of grass stems. Associated with these were a large number of seeds of grassland and disturbed ground species which suggests that this sample represents different on site activities. The number of cultivated species was limited and consisted of a small number of wheat (*Triticum* sp) and hulled barley (*Hordeum vulgare)* grains. Cereal chaff, in the form of wheat glume bases, was also recorded in low numbers. Only a few were identifiable and were of spelt wheat (*Triticum spelta*). The only other cultivated species recorded were three seeds of flax (*Linum usitatissimum*).

The dominant remains were of uncultivated species and are usually classified as weeds. It is possible to divide them into three habitat types, which are disturbed/cultivated ground, grassland and wetland. A total of 43 taxa were recorded, of these 11 are usually found on disturbed or cultivated ground and therefore may be associated with the cereal remains and may represent the remains of crop processing. Twenty-seven of the taxa can be classified as grassland species and five are found in wetland areas.

Disturbed/cultivated ground

Eleven taxa from pit fill 616 can be classified as species of disturbed or cultivated ground. These include poppy (*Papaver* sp), common nettle (*Urtica dioica*), fat hen (*Chenopodium*

album), orache (*Atriplex* sp), common chickweed (*Stellaria media*), knotgrass (*Polygonum aviculare*), mallow (*Malva* sp), shepherd's-purse (*Capsella bursa-pastoris*), petty spurge (*Euphorbia peplus),* scentless mayweed (*Tripleurospermum inodorum),* and brome grass (*Bromus* sp). These taxa were either associated with the crop species found in the sample and represent crop processing waste, or they may have been growing on the site itself in areas where there had been trampling either by animals or humans. Another possibility is that the cereal, chaff and weed remains may have been used as fodder.

Wetland

Only five species can be associated with wetland habitats, these are meadowsweet (*Filipendula ulmaria*), spike-rush (*Eleocharis* sp), common club-rush (*Schoeonoplectus lacustris),* possible flat sedge (cf *Blysmus compressus*) and possible wood-sedge (*Carex* cf *sylvatica*). It is most likely that these species were not growing on or near the site but closer to the river, and may have been growing on the river bank. This demonstrates that plant material was being deliberately brought onto site.

Grassland

Pit fill 616 was dominated by thousands of grass stem fragments and it is most likely that they represent the remains of hay. The majority of the taxa (27) recorded from this context were of grassland taxa. The most common species included crested dog's-tail (*Cynosurus cristatus*), clover (*Trifolium* sp), bird's-foot trefoil (*Lotus corniculatus*), and black medick (*Medicago* cf *lupulina*). The presence of brome grass may also have originated from grassland although it is usually classified as an arable weed. Other good indicators of the presence of a grassland component are self heal (*Prunella vulgaris*), ribwort plantain (*Plantago lanceolata*), cat's ear (*Hypochaeris radicata*), autumn hawkbit (*Leontodon autumnalis),* lesser hawkbit (*Leontodon saxatilis),* and ox-eye daisy (*Leucanthemum vulgare*).

There are several possible origins for these remains. It is possible that they represent the burning off of overgrown land in order to clear it ready for another purpose. This is unlikely as this would have produced a very hot fire which would have destroyed the more fragile members of the assemblage such as the grass stems and flower heads. Therefore it is more likely that the plant remains represent hay which must have been brought onto site from elsewhere.

With the large number of taxa present it is possible to determine what type of grassland was the source of the hay. Modern ecological studies (Rodwell 1992) have classified grasslands into various types with regard to species present and soil conditions. This has been used by archaeobotanists in the past to help determine which type of grassland was being exploited. Greig (1988) produced a table of the various grassland types and the species associated with them, both modern and their archaeological occurrence. The majority of the species found in this sample appear to represent the Arrhenatheretalia grassland community of which many appear to indicate the Cynosurion order. The Arrhenatheretalia community is that of meadows and pastures and the Cynosurion cristati alliance again is a more specific meadow or pasture, this order is usually divided into two associations: MG5 (*Cynosurus cristatus- Centaurea nigra*) grassland, which is the traditional grazed hay meadow; or MG 6 (*Lolium perenne – Cynosurus cristatus*) grassland which is the modern improved pasture. Although no knapweed (*Centaurea nigra*) was found in the assemblage it is more likely that the grassland represented here is MG5 rather than MG6.

The presence of the wetland species may suggest that the meadow was situated close to a wet area and the most obvious place in Worcester would have been by the River Severn. A likely area where the meadow could have been located is at Pitchcroft, or the other side of the river near the cricket ground.

Hay meadows require some form of management in order to maintain species diversity and nutritional value. In Britain this has been traditionally carried out by allowing grazing early in

the year, usually in spring. This would have added nutrients to the grassland via dung and other excretory products. The livestock are removed in early summer to allow the grasses and other plants to grow. The meadow is then cut in late summer and the wet hay is gathered and stored in stooks in the field and allowed to dry naturally. After drying, the hay is stored inside and fed to livestock in the winter months.

The majority of the evidence for Roman hay in Great Britain is from waterlogged remains, especially those found in wells (Greig 1988). Charred Roman hay remains are extremely rare and only a few examples have been analysed. Perhaps the best known example is from Causeway Lane, Leicester (Monckton 1996). This sample was from a rubbish pit which was thought by the excavators to show evidence for *in situ* burning. The plant remains indicated similar habitats to those found here, that is grassland, damp or wet ground and disturbed/cultivated ground. The majority of the taxa found at Causeway Lane were very similar to those found here, although at Leicester other species such as cowslip (*Primula veris*), yellow-rattle (*Rhinanthus* sp) and knapweed (*Centaurea nigra*) were present. This may be a reflection of the different soil types between the two sites. The main difference between the two sites is the presence of large numbers of grass stems at Sanctuary House.

The interpretation of the Causeway Lane assemblage was one containing fodder, including hay, which was burnt possibly for disposal of old fodder or as fuel or kindling. A similar interpretation can be made for the material from Sanctuary House although with the presence of the grass stems it is more likely to be fodder rather than fuel or dung and, after its use, it was dumped into the pit along with other rubbish and burnt to reduce any unpleasant odours.

