

**Excavations at
Deansway, Worcester, 1988–89:
Romano-British small town to
late medieval city**

ADS publication

By Hal Dalwood and Rachel Edwards

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Contents

List of figures	vi
List of tables	viii
6 Site narratives: activity unit tables	1
6.1 Deansway Site 2: Bull Entry by <i>Robin Jackson</i> (Tables 7–15)	1
6.2 Deansway Site 1: Powisk Lane South by <i>Victoria Bryant and Gary Taylor</i> (Tables 16–24)	64
6.3 Deansway Site 3: Ambulance station by <i>Gary Taylor</i> (Tables 25–32)	100
6.4 Deansway Sites 4 and 5: Powick Lane north by <i>Hal Dalwood and Rachel Edwards</i> (Tables 34–43).	112
7 Specialist reports: artefacts, ecofacts, soils, and dating	139
7.1 Introduction to the pottery reports by <i>Victoria Bryant and Jane Evans</i> (Table 45)	139
7.9 Ironworking residues by <i>Gerry McDonnell and Anthony Swiss</i>	148
7.9.3 Compositional and statistical analysis of Roman ironworking slag.	148
7.10 Chemical analysis of the copper alloys by <i>Nigel Blades</i>	157
7.13 Iron and copper alloy objects by <i>Nina Crummy</i>	163
7.16 Roman vessel glass and glass working waste by <i>Hilary E M Cool and Caroline M Jackson</i> . .	174
7.24 Worked stone by <i>Fiona Roe</i>	176
7.26 Flint by <i>Hal Dalwood</i>	194
7.28 Animal remains by <i>Rebecca A Nicholson and Sally A Scott</i>	195
7.28.11 Spatial variation	195
7.29 Human skeletal remains by <i>Christine Osborne</i>	203
7.29.3 Skeletal inventory	203
7.30 Botanical remains by <i>Lisa Moffett</i>	206
7.32 Soil micromorphology by <i>Richard I Macphail</i>	229

List of figures

212	Ore sample 17002	148
213	Iron silicate (mid-grey), glass (dark grey), disseminated FeO (light grey), and FeO vein	149
214	Tap slag 20501	150
215	Iron silicate (mid-grey), glass (dark grey), and dendritic FeO (light grey)	150
216	Massive iron silicate laths, with a little glass (dark grey) and vesicularity (black)	151
217	Area of massive iron oxide (light grey), surrounded by iron silicate	151
218	Mounted sample of tube slag	151
219	Columnar laths of iron silicate (mid-grey), with infill of glass (dark grey). Some FeO (light grey)	152
220	Iron silicate (mid-grey), glass (dark grey), with dendritic FeO and FeO veining (light grey)	152
221	Charcoal voids has given slag 20729 B a 'wooden' appearance	153
222	Massive FeO (light grey), iron silicate (mid-grey), and glass (dark grey)	153
223	Uniform grey matrix, with crystalline vesicularity	153
275	Representation of animal groups within major context types, by fragment counts	197
276	Skeletal element representation of cattle and large ungulate bones, by period, site, and collection method	198
277	Skeletal element representation of sheep and small ungulate bones, by period, site, and collection method	199
278	Skeletal element representation of pig bones, by period, site, and collection method	200
279	Skeletal element representation of goat bones, by period, site, and collection method	201
280	Skeletal element representation of cattle, sheep, and pig bones from CG 1546 (AU 1145) and CG 1547 (AU 1144), Period 10 Site 1	202
293	Site 2; field photo; location of sample A in reddish early Roman deposits, overlain by darker later Roman stratigraphy	229
294	Site 2; field photo; location of sample D in gully/camber fill of later Roman pebble surfaced street (level with trowel)	229
295	Site 2; field photo; location of samples C and B in dark earth sealed by late Saxon ash lime dumps	229
296	Site 1; field photo; location of samples E and F in dark earth over a patch of Roman clay floor	230
298	Site 4; sample M; photomicrograph of brown alluvial sandy loam soil, with dusty clay coatings inferring affects of prehistoric/early Roman cultivation. Plane polarised light (PPL)	230
299	As Figure 298, but crossed polarised light (XPL); note low birefringence of dusty clay coatings	231
300	Site 2; sample A; photomicrograph of mixed natural (quartz etc) and anthropogenic (weakly burnt dark brown clay daub? fragments) soil. PPL	231
301	As Figure 300, but crossed polarised light; note birefringence pattern of daub? and textural features, such as intercalations caused by trampling etc	232
302	Site 2; sample I; photomicrograph of pale brown pit fill material. PPL	232
303	As Figure 302, clay coatings have moderately high birefringence	233
304	Site 2; sample K; photomicrograph of dark fine soil separating a fragment of pale yellowish and mainly amorphous human coprolite (left) and a reddish brown and slightly blackened silty clay soil fragment. PPL	233
305	As Figure 304, but XPL; note non-birefringence of human coprolite and moderately low birefringence of probably weakly burnt silty clay soil fragment	234
306	As Figures 304 and 305, but detail of human coprolite. PPL	234
307	As Figure 306, but XPL; note fragment of included non-phosphatised, but birefringent bone in left centre of human coprolite	235
308	As Figure 306, but under ultra violet light illumination (UV)	235
309	As Figures 304 and 305, but detail of silty clay soil fragment under UV	236
310	Site 2; sample J: photomicrograph of dark fine soil and further silty clay soil fragments, which are often rounded. PPL	236
311	As Figure 310, but XPL showing birefringent character of these clay soil fragments	237
312	As Figures 310 and 311, but under UV	237

313	As Figure 310; detail of dark fine soil fabric of charred Gramineae type and amorphous organic matter rich in phytoliths (plant opal rods). PPL	238
314	As Figure 313, but XPL	238
315	Site 2; sample D; yellow amorphous infills and pseudomorphic? fragments, dark fine charcoal and phytolith-rich soil, and rounded silty clay soil fragment (centre). PPL	239
316	As Figure 314, but XPL; amorphous features probably resulting from the soaking-away of cess/sewage sludge in this street-side gully, are totally non-birefringent	239
317	As Figure 314; detail of fluorescent halo (phosphatised) on probably herbivore ingested silty soil fragment; juxtaposed amorphous feature (right) is non-fluorescent. UV	240
318	Site 2; sample D; generally dense soil with closed vughy porosity caused by the slaking of this gully fill which probably arrived as a slurry. PPL	240
319	As Figure 318, but XPL; note non-birefringence of amorphous features, very low birefringence of dusty clay coatings, but moderate birefringence of vivianite.	241
320	Site 1; sample E; relic fragment of Roman clay floor? in biologically open dark earth/mull brown soil horizon. PPL	241
321	As Figure 320, but XPL; note moderate birefringence of clay floor? fragment in comparison to fine charcoal rich dark earth/mull, and non-birefringent amorphous features.	242
322	Site 1; sample F; edge of 10mm size inclusion within dark earth/mull soil. PPL	242
323	As Figure 322, but XPL; fine organic fabric is totally non-birefringent	243
324	As Figure 322; detail of edge of coprolite showing pale outer margin and brown, strongly organic inner zone. PPL	243
325	As Figure 324, but XPL, showing high content of silt	244
326	As Figure 324, but UV, showing detail of fluorescent (phosphatised) margin of ingested material (coprolite).	244
327	As Figure 322; detail illustrating presence of diatoms in poorly digested amorphous organic matter fabric; diatoms were probably ingested during drinking by the herbivore. PPL	245
328	Site 2; sample B; probable spore case of vesicular arbuscular mycorrhizae in dark earth/mull grassland soil. PPL	245
329	As Figure 328, XPL showing birefringence of spore case, an indicator of the spore case being >900 years old	246
330	Site 1; sample E; large relic fragment of Roman slag in dark earth/mull soil. PPL	246
331	As Figure 330, but XPL showing distinctive birefringent pattern of this slag fragment	247
332	As Figure 331, but oblique incident light (OIL) showing iron rich nature of the slag and the rusting edge	247
333	Site 4; sample N; very open fabric of earthworm and Enchytraeid worked mull grassland soil (dark earth)	248
334	As Figure 333; detail of coarse earthworm excrement and surrounding finer Enchytraeid excrements. PPL	248
335	As Figure 334, but XPL	249
336	Site 2; sample L; late Saxon midden spreads containing fine and coarse charcoal, bone fragments (centre right) and human coprolitic fragments (eg centre bottom). PPL	249
337	As Figure 335, but XPL; note very poor birefringence of probably phosphatised (coprolitic) bone fragment, and non-birefringence of human coprolitic remains.	250
338	As Figure 337, UV, showing highly fluorescent (phosphatised) bone and coprolitic remains	250
339	Site 2; sample L; grass and wood ash-rich late Saxon midden layer. PPL	251
340	As Figure 339, but XPL, showing highly birefringent specks of calcite ash in this unweathered zone	251
341	Site 2; sample G; possible ghosts of vivianite in dark brown charred amorphous peat of late Saxon (dumped) origin (turf fuel/walls?). PPL	252
342	As Figure 341, XPL. Very weak birefringence of vivianite? may indicate acidification (ph 5.6) of deposit by solutions draining from early medieval smithing above	252
343	Site 2; sample H; crack in very coarse fragment of late Saxon dumped/swept alluvial? silty clay loam floor material, has been infilled by charcoal-rich fine fabric, which has been in turn penetrated by rooting. PPL	253
344	As Figure 343, XPL showing silty clay birefringence of floor fragments and non-birefringence of iron stained fabric	253
345	As Figure 343, but OIL, showing iron staining and ferruginous pseudomorphic replacement of roots, probably by iron rich solutions draining down from medieval smithing	254

List of tables

7	Site 2 Period 2 activity unit table	1
8	Site 2 Period 3 activity unit table	1
9	Site 2 Period 4 activity unit table	4
10	Site 2 Period 5 activity unit table	9
11	Site 2 Period 6 activity unit table	14
12	Site 2 Period 7 activity unit table	15
13	Site 2 Period 8 activity unit table	25
14	Site 2 Period 9 activity unit table	41
15	Site 2 Period 10 activity unit table	58
16	Site 1 Period 2 activity unit table	64
17	Site 1 Period 3 activity unit table	65
18	Site 1 Period 4 activity unit table	67
19	Site 1 Period 5 activity unit table	73
20	Site 1 Period 6 activity unit table	73
21	Site 1 Period 7 activity unit table	74
22	Site 1 Period 8 activity unit table	75
23	Site 1 Period 9 activity unit table	81
24	Site 1 Period 10 activity unit table	94
25	Site 3 Period 3 activity unit table	100
26	Site 3 Period 4 activity unit table	102
27	Site 3 Period 5 activity unit table	103
28	Site 3 Period 6 activity unit table	105
29	Site 3 Period 7 activity unit table	106
30	Site 3 Period 8 activity unit table	106
31	Site 3 Period 9 activity unit table	108
32	Site 3 Period 10 activity unit table	111
34	Sites 4 and 5 Period 2 activity unit table	112
35	Sites 4 and 5 Period 3 activity unit table	112
36	Sites 4 and 5 Period 4 activity unit table	114
37	Sites 4 and 5 Period 5 activity unit table	116
38	Sites 4 and 5 Period 6 activity unit table	118
39	Sites 4 and 5 Period 7 activity unit table	119
40	Sites 4 and 5 Period 8 activity unit table	121
41	Sites 4 and 5 Period 9 activity unit table	127
42	Sites 4 and 5 Period 10 activity unit table	133
43	Sites 4 and 5 Period 11 activity unit table	138
45	Catalogue of illustrated pottery sherds	139
83	Slag and ore samples	148
84	Sample 17002 SEM – EDX data	149
85	Sample 17601 SEM – EDX data	149
86	Sample 17608 SEM – EDX data	150
87	Sample 20501 SEM – EDX data	150
88	Sample 20519 SEM – EDX data	151
89	Sample 20616 SEM – EDX data	152
90	Sample 20729A SEM – EDX data	153
91	Sample 20729B SEM – EDX data	153
92	Sample 21078 SEM – EDX data	154
93	Average composition of individual phases	154
94	Average composition for each sample's three bulk analyses	154
95	Average composition for the ore samples' three bulk analyses	154
96	Statistical analysis of the Deansway tap and smelting slags	155
97	Statistical analysis of the Deansway and Severn Estuary slags	156
98	The Deansway iron ore samples in comparison with ores from the Eastern, Central, and Western limbs of the Forest of Dean syncline, and from the Worcester Graben	156