Context	Sample	Sample type	Sample vol (litres)	Res assessed	Flot assessed
605	1	General	30	Yes	Yes
615	2	General	5	Yes	Yes
616	3	General	40	Yes	Yes

Table 4 Contexts analysed for charred plant remains from Sanctuary House WCM 101768

Context	Sample	large mammal	fish	charcoal	charred plant	hammerscale	Comment
605	1	occ-mod		occ	v occ	v occ	mod pot, occ slag, burnt stone, v occ glass
615	2	occ		mod	v occ		v occ burnt stone, nail, slag, occ pot
616	3	mod	v occ	mod	v occ	v occ	abt slag, pot, occ Fe object, fired clay occ glass,

Table 5 Environmental summary of remains found in the contexts analysed for biological remains from Sanctuary House WCM 101768

Latin name	Common name	Habitat	605	615	616
Charred					
Triticum spelta glume base	spelt wheat	F		1	4
Triticum sp grain	wheat	F	1	1	4
Hordeum vulgare grain (hulled)	barley	F	1	4	3
Hordeum vulgare tail grain (hulled)	barley	F		1	
Cereal sp indet grain (fragment)	cereal	F	8	7	7
Poa sp grain	meadow-grass	ABCD			95
Bromus sp grain	brome grass	AF	1		122
Bromus sp grain (fragments)	brome grass	AF			294
Poaceae sp indet culm node	grasses	AF			100+
Poaceae sp indet stem frags	grasses	ABCD			1000+
Ranunculus acris/repens/bulbosus	buttercup	CD			95
Ranunculus acris/repens/bulbosus fragment	buttercup	CD			11
Papaver sp	poppy	ABF			5
Urtica dioica	common nettle	ABCD			1
Chenopodium album	fat hen	AB			6
Atriplex sp	orache	AB			1
Stellaria media	common chickweed	AB			5
Stellaria graminea	lesser stitchwort	D			65
Polygonum aviculare	knotgrass	AB			2
Rumex acetosella	sheep's sorrel	ABD	1	7	14
Rumex sp	dock	ABCD			86
Rumex sp fragment	dock	ABCD			9
Rumex sp (flower)	dock	ABCD			2
Hypericum sp	St Johns's wort	CD			1
Malva sp	mallow	AB			7
Capsella bursa-pastoris	shepherd's-purse	AB			1
Filipendula ulmaria fruit	meadowsweet	E			1
Rubus sect Glandulosus	bramble	CD			3
Potentilla sp	cinquefoil	BCDE			3
Lotus cf *corniculatus*	common bird's-foot-trefoil	D			100+
Vicia/Lathyrus sp	vetch/pea	ABCD			25
Vicia/Lathyrus sp (fragment)	vetch/pea	ABCD			5
Medicago cf *lupulina*	black medick	D			1000+
Trifolium sp	clover	ABD	1		1000+
Trifolium sp flower	clover	ABD			1
Trifolium pratense fruit	red clover	BD			1
Legume pod fragments					2
Euphorbia peplus	petty spurge	AB			1
Linum usitatissimum seed	flax	AF			3
Anthriscus sylvestris	cow parsley	CD			2
Conopodium majus (tuber)	pignut	CD			4
Conopodium majus (tuber fragments)	pignut	CD			3
Prunella vulgaris	selfheal	D			492
Plantago lanceolata	ribwort plantain	D			184

Latin name	Common name	Habitat	605	615	616
Asteraceae flowerhead fragments	daisy family				2
Hypochaeris radicata	cat's-ear	D			5
Hypochaeris radicata (fragment)	cat's-ear	D			4
Leontodon autumnalis	autumn hawkbit	D			9
Leontodon autumnalis (fragment)	autumn hawkbit	D			2
Leontodon saxatilis	lesser hawbit	D			1
Crepis sp	hawk's-beard	D			1
Leucanthemum vulgare	oxeye daisy	BD			25
Leucanthemum vulgare flowerhead	oxeye daisy	BD			1
Leucanthemum vulgare flowerbud	oxeye daisy	BD			1
Tripleurospermum inodorum	scentless mayweed	AB	1		11
Eleocharis sp	spike-rush	E			3
Schoenoplectus lacustris	common club-rush	E			7
cf *Blysmus compressus*	flat-sedge	E			2
Carex cf *sylvatica*	wood-sedge	C			6
cf *Festuca* sp	fescue	ABCD			212
cf *Festuca* sp grain fragments	fescue	ABCD			147
Lolium sp	rye-grass	ABD			99
Cynosurus cristatus grain	crested dog's-tail	D			1000+
Cynosurus cristatus grain fragments	crested dog's-tail	D			100+
Arrhenatherum elatius var *bulbosum* (tuber)	onion couch	ABD			1
unidentified parenchyma fragments					6

Table 6 Plant remains from contexts analysed from Sanctuary House WCM101768

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 6

5. Synthesis

5.1 Roman

The majority of the archaeological remains identified during the excavations were identified as Roman, although the evidence for this came predominantly in the form of ceramic finds as much of the stratified archaeology has been removed through construction and demolition works associated with Cameo House. The majority of these ceramics were locally produced Severn Valley or Malvernian wares suggestive of predominantly domestic activity, supporting the earlier hypothesis presented during the earlier phases of excavation (Mann, 2009).

Despite the intrusive nature of the modern deposits, Roman features with a 2nd century *terminus post quem* were identified in Trench G. These were sealed by an undisturbed layer (603) containing material of similar date which is likely to reflect accumulation of agricultural

and domestic waste on an abandoned piece of ground once activity had ceased upon the site. Due to the limited nature of the excavated area, no larger structural or relational pattern could be established between the pits, postholes and furnace that were identified, although the postholes appeared to predate one of the pits. Roman post-built buildings have been recorded in the local area, for example at the Magistrates Court (Jones and Vyce 2000) and Castle Street (Simon Sworn pers comm) adjacent to the northwest while larger buildings of more substantial construction have been identified at Britannia Square, 0.4km to the north, and The Butts, 0.25km to the southwest (*ibid.*).

As with the evaluation (Mann 2009), and at the Conder site adjacent to the south (Pikes and Sherlock 2003, Trenches A & B, WCM 100592), slag was not encountered in large quantities. This is in contrast to the 1995 excavations and many other investigations within this area (Mann 2009). That which was identified was residual and not deposited in deliberate layers for surfacing or consolidation. The reason for this variation from the norm is considered to be the high level of disturbance identified across the site and the lack of any surviving positive or structural features. The identification of iron smelting slag indicates that industrial activity took place upon or in the immediate environs of the site. The furnace (606) in Trench G may have been used for this purpose, whereas evidence from the previous evaluation pointed towards smithing (*ibid.*, 18). The pits (617 and 619) and post holes (614 and 618) immediately adjacent may relate to an associated structure, although this is unclear.

Of particular interest is the deposit of charred hay of 2nd century date retrieved from within pit (619). It is the only documented example of its sort from Worcestershire, so is of great importance due to the rarity of this kind of deposit from a Roman context,. This unique deposit shows that, as would be expected, a broad selection of local resources was being exploited.

5.2 Medieval

No features of medieval date were identified during the excavation although seven residual sherds of local Malvernian pottery were retrieved from later deposits. The lack of medieval features is unsurprising as the investigated area lay outside the walls of the medieval city and was therefore unaffected by intrusive activity that would have occurred in the city centre. This agrees favourably with the earlier excavations at Love's Grove, Rea's Timber Yard and the present site (Edwards *et al* 2002; Mann 2009).