99	Bulk FeO and SiO ₂ values normalised to 100%	157
100	Analysis of the brasses	159
101	Analysis of the antimony-lead rich alloys	160
102	Analysis of the gunmetals and bronzes	162
106	Iron objects listed by period, site, activity unit, context group, and context	163
113	Copper alloy objects listed by period, site, activity unit, context group, and context	167
121	Undifferentiated vessel glass fragments	174
140	Catalogue of building stone	176
143	Catalogue of flint	194
153	Economic rank, minimum number of beef cuts (mnbc), kilograms of meat provided and rank kilograms of meat provided	196
159	Roman botanical remains, Periods 3–4	207
160	Roman botanical remains, Period 4	209
161	Roman botanical remains, Periods 4–5	211
162	Dark earth botanical remains, Period 6	213
163	Saxon and medieval botanical remains, Periods 7–8	215
164	Saxon and medieval botanical remains, Periods 8–9	219
165	Medieval and post-medieval botanical remains, Periods 9–10	221
166	Post-medieval botanical remains, Period 10	226

Table 7 Site 2 Period 2 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 2: Prehistoric period			
AU 2001 Disposal area: pits: indeterminate (CG 2004, 2005, & 2002)	Three pits: CG 2004, 0.75m deep; CG 2005, 0.36m deep; CG 2002 observed in north section of ditch (AU 2009). These cut the base geology and were sealed by Period 3 soils (AU 2002).	None.	A primarily organic disposal function is suggested on basis of content, size, and form. Chronological relationship between features not determined. Stratigraphy and absence of artefacts suggest prehistoric date.

Table 8 Site 2 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3: Roman, mid-1st century to early 2nd century (c AD 50–AD 120)			
Period 3 Phase 1			
AU 2002 Cultivation: soils: ploughsoils (CG 2003, 2007, 2008, 2009, & 2014)	The naturally formed topsoil was extensively disturbed and as a result sealed Period 2 features (AU 2001). Its surface formed the Phase 2 ground surface (AU 2003) and was sealed by Phase 3 activity (AU 2008, 2009 & 2010) with the exception of CG 2007 which appears not to have been sealed until Period 4 Phase 3 (AU 2036).	None (see AU 2003).	Ploughsoil resulting from reworking of naturally formed topsoil/subsoil.
Period 3 Phase 2			
AU 2003 Movement zone: soils: ground surface (CG 2003, 2007, 2008, 2009, & 2014)	The Phase 1 ploughsoil (AU 2002) was utilised as a ground surface and was cut by Phase 2 features (AU 2004, 2005, & 2006).	Pottery (5), indeterminate Roman. Worked bone (1), burnt clay (1). (Note CG 2003 & CG 2009 none. CG 2007, see AU 2036).	Ground surface developed from earlier Post-built structure/s. No regularity or alignments. Function unknown. Dating evidence poor. Contemporaneity of features uncertain.
AU 2004 Structure: timber: indeterminate (CG 2018, 2019, 2020, 2021, 2022, 2025, & 2026)	Seven postholes, 0.43–0.60m deep. Two stakeholes, 0.12–0.19m deep. Cut ground surface AU 2003. CG 2019 contained a post pipe (CG 2022), 0.25m in diameter.	Pottery (1), indeterminate Roman. Bone fragments (1), iron objects (1, nail), sampled groups (CG 2022, 2025, & 2026) contained a significant quantity of cereal grain (Moffett, Section 7.30).	Post-built structure/s. No regularity or alignments. Function unknown. Contemporaneity uncertain due to poor dating evidence.
AU 2005 Structure: timber: indeterminate (CG 2006)	Seven postholes, 0.10–0.37m deep. Interpreted as cutting Phase 2 ground surface (AU 2003) although original surface from which these had been cut was lost due to reworking through to Period 4 Phase 2.	Pottery (3), indeterminate Roman. Daub (1).	Post-built structure/s. No regularity or alignments. Function unknown.

Table 8 (cont.) Site 2 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2006 Structure: timber: indeterminate (CG 2010, 2011, & 2012) (CG 2063)	Eight postholes, 0.10–0.30m deep and one Pottery (2), indeterminate Roman. Bone fragments (1). Interpreted as cutting Phase 2 ground surface (AU 2003) although original surface from which these had been cut was lost due to reworking through to Period 4 Phase 2.	Pottery (6), indeterminate Roman. Bone fragments (3), flint (1). Secondary rubbish.	Post-built structure/s. No regularity or alignments. Function unknown. Contemporaneity uncertain due to poor dating evidence.
Period 3 Phase 3			
AU 2008 Movement zone: metalling: yard (CG 2063)	Extensive, well constructed metalling of small to medium pebbles rammed into the Phase 2 ground surface AU 2003. Averaged 0.05m thick. Thinned to nothing to north and east. Ditched enclosure AU 2011 ran across north of it but did not cut it. Metalling lying within enclosure worn away or less well constructed than to south of it.	Pottery (6), indeterminate Roman. Bone fragments (3), flint (1). Secondary rubbish.	External yard surface for light use. ?Agricultural function – possible threshing floor.
AU 2009 Movement zone: soils: ground surface (CG 2015, 2016, & 2007)	Soils in the central part of the site (CG 2015 and CG 2016) and part of the earlier ground surface (Phase 2; AU 2003, CG 2007) were cut by Phase 3 features. These soils continued to be reworked through to Period 4 (see AU 2024).	None (see AU 2024).	Ground surface, which remained in use into Period 4. As a result of this long period of use and associated reworking of the soils the relationships of earlier elements of activity associated with the ground surface have been truncated and it has only been possible to assign securely dated features (AU 2014) to this phase in the central part of the site.
AU 2010 Movement zone: ground surface (CG 2023 & 2060)	Compact pebbly soil, 0.05–0.10m thick. Extended north and east of metalling AU 2008. Cut by Phase 3 features and sealed by Phase 4 soil (AU 2017). Relationship to enclosure (AU 2011) uncertain.	Pottery (1), indeterminate Roman. Bone fragments (13), Cu slag (1), Cu alloy ring (1 – Crumminy, Section 7.13).	Trampled accumulation forming ground surface beyond metalling (AU 2008). ?Resulting from continued use of areas of a previously deposited earlier soil (Phase 2; AU 2003) which were not sealed by the metalling. Pebble content reflects trample from the metalling.
AU 2011 Boundary: ditch: enclosure (CG 2024)	V-shaped ditch with right-angled corner, averaged 0.65m deep. 1.00m wide at top narrowing to 0.5m at base. Profile suggested a cleaning slot. Excavated extents enclosed c 63 square metres. Primary fill only observed in section. Ditch cut Period 3 Phase 2 soil (AU 2003). Ran across north part of metalling (AU 2008) but did not cut it. Top edges poorly defined due to trampling of Period 4 soil (AU 2024). Backfilled in Phase 4 (AU 2018).	None.	Rectilinear ditched enclosure. ?Agricultural function.

Table 8 (cont.) Site 2 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2012 Boundary: ditch: indeterminate (CG 2045)	Western side of ?V-shaped ditch running approx north to south. Maximum observed depth 1.00m. Irregular west edge, steepened towards base. Very fine sandy loam primary fill. Cut ground surface AU 2009. Ditch backfilled in Period 4 Phase 1 (AU 2022).	Pottery (57), <i>tpq c 100–120 AD</i> (AD 2nd-century forms and fabrics but no Fabric 22), av wt 37g, average abrasion, cooking pots, and jars. Bone fragments (55), largely unidentified and abraded), Cu alloy objects (1, Hod Hill type brooch dated c 50–60/70 AD – Mackreth, Section 7.14).	Boundary. Property or land division? Fill resulted partly from silting, but also included dumps of both primary and secondary domestic rubbish.
AU 2013 Structure: timber: indeterminate (CG 2067, 2068, & 2069)	Three stakeholes, 0.10m deep. One posthole, 0.30m deep. Cut metalling (AU 2008). No alignment or pattern. (Note: One stakehole not located on plan).	Pottery (7), indeterminate Roman. Bone fragments (3). Secondary deposited rubbish.	Timber structure/s of unknown form and function.
AU 2014 Disposal: pits: indeterminate (CG 2033, 2037, & 2039)	Three pits interpreted as cutting Phase 3 ground surface (AU 2009). 2033, 1.81m deep. 2037 & 2039, 0.18 & 0.13m deep respectively.	Pottery (73), <i>tpq c 100+ AD</i> (Malvernian tubby cooking pot), av wt 12g, moderate abrasion. Bone fragments (21).	CG 2033, cess pit? No interpretation for CG 2037 & 2039 is offered. All three backfills included secondary rubbish probably derived from surrounding area.
AU 2015 Disposal: pit: ?rubbish (CG 2055)	Horizontally truncated pit. Surviving depth c 1.90m. Primary fill loose loamy coarse sand. Backfilled in Period 4 (see AU 2021).	Pottery (84), <i>tpq c 60–120 AD</i> (no Fabric 22), av wt 26g, moderate abrasion, rusticated jars, cooking pot, and mortaria. Bone fragments (68), many abraded and charred.	Pit. Some primary and secondary domestic rubbish within but may have had other original function than rubbish disposal since volume of material relatively small.
AU 2016 Disposal: pits: cess/organic rubbish (CG 2064 & 2065)	Two pits. CG 2064, 0.67m deep, CG 2065 not fully excavated. Fill of CG 2065 charcoal flecked and sticky. Sealed by Phase 4 soil (AU 2017).	CG 2065, Pottery (4), indeterminate Roman. Daub (33). CG 2064, Pottery (84), assessed date 100–120, av wt 14g, very high abrasion. Bone fragments (93), iron objects (5) and a significant quantity of chaff. (Cereal processing). Pit CG 2065, cess or other organic waste pit.	Cess or organic waste pits. CG 2064 also contained secondary domestic rubbish derived from the surrounding area or redeposited from an unknown source, and a dump of chaff. (Cereal processing). Pit CG 2065, cess or other organic waste pit.
Period 3 Phase 4			
AU 2017 Natural soil accumulation (CG 2070)	Distinctive fine brown soil, 0.10m thick. Flecked with burnt clay. Compacted at surface. This sealed Period 3 activity and was used and reworked until Period 4 Phase 2 (AU 2024).	Partly intrusive (see AU 2024) though predominance of early fabrics and forms suggests deposition in Period 3.	Soil which may be partly natural in origin and represent a period of virtual abandonment or return to cultivation. Similar deposits found on other three sites. Interpreted as having been cut by Period 4 Phase 1 features although this relationship had not survived due to reworking as ground surface through to Period 4 Phase 2 (see also AU 2221 & 2024).