5.3 Post-medieval and modern

The upper horizon of the dark earth produced a number of 19th century finds and a pit in Trench A. This had been heavily truncated by modern activity and only a small portion survived. The majority of the post-medieval remains were retrieved from within the dark earth that was encountered across the majority of the site, an indication of how heavily disturbed this deposit has been in recent times.

The majority of the deposits observed during the excavation and watching brief are associated with the construction of Cameo House in 1995 and its recent demolition. Much of this has extensively truncated earlier deposits, particularly those of Roman date.

6. Recommendations

Given the regional (and potentially national) significance and rarity of the deposits identified in the plant macrofossil analysis of context (616), it is recommended that the results of the plant macrofossil analysis are expanded upon and published in a suitable journal such as *Vegetation History and Archaeobotany* or *Environmental Archaeology*. This will allow this assemblage to act as a comparison in the event of similar deposits being encountered and

permit fellow researchers to include the data in the event of regional and national studies of significant plant macrofossil assemblages of Roman date.

7. Publication summary

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service 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 and watching brief was undertaken on behalf of Langdon Davis LLP, on behalf of Sanctuary Housing Association at Sanctuary House, Farrier Street, Worcester (*NGR SO 84790 55340*; HER refs WCM 101768 and 101769). Twenty nine foundation pads and soakaways were subject to the watching brief and seven trenches were excavated during the construction of new offices. The project follows earlier investigations on the site in 1995 and 2009.*

The site lies on the northern side of the Roman town in an area where previous archaeological intervention on sites along Castle Street adjacent have demonstrated that well preserved Roman layers survive, often associated with industrial activity.

Heavy disturbance and truncation of the archaeological deposits associated with the construction and demolition of the previous building on the site, Cameo House, and the limited excavation area meant that many of the features identified in earlier works were not identified in this phase of work.

A varied pottery assemblage of both local and imported Samian ware was recovered from across the site, although the majority of this was residual and had been disturbed and re-deposited within the post-Roman dark earth which was frequently encountered across the site.

Only one trench (G) contained in situ *Roman features, of* c *2nd century date, consisting of two postholes, a possible furnace and two pits. No overall structural or relational patterns could be ascertained.*

Of particular interest was a charred hay deposit which was identified during plant macrofossil analysis. Sampled during excavation of one of the c *2nd century pits, the deposit has been interpreted as representing fodder which was deposited and burnt as part of its disposal. The plant material within the fodder was sourced from a variety of habitats including hay meadow which tends to indicate that landscape management of floodplain grassland was occurring within the immediate environs of the site. Charred hay of this date is extremely rare nationally with this deposit representing the sole example from Worcestershire.*

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9. Personnel

The fieldwork was led by Graham Arnold, Nick Daffern, Jo Wainwright and John Webster with assistance from Richard Bradley and Steve Woodhouse. The report preparation was led by Nick Daffern and Graham Arnold. The project manager responsible for the quality of the project was Tom Vaughan. Environmental analysis was undertaken by Alan Clapham, finds analysis by Dennis Williams and Laura Griffin, illustration by Carolyn Hunt and Steve Rigby.

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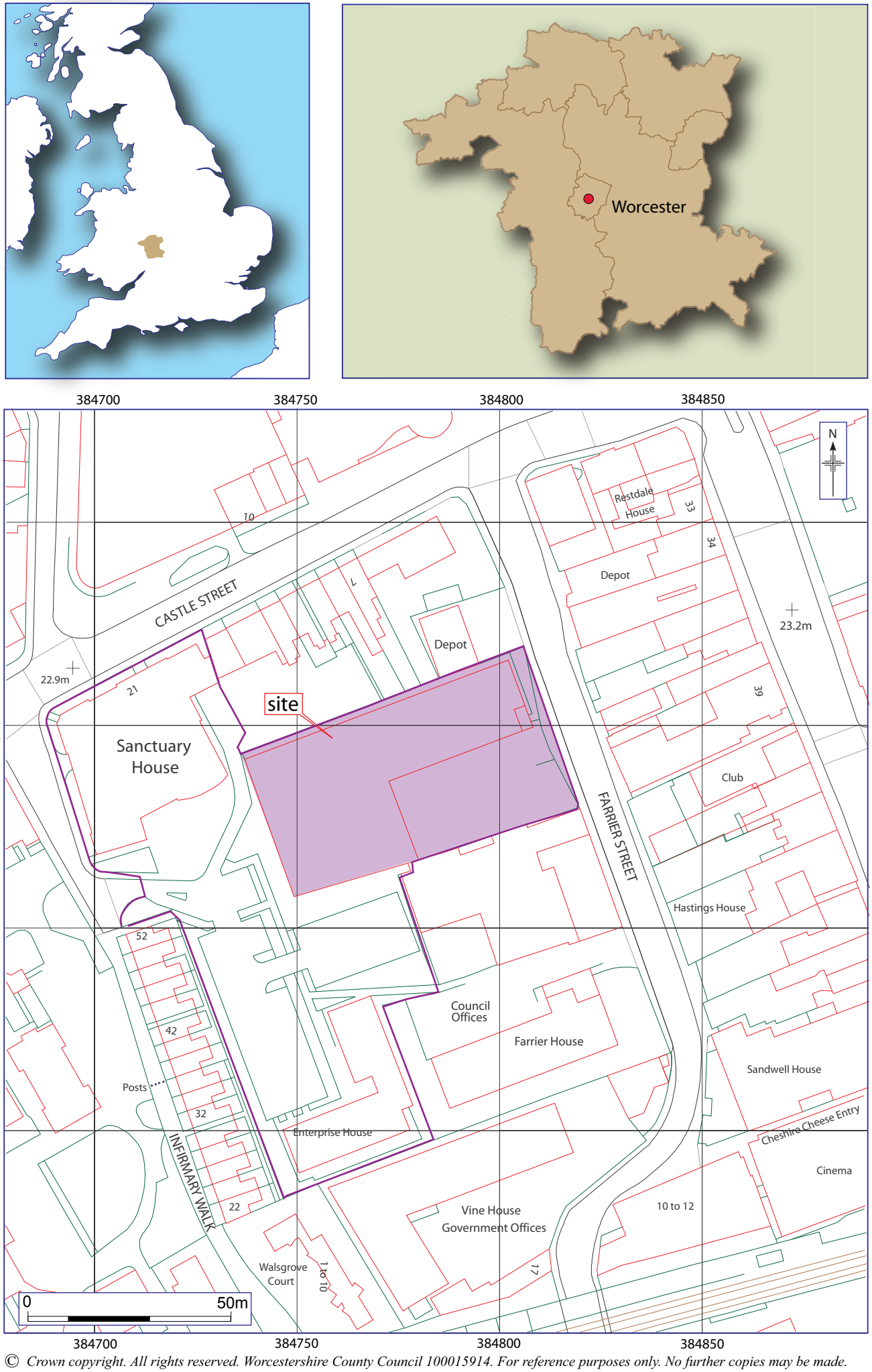
Figures