Table 8 (cont.) Site 2 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2018 Disposal: backfilling of ditch: rubbish and dumped soil (CG 2027 & 2168)	Loamy fine sand fill of Phase 3 ditched enclosure (AU 2011). Upper fill (CG 2168) was compacted. Poorly defined due to disturbance of overlying soils (AU 2024) which may have resulted in incorporation of intrusive material into upper element.	Finds concentrated to base of ditch. CG 2027, pottery (42), late 1st- to early 2nd-century date, (intrusive samian <i>tpq c</i> 140–95 AD), av wt 68g, very high predominant – included disarticulated remains of 1+ horse). Disarticulated human bone (redeposited, at least two individuals). Worked stone (7 slabs of lias (not separately discussed as such). paving), Cu alloy objects (1, dated c 100 AD – Crummy, Section 7.13). CG 2168, Pottery (14), av wt 9g, very high abrasion. Bone fragments (22), coin (Iron Age – King, Section 7.20), iron objects (2), Cu alloy (2, included brooch and pin dated c 55–60 – Mackreth, Section 7.14).	Disuse and backfilling of ditched enclosure. Rubbish dumping followed by soil backfilling. Mixture of primary domestic waste, secondary material from surrounding area, and redeposited material derived in part from unlocated disturbed graves. Top fill (CG 2168), trampled and reworked as part of Period 4. Phase 1 ground surface with AU 2017
AU 2019 Movement zone: soil: ground surface (CG 2007, 2015, 2016, & 2058)	Phase 3 ground surface (AU 2009) and soil CG 2058 continued to be used and reworked through Phase 4. This use and reworking extended into Period 4 (through to Phase 3).	None (see AU 2024).	The absence of Phase 4 features suggests a virtual abandonment of the site as seen at the west end (AU 2017). It would seem probable that a soil accumulation similar to AU 2017 occurred here but that Period 4 use as a ground surface (AU 2221 & 2024) had entirely truncated it across this part of the site.

Table 9 Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 4: Roman, early 2nd century to mid-3rd century (c AD 120–AD 240)			
Period 4 Phase 1			
AU 2221 Movement zone: soils: ground surface (CG 2007, 2015, 2016, 2058 & 2070)	The Period 3 soil accumulation and ground surface (AU 2017 & 2019) continued in use and formed the Period 4 Phase 1 ground surface. These were cut by Period 4 Phase 1 activity (AU 2020, 2023). These subsequently formed the Phase 2 ground surface (AU 2024) and as a result the material assemblage for these is discussed with that activity unit.	See AU 2024.	Ground surface formed by continued use and reworking of earlier deposited soils and also probably incorporating some upcast from pit excavation (AU 2023).

Table 9 (cont.) Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2020 Structure: timber: indeterminate (CG 2061 & 2066)	Twelve postholes, 0.07–0.55m deep (mostly 0.20m+). Two stakeholes, 0.08 and 0.10m deep. The ground surface (AU 2221) associated with this structure, was deposited in Period 3 Phase 4 (AU 2017) and was wholly truncated by its continuing use into Period 4 Phase 2 (AU 2024).	Pottery (13), <i>tpq c</i> 140–65 AD (early to mid-Antonine samian), some residual (1 Iron Age). Bone fragments (6), Cu alloy (3, included 1 residual Iron Age), tap slag (0.025kg), smelting slag (0.04kg), and a quantity of charred cereal seed.	Post-built structure/s. No alignments evident. Form and function unknown. Dating evidence poor. Contemporaneity of features uncertain.
AU 2021 Disposal: backfilling (of pit): rubbish (CG 2056 & 2057)	Fill of Period 3 pit AU 2015. Loose sandy fill (CG 2056) overlain by soil fill (CG 2057).	CG 2056, none. CG 2057, pottery (249), some residual (Period 3), av wt 38g, low abrasion. Bone fragments (176), iron objects (16, mostly tacks & nails), Cu alloy (1, Colchester derivative brooch, late 1st century to early 2nd century AD – Mackreth, Section 7.14), vessel glass (3).	Slumping, then backfilling including much primary and some secondary domestic rubbish. Top fill was reworked as part of Phase 2 ground surface (AU 2024).
AU 2022 Disposal: backfilling (of ditch): rubbish (CG 2046)	Top fill of Period 3 ditch (AU 2012). Compact at surface. Cut by Phase 2 activity (AU 2031).	Pottery (210), <i>tpq c</i> 130–55 AD (Hadrianic/early Antonine samian), much residual (Period 3), av wt 17g, high abrasion. Bone fragments (49), daub (18), iron objects (1 nail), Cu alloy (4, included 2 Colchester derivative brooches – Mackreth, Section 7.14, 1 stud & 1 ring – Crummy, Section 7.13), iron objects (3, 1 nail).	Disuse and backfilling of ditch, with secondary rubbish redeposited from an unknown source or trawled from the surrounding area. Surface of fill subsequently reworked as part of Phase 2 ground surface (AU 2024).
AU 2023 Disposal: pit: ?cess/rubbish (CG 2013)	Pit, 1.08m deep. Interpreted as having cut the Period 3 Phase 4 soil AU 2019, although this relationship had been truncated by the reworking of this ground surface through to Phase 2 (AU 2024).	Pottery (265), <i>tpq c</i> 125–45 AD (Hadrianic/early Antonine samian), av wt 12g, moderately abraded. Bone fragments (117), Cu alloy (5), iron objects (1), glass (1).	Disposal. ?Secondary rubbish derived from surrounding area & cess.
Period 4 Phase 2			
AU 2024 Movement zone: soil accumulation: ground surface (CG 2070, 2007, 2015, 2016, & 2058)	Phase 1 ground surface (AU 2221) and the top of Phase 1 feature backfills (AU 2021 & 2022) were reworked and cut by Phase 2 activity. Burnt clay flecked its compacted surface to the west and concentrated near a burnt clay dump (AU 2025). This deposit was sealed by Phase 3 activity (AU 2036).	Pottery (370), <i>tpq c</i> 145 AD (Nene Valley ware), much residual (Period 3, reflecting original deposition of this layer), av wt 13g, very high abrasion. Bone fragments (85), iron objects (6, including 4 nails), Cu alloy objects (3, including 1 slag (1), Cu alloy objects (3, including 1 brooch dated c 100 AD – Mackreth, Section 7.14), glass (3, 2 window, 1 vessel). Smelting slag (1.328kg), smithing waste (0.003kg).	Ground surface. Trampling spread burnt clay flecks from AU 2025 across it and also truncated the relationship of the earlier ground surface (Period 3, Phase 4, AU 2017) to structure AU 2020 (see above). Finds largely residual but also including Period 4 material incorporated through use (trampling).

Table 9 (cont.) Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2025 Movement zone: dump: ground surface (CG 2095)	Orange, burnt, fine sandy clay, 0.05–0.10m thick. Thins over ground surface to north (AU 2024). Included lumps of highly fired clay. Compacted top surface where not truncated. Cut by Phase 2 features. Below Phase 3 activity (AU 2036).	None.	Dumped clay. ?Debris from demolished oven or hearth. With AU 2024 formed ground surface.
AU 2026 Structure/s: timber: indeterminate (CG 2098, 2099, 2100, 2101, 2102, 2103, & 2104)	Seven postholes, 0.05–0.29m deep. Burnt clay flecked fills. Cut Phase 2 dump/ground surface (AU 2025). All horizontally truncated. CG 2098 in south site section appeared to be below Phase 3 soil.	Pottery (1), indeterminate Roman. Bone fragments (1).	Post-built structure/s. No regularity or alignments. Function unknown. Dating evidence poor. Contemporaneity uncertain.
AU 2027 Structure/s: timber: indeterminate (CG 2028, 2031, 2032, 2035, 2036, 2038, 2040, 2041, 2042, & 2043)	Fifty-seven post and stakeholes and two short east to west slots, 0.06–0.64m deep. Cut ground surface AU 2019. Mostly sealed by Phase 3 activity. Some north to south and east to west alignments. Some were recut.	Pottery (241), some residual (Period 3). Bone fragments (40), brick and tile (5), daub (6), iron objects (12, included 8 nails), Cu alloy objects (2), loom weight (1). Smelting slag (1.256kg), tap slag (3.869kg), smithing waste (0.006kg). Secondary deposited rubbish including 64 sherd assemblage in CG 2032 of redeposited residual rubbish from unknown source.	Post-built structure/s. Great concentration of features within an area of c 168m ² with some alignments is taken to suggest presence of post-built structure/s of some size (see Fig 44). Recuts indicate rebuilds. Function uncertain. Elements included are unlikely to represent one large structure but more probably one main structure and a number of indeterminate associated structures – for example CG 2035 and elements of CG 2036 may have formed a fence around pit CG 2030 (AU 2033). Dating evidence was poor and so contemporaneity of all elements cannot be established.
AU 2028 Structure: timber: indeterminate (CG 2085, 2105, 2106, & 2108)	Two east to west slots. CG 2085, 0.18m deep. CG 2106, 0.11m deep. Flat-based. Two postholes, 0.10 and 0.16m deep. Cut Phase 2 ground surface (AU 2024 & 2025). Sealed by Phase 3 activity.	Pottery (72), much residual, av wt 13g, very high abrasion. Bone fragments (22), brick and tile (8), daub (1). Tap slag (0.276kg), smelting slag (0.784kg).	Timber structure/s. Unknown form and function. Contemporaneity of all elements uncertain.
AU 2029 Structure/s: timber: building and associated structures (CG 2072, 2073, 2074, 2075, 2076, & 2077)	Twenty-four regular sized and spaced postholes, 0.06–0.18m deep. Formed 1.95 × 1.20m sub-rectangular structure. North, south, and west sides well defined. Around this fifteen postholes, 0.07–0.60m including 2 nails), tap slag (3.810kg). Deep and three stakeholes, 0.08–0.12m deep having no apparent regularity. Cut Phase 2 ground surface (AU 2024). Sealed by Phase 3 soil (AU 2036).	Pottery (30), <i>tpq</i> c 140–95 AD (Antonine samian), av wt 7g, all abraded. Flint (1, residual? Bronze Age – Dalwood, Section 7.26), burnt limestone (1), iron objects (8, though size and presence of cereal chaff suggests probably agricultural or outbuilding – barn or granary. Dating evidence poor. Contemporaneity of all elements uncertain.	Small, sub-rectangular, post-built structure and possibly associated post-built structures. Function uncertain

Table 9 (cont.) Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2030 Structure/s: timber: indeterminate (CG 2071, 2079, 2080, & 2096)	Eight postholes, 0.07–0.30m deep. Forty-five stakeholes, 0.03–0.10m deep. Cut Phase 2 ground surface (AU 2024 & 2025). Sealed by Phase 3 soils (AU 2036).	Pottery (3), indeterminate Roman. Bone fragments (5).	Post and stake-built structure/s. Some suggest north to south alignments possibly representing fence lines. Dating evidence poor. Contemporaneity of all elements uncertain.
AU 2031 Structure/s: timber: indeterminate (CG 2047, 2048, 2049, 2050, 2052, 2053, 2054, & 2059)	Fifteen postholes, two recut, 0.12–0.46m deep. Cut ground surface AU 2019. Sealed by Phase 3 soils (AU 2036). No alignments.	Pottery (181), <i>tpq c</i> 150–200 AD (open mouthed jar), some residual (Period 3) one intrusive (Period 5). Bone fragments (135), daub (17), tile (1), glass (19), iron objects (100+), 1 a hinged belt-plate – Crummy, Section 7.13 – but mostly nails), Cu alloy objects (6, 1 sheet metal, 1 Period 3 military fitting – Crummy, Section 7.13), coprolite (1), lime fragment (1). Tap slag (0.06kg), smithing waste (0.031kg+).	Post-built structure/s. Contemporaneity of all elements uncertain. Form and function unknown. Backfills contained secondary rubbish, much of it residual but one (CG 2050) contained a primary dump of smithing waste.
AU 2032 Disposal: pit: ?cess/organic rubbish (CG 2034)	Pit, 1.15m deep. Steep sided. Cutting Period 3 Phase 4 soil AU 2019 which formed a ground surface until sealed by Phase 3 soil (AU 2036).	Pottery (41), some residual (Period 3), av wt 15g, average abrasion. Bone fragments (6), tile (2), iron objects (1).	?Cess or other organic waste pit with small secondary rubbish assemblage.
AU 2033 Disposal: pits: rubbish (CG 2029 & 2030)	Two pits, CG 2029, 0.52m deep. CG 2030, 2.00m and not bottomed. CG 2030 possibly fenced by elements of AU 2027. (Sample I from fill of CG 2030 – Macphail, Section 7.32). Cut ground surface AU 2019. Sealed by Phase 3 soil (AU 2036).	Pottery (534), <i>tpq c</i> 170–220 AD (Mancetter-Hartshill mortaria), much residual (Period 3) av wt 15g, average abrasion. Bone fragments (136, included 50%+ identifiable, cattle and large ungulate predominant), Cu alloy objects (1, brooch dated c 100 – Mackrell, Section 7.14), worked stone (2, quern fragments), daub (6), glass (1), tile (1), tap slag (0.148kg).	Rubbish pits. Domestic waste. CG 2029 ?Primary organic rubbish. CG 2030 ?Redeposited rubbish from earlier pit (large, residual Period 3, assemblage).
AU 2034 Extraction: pits: quarrying (CG 2078, 2082, 2083, & 2084)	Four pits, 0.15–0.30m deep. Irregular sided. Cut Phase 2 ground surface (AU 2024). Sealed by Phase 3 activity (AU 2036).	Pottery (40), <i>tpq c</i> 155–195 (mid- to late Antonine samian), much residual, av wt 6g, high abrasion. Bone fragments (10, iron objects (7, 3 nails), tile (1), tap slag (1.506kg).	Shallow pits for ?gravel extraction. Secondary domestic rubbish in backfills.
AU 2035 Extraction: pit: quarrying (CG 2044)	Pit, 0.50m deep. Irregular sided. Cut Phase 2 ground surface (AU 2019). Sealed by Phase 3 soil (AU 2036).	Pottery (20), all residual (Period 3), av wt 21g, low abrasion. Bone fragments (2).	?Quarry for gravel extraction. Secondary rubbish in fill was all residual.

Table 9 (cont.) Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 4 Phase 3			
AU 2036 Landscaping: soils: ?dumping (CG 2086, 2094, 2148, 2151, & 2159).	Extensive, fairly compact deposit, 0.05–0.20m thick. Sealed Phase 2 activity. North part of it (CG 2094 & 2148) sealed by Phase 4 street (AU 2037). Remainder formed ground surface (AU 2038 & 2039) to south and east of street and was cut by Phase 4 features.	(CG 2086, 2151, & 2159 see AU 2038 & 2039). Pottery (1264), some residual, (? 1 intrusive – ?Fabric 29), av wt 10g, very high abrasion. Bone fragments (117, brick and tile (65), daub (15), fired clay (3), Cu alloy (2 slag, 1 nail cleaner), glass vessel 6, window 1, bead 1), iron objects (26, including 4 nails). Tap slag (5.157kg), smelting slag (3.072kg), smithing waste (0.292).	Dumped soils which through subsequent use became partly intermixed with the soils of the earlier ground surface (AU 2024). In Phase 4 these formed the base for a street (AU 2037) and a ground surface to its south (AU 2038 and 2039; see phase discussion). Note Complex history of use and partial sealing of elements of this by later surface (AU 2037) mean that elements of the material assemblage may be intrusive as a result of later reworking.
Period 4 Phase 4			
AU 2037 Movement zone: metalled surface: street. (CG 2118 & 2145)	Extensive east to west metalled surface with remnant of probable north to south metalling extending to south of it. Comprised pebble and slag compacted onto Phase 3 soil (AU 2036). 0.05–0.10m thick. Well constructed with gentle camber and clearly defined south edge. At the far west end was a worn away or pebble free area and a couple of shallow ruts. A slight gully was observed on its south edge near the west end. The metalling did not extend to the east limit of excavation. Use continued into Period 5 (Trample AU 2043 & repair of west end AU 2047).	Pottery (694), some residual (Period 3), <i>tpq c</i> 200 AD (double lipped jar), generally mid- to late 2nd century AD forms and fabrics, av wt 7g, very high abrasion. Bone fragments (1039), brick and tile (88), worked stone (36, included tile and whetstone fragments), fired clay (6), daub (3), iron objects (20, 13 nails), Cu alloy objects (spring and pin from trumpet brooch <i>c</i> 75–150/75 AD – Mackreth, Section 7.14, strap end, shaft of pin, slag fragment, 1 coin dated 69–96 AD – King, Section 7.20). Tap slag (37.873kg), smelting slag (2.594kg), smithing waste (1.096kg).	East to west ‘street’ with ‘side street’ running south from it. Terminated to east. At west end drainage gully on south limit. Thinness of metalling suggests generally light use although this surface reflects the first use on Site 2 of iron slag as an element of its make-up. Worn area and limited rutting at west end indicate heavier localised use. Finds derived from the matrix of the metalling comprised Period 3 residual material and secondary rubbish incorporated during construction or trampled in through use in mid- to late 2nd century AD.
AU 2038 Movement zone: soil: ground surface (CG 2086)	West part of Phase 3 deposit (AU 2036) not sealed by ‘street’ (AU 2037). Cut by Period 4 features. Sealed by Period 5 deposits (AU 2044).	Pottery (553), <i>tpq c</i> 140–95 AD (Antonine samian), some residual (Period 3), av wt 8g, very high abrasion. Bone fragments (295), brick and tile (18), daub (4), flint (1, residual), iron objects (19, including 6 nails, 1 hobnail), Cu alloy objects (15, including brooch – Hod Hill type, residual Period 3, Mackreth, Section 7.14 – & military equipment – Crummy, Section 7.13; 1 coin – dated 256–60 AD, possibly intrusive – King, Section 7.20; also residual Period 3 – belt-plate & buckle, cavalry harness strap-loop – Crummy, Section 7.13), vessel glass (4), tap slag (6.026kg).	Ground surface, south of Phase 4 ‘street’ (AU 2037). Finds represent reworked, residual material and contemporary material incorporated through trampling.

Table 9 (cont.) Site 2 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2039 Movement zone: soil: ground surface (CG 2148, 2151, & 2159)	Central and east areas of Phase 3 soil deposit (AU 2036) not sealed by Phase 4 street (AU 2037). Cut by Phase 4 pits (AU 2041). Part of Period 5 ground surface (AU 2044). Sealed by Period 5, Phase 4 soil.	None (see AU 2044 for CG 2151 & 2159, and AU 2036 for CG 2148).	Ground surface south and east of 'street'. Continued use and reworking of earlier deposition which remained in use through to Period 5 (see AU 2044). Material assemblage thus somewhat mixed and affected by residuality and intrusion – discussed elsewhere
AU 2040 Structure: timber: indeterminate (CG 2090, 2092, 2093, 2111, 2112, 2113, 2114, 2115, 2116, & 2117)	Sixty postholes, 0.05–0.20m deep. Fourteen stakeholes, 0.03–0.13m deep. Two east to west? timber slots. 0.10 & 0.16m deep. Cut Phase 4 ground surface (AU 2038). Sealed by Period 5 activity. Many features ill-defined.	Pottery (25), <i>tpq</i> c 120+ (Fabric 22), much residual. Bone fragments (43), daub (2), iron objects (3, 1 nail), tap slag (0.216kg).	Post-built structure/s. No alignments evident. Function uncertain. Dating evidence poor. Contemporaneity of all elements uncertain – some may date to Period 5 Phase 1.
AU 2041 Disposal: pits: cess and ?rubbish (CG 2155 & 2156).	Two pits, 0.40m and 0.30m deep, neither fully excavated, both steep sided. CG 2156 cut CG 2155. Cut Phase 4 ground surface (AU 2039).	Pottery (164), <i>tpq</i> c 130–55 AD (Hadrianic–early Antonine samian), some residual, av wt 12g, very high abrasion. Bone fragments (134), brick and tile (21), tap slag (0.634kg), smelting slag (0.784kg).	?Cess pits. Backfill included secondary ?Organic or cess waste. Finds secondary in backfills. Surrounding area.
AU 2042 Disposal: pits: cess and organic rubbish (CG 2097 & 2109)	Two small pits. CG 2097, 0.50m deep. CG 2097 none. Pottery (5), dated Roman, av wt 9g, very high abrasion. Bone fragments (9), brick and tile (3), iron objects (1), smelting slag (0.450kg).	Pottery CG 2097 none. Pottery (5), dated Roman, av wt 9g, very high abrasion. Bone fragments (9), brick and tile (3), iron objects (1), smelting slag (0.450kg).	Disposal function. ?Organic or cess waste. Finds secondary in backfills. Dating evidence poor. Contemporaneity uncertain.

Table 10 Site 2 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5: Roman, mid-3rd century to late 4th century (c AD 240–AD 400)			
Period 5 Phase 1			
AU 2043 Movement zone: soil: trample (CG 2121)	Highly compact soil deposit, 0.08m thick max. Patchily overlaid west end of Period 4 'street' (AU 2037). Survival results from some residual. Bone fragments (145), being sealed by a repaired part of the 'street' (see AU 2047, Phase 2).	Pottery (10), <i>tpq</i> mid-3rd/4th century (Severn Valley ware reeded rim bowl), brick and tile (2, iron objects (5, 1 nail), tap slag (1.538kg).	Trample resulting from use of Period 4 'street' (AU 2037) into Period 5.