Location of the site

Figure 1

Sanctuary House

N

FARRIER STREET

Trench A

concrete stancheon

Trench B

Trench C

Trench D

Trench E

Trench F

Trench G

ZONE 1

ZONE 2

ZONE 3

T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20 T21 T22 T23 T24 T25 T26 T27 T28 T29

ET1 ET2 ET3

619

617

606

pit

KEY

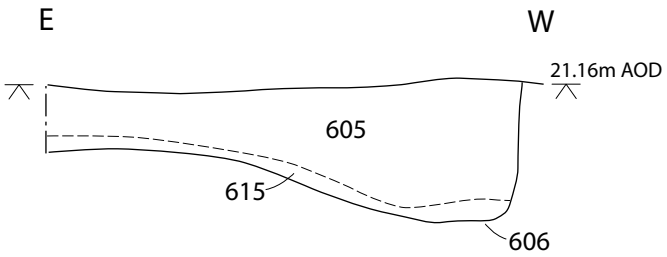
- trenches excavated
- trenches monitored
- area excavated but not observed
- foundation pad: existing
- 2009 evaluation trenches

0 20m

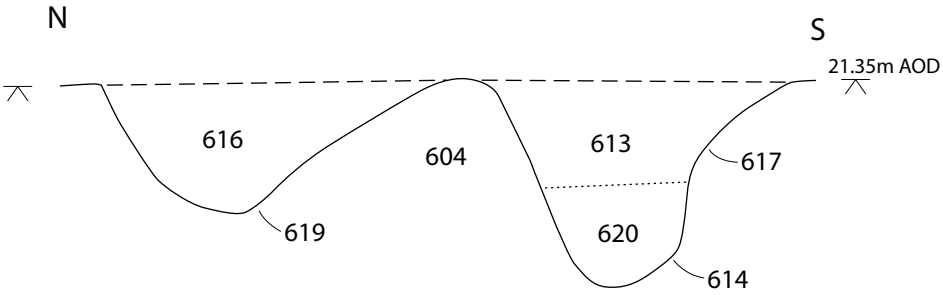
Trench location plan

Figure 2

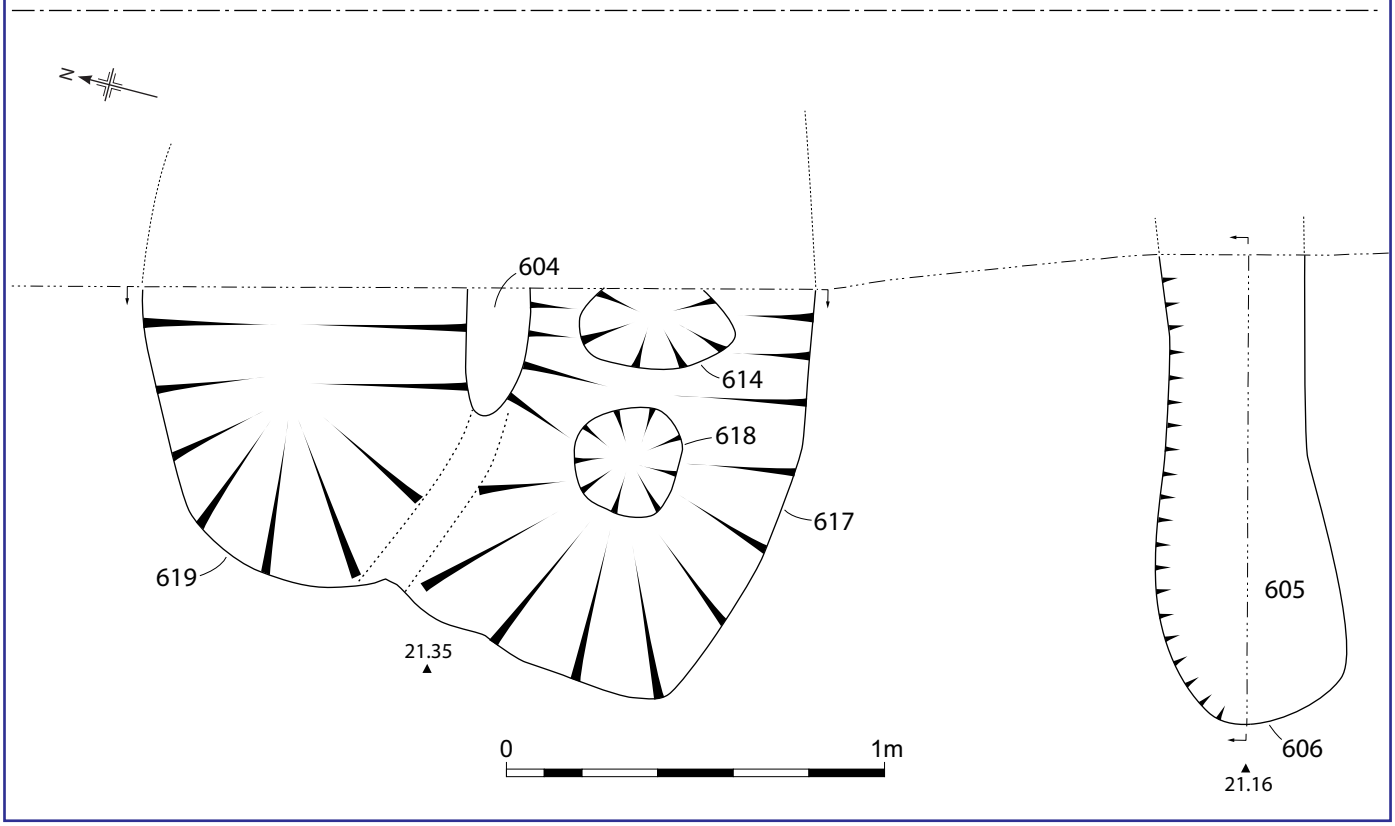
NORTH-FACING SECTION OF FEATURE 606



WEST-FACING SECTION OF 614, 617 and 619



PLAN OF FEATURES IN TRENCH G



Sections and plan of features in Trench G

Figure 3

Plates

Plate 1 General view of the site prior to archaeological works, looking northeast

Plate 2 General site overview during excavation of Zone 2, looking southeast

Plate 3 Top-down view of Trench A

Plate 4 East facing section of Trench A

Plate 5 Trench B overview looking south. Note the toothed bucket marks from earlier intrusive works

Plate 6 East facing section of Trench B

Plate 7 Trench C overview looking south

Plate 8 North facing section of Trench C

Plate 9 Trench D overview looking south; note the major disturbance by modern works