Table 10 (cont.) Site 2 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2044 Movement zone: soil: ground surface (CG 2119, 2120, 2148, 2151, & 2159)	Soil deposit, 0.10–0.25m thick and compact. Extensive. Variation observed towards its western end (CG 2119) where it was heavily flecked with burnt clay and charcoal to far west and adjacent to this was rich in slag. The deposit sealed the west end of the Period 4 ground surface (AU 2038) and associated activity. It thinned to north, slightly overlaying the west end of the Period 4 'street' (AU 2037). Although one area of the deposit (CG 2120) was sealed by a Phase 2 'street' repair (AU 2047), it was cut by Period 5 activity and largely remained in use throughout Phase 2 (AU 2222) and 3 (AU 2223), not being sealed until Phase 4.	For CG 2148 – see AU 2038. Other material considered in AU 2223.	Ground surface representing continued use of Period 4 ground surface (AU 2038 & 2039) south of 'street' (AU 2037 & 2047). Formed ground surface throughout Period 5 (see AU 2222 & 2223) and thus continuing to accumulate and be reworked through use over a long period. Date range through to mid-4th century AD (see AU 2223) reflects this. Use as a ground surface is interpreted as having probably truncated Period 4 soil (AU 2038) and activity.
AU 2045 Structure: timber: indeterminate (CG 2122)	Three stakeholes, 0.12m deep. Sealed by Phase 2 'street' repair (AU 2047). Cut Phase 1 soil accumulation (AU 2044).	None.	Timber structure. Form and function unknown. Encroached onto south limit of 'street' (AU 2037). Possibly related to elements of Phase 2 structural activity.
AU 2046 Extraction: pit: quarry (CG 2091)	Pt, 0.60m deep. Irregular in plan. Interpreted as cutting ground surface AU 2044 in Phase 1 and as being sealed by its continued use through Period 5.	Pottery (16), <i>tpq c</i> 250+ AD. Bone fragments (22), fired clay (1), tap slag (0.025), chaff waste from cereal processing (Moffett, Section 7.30).	Quarry, ?gravel extraction. Backfill included secondary rubbish and ?primary deposit of chaff.
Period 5 Phase 2		Material assemblage considered in AU 2223.	Ground surface formed by continued use and reworking of earlier deposit.
AU 22222 Movement zone: soils: ground surface (CG 2119, 2120, 2148, 2151, & 2159)	The Phase 1 ground surface (AU 2044) continued in use and was cut by Phase 2 activity. Use continued into Phase 3 (see AU 2223).	Material assemblage considered in AU 2223.	The Period 4, Phase 4 'street', remained in use, and the west end was repaired with a rubble dump. Finds represent rubbish incorporated during construction and trampled in during use. Surface finds are considered later (AU 2052).
AU 2047 Movement zone: metalled surface: continued use and repair of street (CG 2118, 2145, & 2136)	The Period 4 Phase 4 'street' (AU 2037) remained in use and its west end was re-metalled (CG 2136). The remetalling overlaid Period 5 Phase 1 activity (AU 2043 & 2044) and was >0.10m thick giving the 'street' a cambered south edge. The remetalling comprised a compact soil with 80% large mixed rubble (limestone slab, slag, and pebble). The material assemblage and dating are derived from the matrix of the remetalled area only, since material from the street surface reflected Phase 3 disuse (AU 2052).	Only matrix of re-metalled area (CG 2136) considered (for surface collection see AU 2052). Pottery (22), <i>tpq c</i> 275–350 AD (Fabric 22, flanged bowl), some residual (period 4), av wt 11g, very high abrasion. Bone fragments (917, gnawing (18+), iron objects (7, 2 nails), copper alloy slag (1), tap slag (5,400kg), smelting slag (21,886kg), slag weight represents context 17327 – all samples, so not included in totals for surface collection.	The Period 4, Phase 4 'street', remained in use, and the west end was repaired with a rubble dump. Finds represent rubbish incorporated during construction and trampled in during use. Surface finds are considered later (AU 2052).

Table 10 (cont.) Site 2 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2048 Structure/s: indeterminate: timber (CG 2123, 2126, 2127, 2128, 2129, and 2130, 2131, 2132, 2135, & 2137)	Twenty-five postholes, 0.04–0.25m deep and 130 stakeholes and small depressions, 0.03–0.12m deep. 1m long east to west, V-shaped slot, 0.05 m deep. Cut Phase 2 ground surface (AU 2222). Sealed by Phase 4 soil (AU 2225).	Pottery (16), all residual (Period 3). Bone fragments (13), brick and tile (1), fired clay (2), lias spindle whorl (1), Cu alloy objects (1), window glass (1), tap slag (0.247kg), smelting slag (0.282kg).	Post and stake-built structures. ?Slot for hurdle. None very substantial. ?East to west and north to south alignments formed by some elements but no structures evident. Function unknown. Dating was poor. Ground surface (AU 2222) they cut was used throughout Period 5 so contemporaneity of post and stakeholes is uncertain. Secondary deposited and residual rubbish incorporated in fills.
AU 2049 Disposal: pit: indeterminate (CG 2134)	Pit cutting Phase 2 ground surface (AU 2222). Sealed by Phase 4 soils (AU 2225).	Pottery (24), all residual (Period 4), av wt 6g, high abrasion. Bone fragments (1), tile (1), Fe nail (1), vessel glass (2), tap slag (0.460kg).	Unknown function. Residual rubbish incorporated in fill.
AU 2050 Disposal: pit: indeterminate (CG 2124 & 2125)	Pit, 0.24m deep. Irregular base. ?Cess rich, sticky, lower fill. Pebby upper fill. Cut Phase 2 ground surface (AU 2222). Sealed by Phase 4 soil (AU 2225).	Pottery (17), <i>tpq c</i> 240+ AD (Fabric 29), some residual. Bone fragments (5), brick and tile (4), fired clay (1), Fe nail (1), ?glass bead (1), tap slag (0.884kg), smelting slag (2.330kg).	Function unknown though may be a cess pit or for other organic waste disposal. Upper pebble fill probably represents deliberate consolidation on disuse.
AU 2051 Disposal: spread: debris (CG 2133)	Burnt clay patches and flecking over limited area of ground surface AU 2222. Sealed by Phase 4 soil (AU 2225).	Pottery (5), indeterminate Roman. Bone fragments (2), fired clay (1), Fe nail (1), smithing slag (0.436kg).	Dump of waste/debris. ?From oven or hearth.
Period 5 Phase 3		Pottery (503), <i>tpq c</i> 240+ AD, much residual (Period 4) av wt 7g, very high abrasion. Brick and tile (33), fired clay (12), iron objects (60, included 9+ nails, 25 hobnails), Cu alloy (10, included 1 seal century AD, much of the assemblage box, 3 items toilet equipment – Crummy, Section 7.13), 2 coins (dated 270–74 AD and 335–48 AD – King, Section 7.20), lead objects (1), window glass (3), tap slag (?trampling) or dumping of material and supports the impression of limited new occupation of this immediate area during this phase.	Ground surface. Activity on it limited in terms of cut features and structural evidence. Although dating of material assemblage indicates activity into 4th century AD, much of the assemblage comprised secondary deposited rubbish incorporating a high level of residual material. This suggests reworking supports the impression of limited new occupation of this immediate area during this phase.

Table 10 (cont.) Site 2 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2052 Disposal: spread: waste scatter (CG 2146 & 2138)	Material collected from surface of Phase 2 'street' (AU 2047). At west end covered by AU 2053. Remainder sealed by Phase 5 soil (AU 2225).	Pottery (694), <i>tpq c 240+ AD</i> (Fabric 29), much residual, av wt 7g, very high abrasion. Bone fragments (2407, included wide species range, many uncrushed bones, gnawed and butchered bone noted), brick and tile (169), fired clay (4), worked stone (12, 7 lias fragments \slabs, 1 lias paving stone fragment, 2 Cotswold limestone roof tiles, 2 sandstone roof tiles), iron objects (10, 3 nails), vessel glass (1), amber bead (1), tap slag (0.013kg), smithing slag (0.02kg).	'Midden-like' debris accumulated on Phase 2 'street'. Included primary deposition of butchery waste and secondary deposited domestic rubbish. Since the butchery waste was largely unfragmented this demonstrates the disuse of metalling as a 'street'.
AU 2053 Disposal: spreads: waste scatter (CG 2139, 2140, & 2141)	Soil deposit (CG 2139), 0.18 m thick max. Wedge-shaped profile filling over south camber at west end of Phase 2 'street' (AU 2047) and above debris on it (AU 2052). Overlaying this and spreading north and east of it was a 0.05–0.10m thick deposit. Comprised soil and 65% mixed rubble (limestone slab – some with one side worn, slag, pebble, and sandstone). Sealed by Phase 4 soils (AU 2225).	Pottery (194), all residual (Period 3 and 4), av wt (5g), very high abrasion. Bone fragments (3659, many unbroken, wide species range, 34 butchery marks, 30 gnawing marks, many goat horncores), brick and tile (50), worked stone (60, 57 lias slab/fragment, 1 sandstone fragment, 1 sandstone and 2 lias paving slabs), shale fragments (21), iron objects (28, including 1 nail, 1 horseshoe fragment, 1 hooked tag, 1 barb-spring barrel padlock and bolt), Cu alloy objects (1, fitting dated <i>c 240+</i>), lead fragments (1), spindle whorl (3 fragments), jet ring (1), worked bone (1), shell (3), glass slag (1), furnace lining (0.053kg), tap slag (1.906kg), smelting slag (54.3kg), smithing waste (0.436kg).	Silting of cambered south side of disused 'street' (AU 2047) and 'midden-like' debris accumulated across it. Debris included butchery and industrial waste (butchered bones, goat horncores and shale fragments), limestone slabs possibly deriving from paved surface in vicinity, and residual, secondary deposited, domestic rubbish. Intrusive elements suggest subsequent Phase 4 dark earth deposition and Period 6 and 7 use has disturbed these deposits possibly even 'moving' some of the rubble and artefacts down through the dark earth.
AU 2054 Structure: timber: indeterminate (CG 2157)	Two postholes. 0.09m deep. Cut disused Phase 2 'street' (AU 2047) and were sealed by Phase 4 dark earth accumulation (AU 2225).	None.	Structure. Unknown form and function. Encroached on 'street' which was apparently no longer a movement zone and may have functioned as the floor of the structure.
AU 2224 Disposal: pit: rubbish (CG 2107 & 2110)	Pit (CG 2110). 1.20m deep. Not fully excavated. Slump (CG 2107) in side. Disturbed Phase 3 grave (AU 2007).	Pottery (23), <i>tpq 120 AD</i> , av wt 5g, very high abrasion. Bone fragments (77), iron objects (11), vessel glass (1), tap slag (0.090kg), smithing slag (0.176kg).	Pit with slump in side. Secondary deposited rubbish incorporated in fill. The pit disturbed a late Roman grave (AU 2007) and is potentially of post 400 AD date

Table 10 (cont.) Site 2 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2007 Disposal: grave (CG 2017)	North to south inhumation, extensively truncated. ?Crouched and east facing. Probably young adult female (Osborne, Section 7.29.3 – Context 17650). Head at north end of a vertical-sided, round-ended grave cut which survived to a depth of 0.60m. Cut, natural, and disturbed by earlier Phase 3 pit (AU 2224).	Pottery (5), indeterminate Roman. Iron smithing waste (0.02kg). Secondary deposited rubbish or ?contamination from truncating pit. C14: GU-5049, cal AD 340-430 (Edwards and Dalwood, Section 340-430 (Edwards and Dalwood, Section 2224).	Solitary late Roman grave. Dating derived from C14 sample suggests that this was broadly contemporaneous with the inhumation cemetery on Site 4.
Period 5 Phase 4	Layer, 0.10-0.35m deep. Extended across whole site, thickening to west. Compact, homogenous, flecked with charcoal and having pebble and slag inclusions. Removed in 0.10m thick spits and extensively sampled for artefactual and environmental evidence. Sealed earlier Period 5 activity. This soil remained in use throughout Period 6 (AU 2055) and subsequently formed the Period 7 Phase 1 (and later) ground surface (AU 2058, 2059, and 2060).	Owing to continuing use of this soil into Period 6 and 7, and of elements of it through into Period 8 the material assemblage is considered as relevant in those sections.	Dark earth accumulation representing long period of virtual abandonment of the site. Broadly analogous to the dark earth on the other three sites. Micromorphological analysis (Macphail, Section 7.32) suggests three main periods of activity and deposition. The Period 5, Phase 4 activity represents the initial accumulation of the deposit and sealing of earlier deposits. This accumulation occurred over a considerable period of time and is characterised by the dumping of cess and domestic rubbish onto the disused Period 5 street and ground surface. There are also indications of the penning of cattle in the area. Subsequently the area was used as grazing land (Period 6, AU 2055) and during Periods 7 and 8 formed the ground surface for further activity which further reworked and mixed the deposit.

Table 11 Site 2 Period 6 activity unit table

Activity unit number and type Period 6: post-Roman and early to middle Anglo-Saxon (5th to late 9th centuries)	Description	Material assemblage	Interpretation
AU 2055 Cultivation: soils: pasture (CG 2142, 2143, 2144, 2149, 2158, 2319, 2321 & 2443)	The Period 5, Phase 4 dark earth accumulation (AU 2225) continued in use throughout Period 6. A number of features (AU 2056 & 2057) were revealed within this apparently homogenous deposit during its removal in spits and are also dated to Period 6. Continued use reworked these deposits and saw new material incorporated into them.	The material assemblages from these deposits are not considered here owing to their continued use, further accumulation and subsequent reworking into Periods 7 and 8. The material from the lower spits (CG 2142 and 2143) is considered at the beginning of Period 7 (AU 2239). The material from the upper spits of the deposit are subsequently considered at the point at which their last use and reworking has been identified. (CG 2144, Period 7 Phase 2, AU 2079; CG 2158, 2319 & 2321, Phase 7 Phase 2, AU 2081; CG 2443, Period 8 Phase 1, AU 2091). Of note amongst these assemblages are Period 6 dated items such as a sceat dated 710–20 AD and an Alfred halfpenny dated 890–99 AD (Metcalf, Section 7.21).	The Period 5 dark earth accumulation (AU 2225) continued in use. Micromorphological analysis (Macphail, Section 7.32) indicates that during Period 6 this was in agricultural use (probably as grazing for sheep) with extensive mixing by earthworms. A high proportion of weed seeds within the deposit supports the development and use of this as pasture (Moffett, Section 7.30). Subsequent use, as a ground surface throughout Period 7 further reworked and altered the deposit (see AU 2058, 2059, 2060, 2070, 2071, 2080, 2081 & 2239). Reworking in Period 6 distributed Roman material, much probably derived from the Period 5 ‘midden-like’ deposits (AU 2052 and 2053) throughout the soil. Subsequent Period 7 reworking through use as a ground surface led to incorporation of late Saxon and early medieval material into the dark earth. This reworking is believed to have truncated and sealed the limited Period 6 activity (AU 2056 & 2057). The material assemblage from this deposit is considered at a later point, however. It included a substantial amount of residual Roman material and a small amount of Period 7 material trampled in through its later use. Only the sceat and the Alfred halfpenny can be reliably dated to Period 6, the latter indicating that the Period 6 activity sealed within the dark earth (AU 2056 and 2057) dated from towards the end of this period of activity.

Table 11 (cont.) Site 2 Period 6 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2056 Structure/s: timber: indeterminate (CG 2154, 2160, 2161, 2162, 2163, 2165, 2166, 2167 & 2425)	Seven postholes, 0.12–0.34m deep, 26 stakeholes, 0.08–0.10m deep and an east to west slot 0.15m deep with a stakehole in its base. Fills include ash, charcoal, burnt clay, and slag. Also a patch of compact soil with clay clog, burnt clay, ash and charcoal. Interpreted as having cut the dark earth during its use as pasture in Period 6 (AU 2055) and as having been sealed and truncated by its Period 7 use (AU 2058).	Pottery (18), av wt 5g, all residual (Roman). Bone fragments (207), iron objects (5).	Post and stake built structure/s and a timber slot. Concentrated to west. East to west and north to south alignments but no obvious structure. Dating was poor and contemporaneity of features is uncertain.
AU 2057 Disposal: pit: indeterminate (CG 2164)	Vertical-sided pit, 0.74m deep. Interpreted as having cut Period 6 dark earth (AU 2055) and having been sealed and truncated by its Period 7 use (AU 2058).	Pottery (11), 2 Period 7 the rest residual (Roman). Bone fragments (22).	Pit. Function unknown.

Table 12 Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 7: late Anglo-Saxon (late 9th to late 11th centuries)			
Period 7 Phase 1			
AU 2239 Movement zone: soils: ground surface (CG 2142 & 2143)	The lower spits of the dark earth deposit (AU 2055) were affected by trampling and use as a ground surface during Period 7. This incorporated new material into the deposit and reworked the existing material throughout the deposit. The lower spits are understood to have been least affected by this activity and are considered separately here to differentiate them from the upper elements. These continued to be reworked and transformed and are considered separately below (AU 2058, 2059 & 2060). Later Phase 2 and 3 use continued to transform and rework these soils. Note: effectively created for purposes of finds analysis to enable separation of material.	Pottery (5492), av wt 2.42g, very high abrasion, no Period 6 pottery, much residual Roman. Bone fragments (16609, unidentified), brick and tile, coins (8: 6 residual Roman dated AD 260–86, 2 × 268–74, 2 × 268–86, 330–35, 2 × 335–41, 341–8 and 364–78; 1 sceat dated AD 710–20 and 1 Alfred halfpenny dated AD 890–99; King, Section 7.20; Metcalf, Section 7.21), copper alloy (5, inc ring, hairpin, balance, sheet, slag – Crummy, Section 7.13), iron objects (778, inc nails, 2 hooked tags, a tanged blade and a strip fragment – Crummy, Section 7.13), stone tiles (8), shale fragments (5), whealstone (1), flint (2, scrapers), lias slab (162, inc 36 paving slabs), daub, tap slag (90.063kg), smelting slag (9.306kg), smithing slag (1.650kg), hearth bottom (0.172kg).	Dark earth deposit worked and disturbed through long period of use. These lower elements are considered to have been least affected by the latest phases of use in Period 7 and thus have been considered separately from the upper, more extensively reworked parts of the deposit.

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2058 Movement zone: soils: ground surface (CG 2144 & 2443)	The upper part of the west end of the Period 5 and 6 dark earth deposit (AU 2225 and AU 2055) formed a ground surface and was cut by Period 7 Phase 1 features (AU 2061, 2062, 2063, 2064, 2065 & 2066). This also formed the Phase 2 and 3 ground surface (AU 2070 & 2080). This use incorporated Period 7 material into the upper part of the dark earth and truncated and sealed the Period 6 activity identified within the dark earth (AU 2056 & 2057).	(see Period 7 Phase 3 AU 2080).	Ground surface. Continuing use of this deposit led to the accumulation of more material incorporating secondary deposited rubbish trampled across it and residual material partly deriving from the upcast of features excavated into it. This soil continued to form a ground surface and be reworked through use into Phase 2 (AU 2070) and Phase 3 (AU 2080).
AU 2059 Movement zone: soils: ground surface (CG 2158, 2319, 2321 & 2472)	The central area of the Period 5 and 6 dark earth (AU 2225 and AU 2055), formed a ground surface. This also formed the Phase 2 and Phase 3 ground surface (AU 2071 & 2081). This use incorporated Period 7 material into the upper part of the dark earth and truncated and sealed the Period 6 activity identified within the dark earth (AU 2056 & 2057).	(see Period 7 Phase 3 AU 2081).	Ground surface. Continuing use of this deposit led to the accumulation of more material and incorporated secondary deposited rubbish trampled across it and residual material partly deriving from the upcast of features excavated into it. This soil continued to form a ground surface and be reworked through use into Phase 2 (AU 2071) and Phase 3 (AU 2081).
AU 2060 Movement zone: soils: ground surface (CG 2147, 2150, 2369, 2371 & 2386)	The Period 5 and 6 dark earth (AU 2225 and AU 2055) formed a ground surface and was cut by Period 7 Phase 1 features (AU 2067, 2068 & 2069). This use incorporated Period 7 material into the upper part of the dark earth. Part of this ground surface (CG 2150) was sealed by a Phase 2 dump (part of AU 2071) but the remainder (along with this newly deposited material) formed the Phase 2 ground surface as well as that in Phase 3	Only the area of this ground surface (CG 2150) sealed by a Phase 2 dump is considered – the remainder having been affected by later reworking. Pottery (3), dated Period 7, much residual (Roman). Bone fragments (1), tile (1). CG 2147, 2369, 2371 & 2386, see Phase 2 (AU 2071).	Ground surface. Continuing use of this deposit led to the accumulation of more material and incorporated secondary deposited rubbish trampled across it and residual material partly deriving from the upcast of features excavated into it. This soil continued to form a ground surface and be reworked through use into Phase 2 (AU 2071) and Phase 2 (AU 2081).

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2061 Structure: timber: domestic building (CG 2169)	North-west corner of a sub-rectangular timber structure. Comprised three east to west aligned, wedge-shaped cuts, 0.35–0.50m deep and one right angled cut, 0.50m deep which formed a corner with a north to south slot 0.15m deep. These cut the Phase 1 ground surface (AU 2058) and were partially backfilled by, but affected the deposition of a Phase 2 dumping (AU 2072).	Bone fragments (2).	Corner of a well-constructed, sub-rectangular plank built structure. North wall comprised radially split planks driven into the ground, with a similarly constructed corner and a plank slot representing the base of the west wall. No internal surface was recovered and no indication of the overall extent of the structure survived. Its function is unclear but the method of construction indicates that this was a substantial building of probable domestic character.
AU 2062 Structure/s: timber: indeterminate (CG 2171, 2173, 2193, 2208, & 2213)	Two postholes, 0.05 and 0.10m deep, 33 stakeholes, 0.06–0.34m deep, and two shallow gouges. Cut Phase 1 ground surface (AU 2058) and largely sealed by Phase 2 dumping (AU 2072). Some north to south and east to west alignments but no obvious structures. Fills varied, some containing ash/lime fleck and burnt clay fragments but others ash/lime free, compact and containing iron slag. There was no evident pattern to this variation.	Pottery (4), dated Period 7, much residual (Roman). Bone fragments (75), iron objects (2), shale fragments (2).	Post and stake-built structure/s of uncertain form and function. ?Fence lines or temporary structures.
AU 2063 Structure: timber: indeterminate (CG 2174 & 2216)	Posthole, 0.20m deep, with ash/lime flecked fill and ?posthole with slag in fill. Cut Phase 2 ground surface (AU 2058), cut by later Phase 1 pits (AU 2064) and below Phase 2 activity.	None.	Part of an indeterminate post-built structure ?associated with part of pit complex AU 2064.