Plate 10 South facing section of Trench D

Plate 11 Post-excavation overview of Trench D

Plate 12 Location shot of soakaways and Trench E prior to excavation, looking northwest

Plate 13 Trench E overview showing natural sands and modern disturbance, looking east

Plate 14 Trench E overview showing natural sands and modern disturbance, looking east

Plate 15 South facing section of Trench E showing dark earth and modern truncation overlay by modern hardcore

Plate 16 South facing section of Trench E showing modern truncation cutting natural sands

Plate 17 Trench F overview, looking northwest

Plate 18 Northeast facing section of Trench F

Plate 19 Trench G overview, looking northwest; note possible furnace [606] in the foreground

Plate 20 Northwest facing section of Trench G showing modern deposits (600) and (601), "dark earth" (602) and the lighter brown, stratified Roman deposit (603) in the base of the section overlying natural sands (604)

Plate 21 Northwest facing section through (605) and (615), fills of possible furnace [606]

Plate 22 Looking northeast shows post-holes [614] and [618] and pit [617] post excavation and pit fill (616) pre-excavation

Plate 23 Looking northeast showing post-holes [614] and [618] and pits [617] and [619] post excavation

Appendix 1 Trench descriptions

WCM 101768 Excavation

Trench A

Site area: Zone 2

Maximum dimensions: Length: 2.30m (E-W) Width: 2.00m (N-S) Depth: 1.90m

Orientation: east to west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
001	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.65m
002	Fill of pit	Dark grey, black to brown friable silty clay with moderate sub-rounded and rounded small to large pebbles, moderate charcoal and moderate brick fragments. Fill of (003).	0.65-1.55m
003	19th century pit cut	Slightly concave, near vertical sides with a gradual break of slope at the base. Base slopes to the NE Only partially seen in plan and East facing section. Shape in plan unknown. Heavily truncated by modern disturbance. Cuts dark earth (004).	0.65-1.55m
004	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	0.65-1.25m
005	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles	1.25-1.55m
006	Natural	Beige, orange and pink sands with gravels.	1.55-1.90m+

Trench B

Site area: Zone 2

Maximum dimensions: Length: 2.90m (N-S) Width: 2.10m (E-W) Depth: 1.55m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.50m
101	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster and mortar.	0.50-1.30m
102	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles	1.30-1.55m
103	Natural	Beige, orange and pink sands with gravels.	1.55m+

Trench C

Site area: Zone 2

Maximum dimensions: Length: 3.30m (E-W) Width: 2.80m (N-S) Depth: 1.30m

Orientation: east to west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
200	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.20m
201	Modern mortar	A band of modern mortar and gravel spread surface from the remains of the foundations of Cameo House.	0.20-0.30m
202	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	0.20-0.90m
203	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles	0.90-1.20m
204	Natural	Beige, orange and pink sands with gravels.	1.20-1.30m+

Trench D

Site area: Zone 2

Maximum dimensions: Length: 3.80m (E-W) Width: 3.40m (N-S) Depth: *c* 1.80m

Orientation: east to west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
300	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.40m
301	Modern disturbance	Cameo House building demolition and service trenches disturbance. Very mixed re-deposited black, brown and grey silty clay. Frequent mortar, modern bricks, moderate concrete and service pipes. Occasional patches of Type 1 in pipe trench fills. Cuts natural sands and gravels (302)	0.40-1.25m
302	Natural	Yellow, orange and pink sands with gravels.	1.25m+

Trench E

Site area: Zone 2

Maximum dimensions: Length: 10.50m (E-W) Width: 3.40m (N-S) Depth: >2.60m

Orientation: east to west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
400	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore.	0-0.79m
401	Fill	Dark grey, black to brown friable silty clay with moderate sub-rounded and rounded small to large pebbles, moderate charcoal and moderate brick fragments. Fill of (402).	0.80-2.28m
402	20th century linear cut	Slightly concave, near vertical sides with a gradual break of slope at the base. Base slopes to the NE. Only partially seen in plan and East facing section. Shape in plan unknown. Heavily truncated by modern disturbance. Cuts dark earth (403).	0.80-2.28m
403	Dark Earth	Dark blue grey sand and silts mix, occasional rounded and sub-rounded gravels and charcoal flecks.	0.65-1.25m
404	Subsoil	Soft yellow brown bioturbated silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles.	2.09-2.59m
405	20th century cut	Vertical, sharply sloped modern 20th century cut.	0.80-2.28m
406	Fill	Friable modern rubble, from demolition and levelling of site. Inclusions	0.80-2.28m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
		of brick walls, concrete beams, metalwork and plastics. Fill of 405.	
407	Natural	Red and orange sands with gravels.	2.59m+

Trench F

Site area: Zone 1

Maximum dimensions: Length: 15.10m (N-S) Width: 4m (E-W) Depth: >2.60m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
500	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.24m
501	Layer	Demolition material, modern CBM and building rubble from previous building in a silty sand matrix. Pinkish-grey in colour. Very mixed and contained frequent pieces of concrete, brick, tile, tarpaulin etc.	0.24-0.50m
502	Dark Earth	Humic dark-earth/cultivation soil. Friable dark brown sandy silt containing small and medium sub-rounded stones and frequent charcoal smears, flecks and pieces. Heavily disturbed by modern building activity, contained frequent CBM and modern pottery and rubbish. Also contained residual animal bone and Roman pottery	0.50-1.60m
503	Layer	Soft-loose yellowish orange sand layer within (502) at southern end of trench. Probably building sand related to modern building activity	0.55 – 0.70m
504	Natural	Natural orange sand with occasional rounded-sub-rounded gravel. Occasionally truncated by modern disturbance.	1.60 - >1.60m
505	Fill	Dark blackish brown sandy silt fill of modern truncation [506]. Frequent charcoal, CBM etc. Similar to (502)	1.60 - >1.60m
506	Cut	Cut of modern intrusion. Filled by 505.	1.60 - >1.60m
507	Fill	Dark blackish brown sandy silt fill of modern truncation [508]. Frequent charcoal, CBM etc. Similar to (502)	1.60 - >1.60m
508	Cut	Cut of modern intrusion. Filled by 507.	1.60 - >1.60m
509	Fill	Dark blackish brown sandy silt fill of modern truncation [510]. Frequent charcoal, CBM etc. Similar to (502)	1.60 - >1.60m
510	Cut	Cut of modern intrusion. Filled by 509.	1.60 - >1.60m
511	Fill	Dark blackish brown sandy silt fill of modern truncation [512]. Frequent charcoal, CBM etc. Similar to (502)	1.60 - >1.60m
512	Cut	Cut of modern intrusion. Filled by 511.	1.60 - >1.60m