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2064 Disposal: pits: cess and organic waste (CG 2217, 2264, 2265, 2276, 2277, & 2356)	Five pits, depths varied from 1.55m to over 2.00m and two were not fully excavated. Also a slot, 0.35m deep sloping slightly to the east and linking two of the pits. These pits formed two groups one to the north and one to the east of Phase 1 timber structures (AU 2061 & 2062). Complex series of fills included Phase 2 and Phase 3 backfilling deposits (AU 2073 & 2083). The primary fill was not revealed in all but in those that were fully excavated was fine and silty with few inclusions.	Pottery (14), av wt 14.29, dated Period 7, much residual (Roman). Bone fragments (492, inc 200+ fish bones), iron objects (4), fired clay (2), glass (1), grinding stone (1, Roe, Section 7.24). C14 dating – GU-5009, cal AD 710–890, from a burnt plank in CG 2265; OxA-3066, cal AD 340–500, from uncharred seeds in CG 2217 (Edwards and Dalwood, Section 7.33). Mineralised fruit stones in CG 2217 & 2264. Charred cereal dump in CG 2265	Pits with primary fills. The fills varied and suggested that they were used as both cess pits and pits for disposal of domestic organic waste. A slot drained one to another. The pits were probably associated with Phase 1 structures (AU 2061 & 2062). Primary use continued until secondary fills (AU 2073 & 2083) were deposited in Phases 2 and 3. Slumping of these later fills was severe suggesting a highly organic nature to the primary fills. The C14 dating poses some problems as although that from CG 2265 confirms a Period 7 date, (dating the pits to the late 9th or early 10th century) the date from CG 2217 dates the primary fill to the 4th to 6th centuries. However, dating of a phase of dumping of lime burning residues (see Phase 2, AU 2073) which was present in the secondary fills of all of these pits secures the Period 7 date.
AU 2065 Disposal: dumps: indeterminate (CG 2273, 2274, & 2275)	Poorly defined irregular deposits of olive brown silty soil flecked with ash/lime. These overlaid the Phase 1 ground surface (AU 2058) immediately to the north of two pits (part of AU 2064). Mainly occupied a shallow hollow, 0.16m deep, but also spread in two patches to either side of that hollow. They were sealed by a Phase 2 deposit (AU 2076).	Pottery (10), much contamination. Bone fragments (72), iron objects (3), brick and tile, shell (2).	Dumps, or possibly overflow, associated with pits to the south. Trampling had incorporated Phase 2 ash/lime into it prior to the deposition of a Phase 2 consolidating layer (AU 2076). A Phase 2 drainage feature (AU 2077) may also be associated.
AU 2066 Disposal: pit: cess (CG 2320)	Horizontally truncated pit, 0.33m deep, having four stakeholes in a square in its base. Few inclusions in fill.	Pottery (4), all residual (Roman). Bone fragments (55), tile (1). Large quantity of mineralised seed fragments.	Cess pit, with wooden structure in base, ?lining or other associated structure. Dating poor, based on truncation by Period 8 feature. Interpretation based on the presence of a large quantity of mineralised seed.
AU 2067 Structure: timber: indeterminate (CG 2370 & 2374)	Two postholes, 0.08 and 0.10m deep, one cutting Phase 1 ground surface (AU 2060), the other in the base of another Phase 1 feature (AU 2068). Sealed by Phase 2 activity.	Pottery (4), all residual (Roman). Bone fragments (27), iron objects (1).	Part of post-built structure(s). Form and function unknown.

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2068 Structure: indeterminate: ?building (CG 2375)	Linear feature, 0.38m deep, aligned north to south, and having a flat base. Distinct, compact with high slag inclusion. Cut Phase 1 ground surface (AU 2060) and truncated by a later Phase 1 pit (AU 2069).	Pottery (53), av wt 8g, very high abrasion, dated Period 7, much residual (Roman). Bone fragments (55), brick and tile, fired clay (3), iron objects (1), smelting slag (2.24kg), tap slag (0.596kg), smithing slag (0.247kg).	Function and form of structure uncertain although apparently structural. Initial interpretation suggested that this might be a robber trench for a conventional stone built wall, however, micromorphological analysis indicated that the lower part of the fill included charred peat (probably fen peat; Macphail, Section 7.32). This suggests that the feature might represent a beam slot providing footings for a peat turf walled building which burnt down. Alternatively this may indicate that peat turfs were used as fuel and that the original interpretation might stand.
AU 2069 Disposal: pit: cess and secondary rubbish (CG 2372 & 2373)	Pit, 0.74m deep, cutting earlier Phase 1 features (AU 2067 & 2068) and below Phase 2 activity (AU 2071 & 2078). Fill varied, with redeposited natural to base, sealed by cess deposits and finally backfilled with soil relatively rich in iron.	Pottery (91), av wt 13.51g, very high abrasion, dated Period 7, much residual (Roman). Bone fragments (374), brick and tile, iron objects (7, inc hooked shaft, ring frag, plate frag), copper alloy (1, with residual rubbish).	Pit, in which sides have partially collapsed before primary use as a cess pit. The pit was then backfilled with soil containing secondary deposited and residual rubbish.
AU 22226 Structure: timber?: indeterminate (CG 2376)	Much truncated, surviving fragment of ?shallow (0.18m) linear cut feature with single fill	Tile (3)	Indeterminate. Possibly structural – ?beam slot/sill
Period 7 Phase 2		Owing to use through into Phase 3 and for CG 2443 into Period 8 the material assemblage from this deposit is discussed in association with its latest use as a ground surface (see AU 2080 & 2091).	Phase 2 ground surface at western end of site. This developed from the Phase 1 ground surface. Continuing use of this deposit led to the accumulation of more material incorporating secondary deposited rubbish trampled across it. The material was much mixed and abraded as a result of extensive trampling, a process which continued to affect much of the deposit throughout Period 7.
AU 2070 Movement zone: soils: ground surface (CG 2144 & 2443)	Phase 1 ground surface (AU 2058), was partially sealed by Phase 2 activity (AU 2072 & 2076) but elsewhere formed the Phase 2 ground surface and was cut by Phase 2 features (AU 2075 & 2077). Subsequently formed Phase 3 and 4 ground surface (AU 2080) and was cut by associated activity. The eastern extent (CG 2443) also continued in use through to Period 8 (AU 2091).		

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2071 Movement zone: ground surface (CG 2147, 2158, 2319, 2321, 2369, 2371, 2378, 2386, & 2472)	Much of the Phase 1 ground surface in the central and eastern part of the site (AU 2059 & 2060) formed the Phase 2 ground surface along with the top part of backfilled Phase 1 features. This ground surface was overlain and cut by Phase 2 activity (AU 2078 & 2079). Subsequently also formed the Phase 3 and 4 ground surface (AU 2081) and was cut by features associated with those phases of activity.	Owing to use through into Phase 3 the material assemblage from this deposit is discussed in association with its latest use as a ground surface (see AU 2081).	Phase 2 ground surface across central and eastern part of site. This developed from the Phase 1 ground surface. Continuing use of this deposit led to the accumulation of more material incorporating secondary deposited rubbish trampled across it. The material was much mixed and abraded as a result of extensive trampling, a process which continued to affect much of the deposit throughout Period 7.
AU 2072 Disposal: dumps: industrial waste (CG 2172, 2196, 2205, & 2209)	Dumps of charcoal flecked soil, 0.05–0.15m thick, with very high ash/lime content (80%+) and burnt clay inclusions (Fig. 57). Compact in places and layered, with smears of charcoal and soil, and lenses of pure ash/lime. Partially limited to south by surviving elements of Phase 1 structure (AU 2061). Overlaid areas of the Phase 1 ground surface (AU 2058) and was cut by Phase 2 features (AU 2074 & 2075).	Pottery (42), av wt 7.45g, moderate abrasion, dated Period 7, much residual (Roman). Bone fragments (123, inc bone skate), brick and tile, iron objects (4).	Dumped waste from industrial process producing a lime burning residue (Marsden, Section 7.25). Deposition was partly limited by a Phase 1 structure (AU 2061). Trampled through use and probably worn away in some areas. Cut by many features (AU 2074 & 2075) of which the distinctive structures forming AU 2075 may be related to the storage, mixing or use of lime (?leatherworking process – tanning/curing). Similar material was also dumped as a secondary fill (AU 2073) into pits in the vicinity. Material remains represent secondary deposited and residual rubbish. This subsequently formed part of Phase 3 ground surface (AU 2080).
AU 2073 Disposal: secondary use of pits: industrial waste (CG 2170, 2218, 2267, 2269, 2271, 2278, & 2357).	Dumps of virtually pure ash/lime, layered Pottery (15), av wt 0.11g, very high in places with redeposited natural sands and gravels and soily deposits. Mainly deposited in Phase 1 pits (AU 2064) as a secondary fill but also backfilling elements of a Phase 1 structure (AU 2061). Within the pits it varied from 0.05–0.15m thick and had slumped extensively (up to 0.75m) dishing to the centre but remaining smeared up the sides. Overlaid by Phase 3/4 backfilling (AU 2084).	Dumped waste from industrial process and clearly related to AU 2072. Analysis showed this to be a lime burning residue (Marsden, Section 7.25). This had been dumped into pits to dispose of the waste but also probably functioned to sterilise and backfill these cess and organic rubbish pits (AU 2064).	

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2074 Structure: timber: fence (CG 2210)	Twelve stakeholes, 0.10m deep, aligned east to west (Figs 56 and 58 – lime burning residues and associated structures). Cut Phase 2 ash/lime dump (AU 2073).	Pottery (12), all abraded, all residual (Roman). Bone fragments (21), brick and tile, daub (1), iron objects (1).	Stake-built fence – probably an internal division rather than a property boundary.
AU 2075 Structures: timber: industrial? (CG 2176, 2184, 2192, & 2206)	One hundred and three stakeholes, 0.05–0.12m deep, cutting Phase 2 ground surface (AU 2070) and dumped industrial waste deposits (AU 2072). These formed three sub-circular structures, open to one side (Figs 56 and 58 – lime burning residues and associated structures). In addition there were a number which could not be associated with any definable structure but are considered to have related to similar structures.	Three stake-built sub-circular structures, open on one side and the remains of other probably similar stake-built structures. The structures concentrated on and around ash/lime dumps (AU 2072) and are probably directly associated with them. The form of the structures suggests a wattle 'basket-like' superstructure within which the lime could have been either stored or used.	
AU 2076 Movement zone: dump: ground surface (CG 2276)	Compact deposit of coarse sand and gravel, overlying Phase 1 activity (AU 2065) associated with cess and organic waste disposal. Cut by a Phase 2 drainage feature (AU 2077) and partially overlaid by further Phase 2 dumping (AU 2072).	Pottery (12), all abraded, dated Period 7, much residual (Roman). Bone fragments (19), brick and tile, whetstone (1).	Consolidating dumped layer over Phase 1 waste disposal/overflow (AU 2065). Formed part of Phase 3 ground surface (AU 2080).
AU 2077 Disposal: gully: drain (CG 2279)	Shallow, 0.15m, linear east to west feature, 2.00m long, butt-ended to west, irregular based and ill-defined reducing to nothing to the east. Cut Phase 2 layer (AU 2076). Fill partially overlaid by later Phase 2 ash/lime dump (AU 2075). Fill was flecked with ash/lime.	Pottery (9), dated Period 7, much residual. Bone fragments (27), iron objects (1).	Drain or soakaway which with sandy gravel spread (AU 2076) consolidated the area to the north of Phase 1 organic and cess deposits (AU 2065). Surface of fill formed part of Phase 3 ground surface (AU 2080).
AU 2078: Disposal: pit: indeterminate (CG 2382)	Sub-circular, partially truncated pit. 1.45m+ across and 0.25m deep. Single fill.	Pottery (5), dated Period 7. Bone fragments (11), tile (1)	Shallow pit of indeterminate function – fill not primary rubbish. May have been soakaway or possibly have been extractive in function (soil for earthen floor?)
AU 2079 Disposal: dump: indeterminate (CG 2379 & 2380)	Two deposits, 0.05m thick, limited in area and overlaying Phase 1 ground surface (AU 2060). Cut by Phase 2 feature (AU 2076). One deposit was ashy, the other contained a large quantity of bone fragments.	Pottery (3), all residual (Roman). Bone fragments (156).	Two dumps of rubbish. Formed part of Phase 3 ground surface (AU 2081).