Trench G

Site area: Zone 1

Maximum dimensions: Length: 15.40m (N-S) Width: 5.30m (E-W) Depth: 2.03m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
600	Hardcore	Modern gravel hardcore put down after the demolition of Cameo House. Mixture of type 1 and type 2 hardcore	0-0.08m
601	Layer	Demolition material, modern CBM and building rubble from previous building in a silty sand matrix. Pinkish-grey in colour. Very mixed and contained frequent pieces of concrete, brick, tile, tarpaulin etc.	0.08-0.83m
602	Dark Earth	Humic dark-earth/cultivation soil. Friable dark brown sandy silt containing small and medium sub-rounded stones and frequent charcoal smears, flecks and pieces. Heavily disturbed by modern building activity, contained frequent CBM and modern pottery and rubbish. Also contained residual animal bone and Roman pottery	0.83-1.91m
603	Layer	Light yellowish brown silty sand with occasional round-sub angular pebbles. Diffuse upper and lower boundary. Contained frequent Roman pottery	1.91-2.03m
604	Natural	Natural orange sand with occasional rounded-sub-rounded gravel. Occasionally truncated by modern disturbance.	2.03m+
605	Fill	Fill of [606]. Soft/friable light greyish brown sandy silt with occasional small sub-rounded stones and frequent flecks and streaks of charcoal. Contained frequent Roman pottery.	2.03 – 2.28m
606	Cut	Cut of possible Roman furnace. Filled by (605) and (615) Irregular linear cut with bulbous western end. 1.26m in length (east – west) and 0.45m wide (north – south). Vertical sides and concave base. Full plan not seen as flue of oven went into the west facing section.	2.03 – 2.33m
607	Fill	Dark blackish brown sandy silt fill of modern truncation [608]. Frequent charcoal, CBM etc. Similar to (602)	2.03 - >2.15m
608	Cut	Cut of modern intrusion. Filled by (607)	2.03 - >2.15m
609	Fill	Dark blackish brown sandy silt fill of modern truncation [610]. Frequent charcoal, CBM etc. Similar to (602)	2.03 - >2.15m
610	Cut	Cut of modern intrusion. Filled by (609)	2.03 - >2.15m
611	Fill	Dark blackish brown sandy silt fill of modern truncation [612]. Frequent charcoal, CBM etc. Similar to (602)	2.03 - >2.20m
612	Cut	Cut of modern intrusion. Filled by (611)	2.03 - >2.20m
613	Fill	Fill of [617], very similar/same as (603)	2.03 – 2.22m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
614	Cut	Cut of posthole. Filled by (620).	2.22 – 2.43m
615	Fill	Charcoal rich sand. Basal fill of [606]	2.28 – 2.33m
616	Fill	Fill of [619], similar to (603).	2.03 – 2.24m
617	Cut	Cut of pit truncating (620) and (621). Possibly cut to allow removal of posts from postholes [614] and [618]. Filled by 613.	2.03 – 2.22m
618	Cut	Cut of posthole. Filled by (621)	2.22 – 2.42m
619	Cut	Cut of pit. Filled by (616)	2.03 – 2.24m
620	Fill	Fill of [614], mid brown silty sand with occasional round-sub angular pebbles	2.22 – 2.43m
621	Fill	Fill of [618]. very similar to (620)	2.22 – 2.42m

WCM 101769 Watching Brief

Trench 1 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3m (E-W) Width: 3m (N-S) Depth: 1.35m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1000	Hardcore	Compact fine grey gravel. Modern hardcore surface. Mixture of type 1 and type 2 hardcore. Previous road surface in the east-facing section	0-0.15m
1001	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
1002	Building demolition levelling	Moderately compact reddish brown silty clay with abundant large sandstone and limestone pieces and gravels and frequent broken bricks, concrete and modern debris with lenses of red sand	0-0.80m
1003	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments and glass cut by modern concrete manhole foundation in the southwest corner	0.70-1.35m+

Trench 2 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 4m (N-S) Width: 3m (E-W) Depth: 1.15m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
2000	Modern surface	Compacted grey gravel surface (same as 1001)	0-0.15m
2001	Fill	Type 1 gravel hardcore and friable red sandy clay. Fill of construction cut for modern wall [2004] and concrete manhole foundation [2005] these contexts need to be added to the table	0.15-0.90m
2002	Building demolition levelling	0.05m Red sand from piling auger. 0.05-0.70m Moderately compact reddish brown silty clay with abundant large sandstone and limestone pieces, gravels, frequent broken bricks, concrete and modern debris with a lens of red sand 0.10m thick 0.70-0.80m	0-0.80m
2003	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments, ironwork and glass cut by a modern wall [2004] and concrete manhole foundation [2005]	0.70-1.15m+

Trench 3 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3m (NW-SE) Width: 2m (SE-NW) Depth: 1.05m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
3000	Modern surface	Compacted grey gravel surface (same as 1001)	0-0.15m
3001	Layer	Type 1 gravel hardcore and friable red sandy clay.	0.15-0.90m
3002	Building demolition levelling	Moderately compact reddish brown silty clay with abundant large sandstone and limestone pieces and gravels and frequent broken bricks, concrete and modern debris	0-0.70m
3003	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments, ironwork and glass	0.70-1.05m+

Trench 4 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 1.30m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
4000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
4001	Building demolition levelling	Moderately compact reddish brown silty clay with abundant large sandstone and limestone pieces and gravel, frequent broken concrete, bricks and modern demolition debris	0-1.20m
4002	Layer	Friable coarse red sand modern levelling layer form services	0.60-0.80m
4003	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments, ironwork and glass.	0.80-1.30m+

Trench 5 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 1.30m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
5000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
5001	Building demolition levelling	Moderately compact reddish brown silty clay with abundant large sandstone and limestone pieces and gravels and frequent broken bricks, concrete and modern debris	0.05-0.80m
5002	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments, ironwork, glass and plastics.	0.80-1.30m+

Trench 6 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 2m (N-S) Width: 2m (E-W) Depth: 1.20m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
6000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
6001	Building demolition levelling	Moderately compact red sand and grey gravel hardcore with abundant large sandstone and limestone pieces and gravels and frequent broken bricks, concrete and modern debris.	0.05-0.35m
6002	Modern/post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern ceramics, brick fragments, ironwork, glass and tarmac.	0.80-1.30m+

Trench 7 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 2m (N-S) Width: 2m (E-W) Depth: 1.20m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
7000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
7001	Building demolition levelling	Friable red sand and grey gravel. Modern levelling of site.	0-0.35m
7002	Modern / post-medieval buried soil	Friable dark grey silty clay with lenses of charcoal and moderate modern brick fragments, ironwork and tarmac.	0.35-1.20m+

Trench 8 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3m (NW-SE) Width: 2m (NE-SW) Depth: 1.20m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
8000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
8001	Modern levelling	Friable red silty sand with frequent large angular and sub angular stone and gravels, moderate brick fragments and occasional plastics and metalwork.	0.05-0.90m
8002	Modern / post-medieval buried soil	Compact dark greyish brown silty clay with frequent charcoal and rounded pebbles and occasional modern brick fragments.	0.70-1.20m+

Trench 9 – pile cap

Site area: Zone 1

Maximum dimensions: Length: 3.40m (N-S) Width: 3m (E-W) Depth: 1.30m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
9000	Modern levelling layer	Loose red sand layer from piling auger.	0-0.05m
9001	Modern levelling	Friable red silty sand with frequent large angular and sub angular stone and gravels, moderate brick fragments and occasional plastics and metalwork.	0.05-0.70m
9002	Modern / post-medieval buried soil	Compact dark greyish brown silty clay with frequent charcoal and rounded pebbles and moderate brick fragments mortar and charcoal. Occasional bone, clay pipe and tile. 19th century level of cultivation layer.	0.70-1.30m+

Trench 10 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 5m (E-W) Width: 4m (N-S) Depth: 2.50m

Orientation: east to west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
10000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
10001	Modern levelling overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.50m
10002	Modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brickwork, concrete and rooting. Truncated by modern services and recent demolition activity.	0.50-1.20m
10003	Natural	Clean compact orange sand	1.20-2.50m+

Trench 11 – foundation pad (south extension to Trench A)

Site area: Zone 2

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 2.10m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
11000	Levelling	Compact grey type 1 hardcore gravel.	0-0.05m
11001	Modern Levelling	Friable light brown sandy clay with abundant grey gravel hardcore and large angular stones and occasional plastics and metalwork.	0.05-0.60m
11002	Demolition material	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and brick. Truncated by large concrete beams and stanchions from Cameo House foundations.	0.50-1.30m
11003	Natural	Orange and pink sands with gravels. Truncated by large concrete beams and stanchions measuring 3m x 1.5m.	0.65-2.00m
11004	Natural	Reddish orange river gravels.	2.00m+

Trench 12 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 4m (N-S) Width: 4m (E-W) Depth: 2m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
12000	Levelling	Compact grey type 1 hardcore gravel.	0-0.05m
12001	Modern Levelling	Friable light brown sandy clay with abundant grey gravel hardcore and large angular stones and occasional plastics and metalwork.	0.05-0.40m
12002	Demolition material	Friable dark blackish grey silty clay. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and brick. Truncated by large concrete beams and stanchions from Cameo House foundations and frequent modern disturbance from services such as a modern water pipe [12006] filled with red sand and pea grit (12005).	0.40-1.30m
12003	Natural	Natural orange and pink sandy gravels. Truncated by large concrete beams and stanchions measuring 3m x 1.5m.	1.20-2.00m
12004	Natural	Reddish orange river gravels.	2.00m+
12005	Fill	Loose red sand and pea gravel fill of water pipe trench [12006].	0-1.25m
12006	Construction cut	V shaped modern service pipe trench filled by (12005).	0-1.25m

Trench 13 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 2.50m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
13000	Levelling	Compact grey type 1 hardcore gravel.	0-0.30m
13001	Modern Levelling	Friable light brown sandy clay with abundant grey gravel hardcore and large angular stones and occasional plastics and metalwork.	0.30-1.20m
13002	Demolition material	Friable dark greyish brown and black silty clay with frequent brick, mortar, concrete and modern service pipe debris. Truncated by building demolition.	1.20-2.00m
13003	Natural	Yellow, orange and pink sands and river gravels.	2.00-2.50m

Trench 14 – foundation pad (east extension to Trench B)

Site area: Zone 2

Maximum dimensions: Length: 2.50m (N-S) Width: 1.50m (E-W) Depth: 1.80m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
14000	Levelling	Compact grey type 1 hardcore gravel.	0-0.30m
14001	Demolition material	Friable dark greyish brown sandy silt with abundant large angular stones, frequent broken brick, concrete and occasional plastics and metalwork.	0.30-1.00m
14002	Modern / post-medieval buried soil	Moderately compacted dark greyish brown silty clay with lenses of orange sandy clay. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and brick. Truncated by frequent modern disturbance from services.	1.00-1.80m+

Trench 15 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 2.50m (N-S) Width: 2.50m (E-W) Depth: 2.00m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
15001	Levelling	Firm dark brownish red sandy clay.	0-0.30m
15002	Modern services and demolition material	Amorphous loose coarse yellow sand from blue plastic water pipe and grey gravel aggregate and bricks covering disused cables. Occasional pockets of re-deposited red sand and dark blackish brown silty clay. Original soil totally truncated by modern services.	0.30-1.50m
15003	Natural	Compact light yellowish orange sand.	1.50m+

Trench 16 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 2.50m (N-S) Width: 2.50m (E-W) Depth: 2.00m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
16001	Levelling	Firm dark brownish red sandy clay.	0-0.30m
16002	Demolition debris and modern disturbance	Friable dark greyish brown and black silty clay with frequent brick, mortar, concrete and modern service pipe debris. Truncated by building demolition.	*c* 0.30-1.50m
16003	Natural	Compact light yellowish orange sand.	*c* 1.50m+

Trench 17 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 3m (N-S) Width: 2.50m (E-W) Depth: 2.00m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
17001	Levelling	Firm dark brownish red sandy clay with frequent type 1 grey gravel hardcore and brick rubble	0-0.30m
17002	Demolition debris and modern disturbance	Friable dark greyish brown and black silty clay with frequent brick, mortar, concrete and modern service pipe debris. Truncated by building demolition.	*c* 0.30-1.50m
17003	Natural	Compact light yellowish orange sand	*c* 1.50m+

Trench 18 – foundation pad (west extension to Trench 15)

Site area: Zone 2

Maximum dimensions: Length: 1.30m (N-S) Width: 0.80 (E-W) Depth: 2.00m

Orientation: north to south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
18001	Levelling	Firm dark brownish red sandy clay	0-0.30m
18002	Modern services and demolition material	Amorphous loose coarse yellow sand from blue plastic water pipe and grey gravel aggregate and bricks covering disused cables. Occasional pockets of redeposited red sand and dark blackish brown silty clay. Original soil totally truncated by modern services and modern wall concrete foundations	0.30-1.50m
18003	Natural	Compact light yellowish orange sand	1.50m+

Trench 19 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 2.50m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
19000	Modern levelling layer	Compact grey type 1 hardcore gravel	0-0.05m
19001	Modern levelling overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling	0.05-0.60m
19002	Modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brick, concrete and rooting. Truncated by modern services and recent demolition activity	0.60-1.50m
19003	Natural	Loose light yellowish orange sand	1.50m+

Trench 20 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 2.5m (N-S) Width: 2.5m (E-W) Depth: 2.00m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
20000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
20001	Modern levelling overburden	Moderately compact light brown sandy clay with frequent brick, angular stone, ash and mortar lenses. Demolition material levelling.	0.05-0.50m
20002	re-deposited modern dump	Friable dark greyish black silty clay with frequent charcoal, ash and coke. Truncated by modern services and recent demolition activity.	0.50-0.85m
20003	Modern levelling	Friable light yellowish brown silty sand with frequent mortar and ash.	0.85-1.00m
20004	Modern / post-medieval buried soil	Compact dark greyish brown silty clay with frequent charcoal and rounded pebbles and moderate brick fragments mortar and charcoal cut on the south edge by a modern water ceramic pipe aligned east to west across site and also seen in Tr 24 and 25 and possibly Tr 13.	1.00m+

Trench 21 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 2.5m (N-S) Width: 2.5m (E-W) Depth: 2.50m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
21000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
21001	Modern levelling overburden	Moderately compact light reddish brown sand with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.30m
21002	Modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brick, concrete ash and occasional clay pipe. Truncated by modern services.	0.30-1.30m
21003	Natural	Loose orange sand.	1.30m+

Trench 22 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 2.5m (N-S) Width: 2.5m (E-W) Depth: 2.50m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
22000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
22001	Modern levelling overburden	Moderately compact light reddish brown sand with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.30m
22002	modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brick, concrete ash and occasional clay pipe. Truncated by modern services.	0.30-1.30m
22003	Natural	Loose orange sand.	1.30m +

Trench 23 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 2.5m (N-S) Width: 2.5m (E-W) Depth: 2.50m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
23000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
23001	Modern levelling overburden	Moderately compact light reddish brown sand with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.30m
23002	Modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brickwork, concrete ash and occasional clay pipe. Truncated by modern services.	0.30-1.30m
23003	Natural	Loose orange sand.	1.30m+

Trench 24 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 3m (N-S) Width: 3m (E-W) Depth: 2.20m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
24000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
24001	Modern levelling overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.40m
24002	Modern / post-medieval buried soil	Friable dark greyish brown silty clay with frequent charcoal, modern brickwork, concrete and rooting. Truncated by modern services, brickwork, concrete beams and recent demolition activity. Cut on the south edge by a modern water ceramic pipe aligned east to west across site and also seen in Tr 20 and 25 and possibly TR 13.	0.40-1.25m
24003	Natural	Loose orange sand.	1.25m+

Trench 25 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 2.5m (N-S) Width: 2.5m (E-W) Depth: 2.20m

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
25000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.05m
25001	Modern levelling overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling.	0.05-0.40m
25002	Modern disturbance	Friable dark greyish brown silty clay with frequent charcoal, modern brick, concrete. Truncated by modern services, brickwork, concrete beams and recent demolition activity. Cut on the south edge by a modern water ceramic pipe aligned east to west across site and also seen in Tr 20 and 24 and possibly Tr 13.	0.40-1.25m
25003	Natural	Loose orange sand.	1.25m+

Trench 26 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 5.6m (NW-SE) Width: 3.6m (NE-SW) Depth: 4.00m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
26000	Modern levelling layer	Compact grey type 1 hardcore gravel	0-0.10m
26001	Modern rubble overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling	0.10-1.20m
26002	Mixed contaminated dark earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	1.20-1.40m
26003	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	1.40-2.20m
26004	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles – bioturbated red sand	2.20-2.60m
26005	Natural	Compact red sands and river gravels	2.60-2.90m
26006	Natural	Clean, laminated orange sand	2.90-3.70m
26007	Natural	Natural red and orange sands with gravels and reworked Mercia mudstone	3.70m +

Trench 27 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 5.6m (NW-SE) Width: 3.6m (NE-SW) Depth: 4.00m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
27000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.10m
27001	Modern rubble overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling.	0.10-1.20m
27002	Mixed contaminated	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal,	1.20-1.40m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
	dark earth	occasional plaster, mortar and degraded bone.	
27003	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone.	1.40-2.20m
27004	Natural	Clean, laminated orange sand.	2.20-3.00m
27005	Natural	Natural red and orange sands with gravels and reworked Mercia mudstone.	3.00m+

Trench 28 – foundation pad

Site area: Zone 3

Maximum dimensions: Length: 5.6m (NW-SE) Width: 3.6m (NE-SW) Depth: 4.00m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
28000	Modern levelling layer	Compact grey type 1 hardcore gravel	0-0.10m
28001	Modern rubble overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling	0.10-1.20m
28002	Mixed contaminated dark earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	1.20-1.40m
28003	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	1.40-2.20m
28004	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles – bioturbated red sand	2.20-2.60m
28005	Natural	Compact red sands and river gravels	2.60-2.90m
28006	Natural	Clean, laminated orange sand	2.90-3.70m
28007	Natural	Natural red and orange sands with gravels and reworked Mercia mudstone	3.70m+

Trench 29 – foundation pad

Site area: Zone 2

Maximum dimensions: Length: 5.6m (NW-SE) Width: 3.6m (NE-SW) Depth: 4.00m

Orientation: northwest to southeast

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
29000	Modern levelling layer	Compact grey type 1 hardcore gravel.	0-0.10m
29001	Modern rubble overburden	Moderately compact light brown sandy clay with frequent brick, angular stone and rubble. Demolition material levelling.	0.10-1.20m
29002	Dark Earth	Humic friable silty clay, very dark grey brown to black. Moderate sub-rounded and rounded small to large pebbles. Frequent charcoal, occasional plaster, mortar and degraded bone	1.20-2.20m
29003	Subsoil	Soft yellow brown silty sand with very frequent root and worm action, occasional small to large, rounded and sub-rounded pebbles – bioturbated red sand	2.20-2.60m
29004	Natural	Compact red sands and river gravels.	2.60-2.90m
29005	Natural	Clean, laminated orange sand.	2.90-3.70m
29006	Natural	Natural red and orange sands with gravels and reworked Mercia mudstone.	3.70m+

Appendix 2 Technical information

The archive

WCM 101768 Excavation

The archive consists of:

13	Context records AS1
9	Fieldwork progress records AS2
2	Photographic records AS3
54	Digital photographs
1	Drawing number catalogues AS4
1	Levels record sheets AS19
7	Trench record sheets AS41
12	Scale drawings
1	Box of finds
1	Computer disk

WCM 101769 Watching Brief

The archive consists of:

12	Fieldwork progress records AS2
3	Photographic records AS3
215	Digital photographs
1	Drawing number catalogues AS4
29	Trench record sheets AS41
7	Scale drawings
1	Box of finds
1	Computer disk

The project archive is intended to be placed at:

Worcester City Museum and Art Gallery
Foregate Street
Worcester
WR1 2PW

Tel. Worcester (01905) 25371