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 7 Phase 3	<p>AU 2080 Movement zone: soils/dumps: ground surface (CG 2144, 2172, 2196, 2205, 2209, 2276, 2278, & 2443)</p> <p>The Phase 2 ground surface (AU 2070), dumps (AU 2072 & 2076), and the top part of a backfilled Phase 2 features formed a ground surface which was cut by Phase 3 features (AU 2082, 2083, 2084, & 2085). Although not separately discussed limited elements of this deposit also formed the Phase 4 ground surface (20, inc 13 nails, hobnails, tongue ended strip, hinged belt-plate, and padlock key handle (Crummy, Section 7.13), fired clay (4), daub (7), shale (2), limestone slab (22, inc 3 paving frag and 2 tiles).</p>	<p>Pottery (360), av wt 4.9g, very high abrasion, dated Period 7, much residual (Roman). Bone fragments (1054, inc wide range of species), brick and tile, copper alloy (8, inc residual Roman brooch and residual Roman coin (Mackreth, Section 7.14 & King, Section 7.20), iron objects (20, inc 13 nails, hobnails, tongue ended strip, hinged belt-plate, and padlock key handle (Crummy, Section 7.13), fired clay (4), daub (7), shale (2), limestone slab (22, inc 3 paving frag and 2 tiles).</p>	<p>Ground surface at west end of site. The material assemblage contains high proportion of Roman residual material incorporated during Period 5 deposition of the soil (AU 2225). The deposit is also considered to include earlier Period 7 material incorporated through use as a ground surface in Phase 1 (AU 2058) and Phase 2 (AU 2070).</p>
AU 2081 Movement zone: ground surface (CG 2147, 2158, 2319, 2321, 2369, 2371, 2378, 2379, 2380, 2386, & 2472)	<p>The Phase 2 ground surface (AU 2071), dumped deposits (AU 2079) and the surface of backfilled Phase 2 features formed the Phase 3 ground surface which was cut by Phase 3 features (AU 2086, 2087, & 2088).</p>	<p>Pottery (1751), av wt 3.32g, very high abrasion, dated Period 7, much residual (Roman). Bone fragments (11357, inc wide range of species and some butchered and gnawed bones), brick and tile, fired clay (158), furnace lining (1), copper alloy (2, inc ring – Crummy, Section 7.13), iron objects (212, inc 2?nails, 2 hooked tags, 1 needle, 2 ring frags – Crummy, Section 7.13), iron ore (8), lead objects (8), silver coin (1, penny 10th century – before AD 973 – Metcalf, Section 7.21), flint (3, inc scraper), shale (4), loomweight (1), whetstone (2), lias (190, inc 12 paving, 1 shaped block, 4 tiles).</p>	<p>Ground surface in central and eastern part of site. Developed from the Phase 2 ground surface, dumped deposits, and backfilled features. Use is considered to have incorporations of new material into it.</p> <p>(2, inc ring – Crummy, Section 7.13), iron objects (212, inc 2?nails, 2 hooked tags, 1 needle, 2 ring frags – Crummy, Section 7.13), iron ore (8), lead objects (8), silver coin (1, penny 10th century – before AD 973 – Metcalf, Section 7.21), flint (3, inc scraper), shale (4), loomweight (1), whetstone (2), lias (190, inc 12 paving, 1 shaped block, 4 tiles).</p> <p>Material assemblage contains a high proportion of residual Roman material incorporated during Period 5 deposition of the soil (AU 2225), subsequent Period 6 reworking and use (AU 2055). Earlier Period 7 use as a ground surface (AU 2059, 2060, & 2071) is also likely to have incorporated further material. The material was much mixed and abraded through trampling. Period 7 material represents secondary deposited domestic rubbish.</p>

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2082 Structure: timber: domestic building? (CG 2180, 2185, 2191, 2194, 2198, 2202, 2246, 2284, & 2714)	Seventeen postholes, 2 re-cut, 0.05–0.45m deep (mostly 0.20–0.35m), aligned east to west and to a degree north to south. These cut the Phase 3 ground surface (AU 2080). Some were sealed by Phase 4 deposits (AU 2089). Backfills mostly contained ash/lime and charcoal fleck, several had loose rubble including limestone slab in them.	Pottery (27), very high abrasion, dated to Period 7, some residual (Roman). Bone fragments (559), brick and tile, daub (58), iron object (2).	Substantial sub-rectangular, post-built structure (c 7 × 4m). Re-cut postholes suggest repairs of elements indicating that structure stood for a considerable time. Several postholes had evidence of stone post-packing. No internal surfaces or clear evidence of function, but size and substantial construction suggest this was a domestic building. The presence of daub suggests wattle and daub walling. The relatively artefact rich backfills represent demolition debris incorporating secondary deposited domestic refuse. These were deposited prior to levelling and rebuilding in Phase 4 (AU 2088 and AU 2089).
AU 2083 Structure: indeterminate: internal surface (CG 2211)	Pale greenish skim of soil with a surface of compact mortar flecked with charcoal and burnt clay. This survived patchily above the Phase 2 ground surface (AU 2070) and below a Phase 4 deposit (AU 2089).	Pottery (2), both abraded, dated Period 7, one residual Roman. Bone fragment (11).	Internal surface. No obvious associated structure though this could relate to building AU 2082 to the east.
AU 2084 Disposal: secondary use of pits: rubbish (CG 2218, 2268, 2270, 2272, & 2357)	Upper fills in Phase 1 rubbish pits (AU 2064), overlying Phase 2 secondary fills (AU 2073). Variably banded moderately ash/lime and charcoal flecked soil layers, which in one pit included lenses of clay. These layered fills slumped to the centre of the pits.	Pottery (144), av wt 8.2g, very high abrasion, dated Period 7, some residual (Roman). Bone fragments (1431), brick and tile, daub (5), copper alloy (7, inc 2 slag fragments), iron objects (20, inc 6 nails, tangential blade, pick head – Crummy, AU 2091). Secondary deposited and Section 7.13, glass (1), whetstone (1), spindle whorl (1), and a crucible fragment. C14 dating – cal AD 960–1040, from CG 2270 (Edwards and Dalwood, Section 7.33).	Backfilling of pits over slumped Phase 1 and 2 fills. Clay lenses in one suggested attempt at consolidation or sealing, however, subsidence above them remained a problem into Period 8 (see AU 2091). Secondary deposited and residual rubbish in fills.
AU 2085 Disposal: pit: cess (CG 2291)	Partially excavated pit, 1.00m+ deep, cut Phase 3 ground surface (AU 2081). Backfilled in Period 8 (AU 2101).	Pottery (7), av wt 9g, much abrasion, dated Period 7, some residual (Roman). Bone (241, inc 50+ fish), iron objects (2, both nails). Many seeds also recovered.	Cess pit.
AU 2086 Structure: timber: indeterminate (CG 2377 & 2381)	Two postholes, 0.10 and 0.27m deep, cutting Phase 3 ground surface (AU 2081). Stone fragments in one.	Bone fragments (5), fired clay (1), brick and tile.	Elements of post-built structure. No form or function evident.

Table 12 (cont.) Site 2 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2087 Disposal: ditches: drainage? (CG Two ditches, one 0.10m deep running east to west and filled with soil and rubble. The rubble included slabs of limestone tipping to the base of the feature. The other ditch ran north to south and was 0.26m deep. This had a compact backfill. Both cut the Phase 3 ground surface (AU 2081).)	Pottery (39), av wt 7.02g, very high abrasion, dated Period 7, some residual (Roman). Bone fragments (54), brick and tile.	?Drainage features. Possibly also boundaries. Backfilled with soil and secondary deposited rubbish.	
Period 7 Phase 4			
AU 2088 Movement zone: dumps: ground surface (CG 2175, 2183, 2189, 2190, 2197, 2199, 2200, 2203, 2207, 2212, 2235, 2443, & 2713)	The Phase 3 ground surface (AU 2080) was partly overlain by a series of dumps, mostly comprising soil with ash/lime mixed through the dumps and forming lenses within them. Also a spread of mixed rubble (limestone slab, iron slag, and pebble) and soil occupied a hollow centrally. These overlie Phase 3 activity (AU 2082 & 2083) and were cut by a Phase 4 structure (AU 2089). One area, that covered by CG 2443 remained in use into Period 8 (AU 2091).	Pottery (56), av wt 8.54g, very high abrasion, dated Period 7, some residual (Roman). Bone fragment (708, inc 3 worked), brick and tile, iron objects (3, inc ?punch), daub (16), plaster (2), fired clay (2), glass (2), shell (2), flint (1). Note: CG 2443 omitted owing to Period 8 use	Dumps levelling Phase 3 ground surface (AU 2080) and forming part of the Phase 4 ground surface. Derive in part from demolition of Phase 3 structures (AU 2082 & 2083) and also from upcast of feature excavation. Rubble dump may form part of internal surface of Phase 4 structure (AU 2090).
AU 2089 Structure: timber: domestic building (CG 2177, 2178, 2179, 2181, 2182, 2186, 2187, 2188, 2195, 2201, 2204, 2219, 2229, 2230, 2231, 2232, & 2247)	Three sections of east to west slot, and two sections of north to south slot, 0.15–0.40m deep. One had a sub-square posthole at its north end, one a sub-circular posthole at its south end. These cut the Phase 4 ground surface (AU 2080) and levelling dumps (AU 2089) and were sealed by Period 8 activity (AU 2091). All had charcoal and ash/lime flecked fills. The projected lines of these slots formed a sub-rectangle approx 7.50 × 5m in plan. To the north were five postholes, 0.15–0.30m, two with re-outs and forming a sub-rectangular 'annex' to the main structure. Within the area bounded by the slots were five stakeholes and a posthole, 0.30m deep. A large sandstone block lay partially within the posthole but protruded above it and was surrounded by gravel. Also internally was a short east to west slot, 0.10m deep. A further posthole lay to the west and may be associated.	Pottery (72), av wt 3.75g, very high abrasion, dated Period 7, contamination (1, Period 8) and some residual (Roman). Bone fragment (468), brick and tile, fired clay (1), daub (1), iron objects (1), loomweight (1).	Sill beam and post-built structure of considerable size. Occupied much the same limits as the Phase 3 domestic building (AU 2082) and probably represents a rebuild of that. The postholes to the north probably represent an entrance or side building constructed where there is a gap in the alignment, bounded by a square butt-ended slot and a posthole. Within the building features represent internal structures the large posthole and sandstone block perhaps being a roof support or solid base for working on.

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2090 Disposal: pits: rubbish (CG 2358, 2361, & 2712)	Three pits, partially excavated, 1.00m+ deep. Cut Phase 1 pits (AU 2064) and their Phase 2 and 3 secondary fills (AU 2073 & 2084). Similar in form and fill to those earlier pits having severely slumped, banded fills including lenses of ash/lime and layers of redeposited natural. Backfilling of one (CG 2361) continued into Period 8 (AU).	Pottery (1), bone fragments (20).	Pits, probably initially organic waste pits, similar to earlier pits in the vicinity and remaining in use into Period 8 (AU 2099). Dating was poor.

Table 13 Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8: medieval, late 11th to mid-13th centuries			
Period 8 Phase 1			
AU 2091 Movement zone: soils/dumps and continuing use: ground surface (CG 2215, 22223, 2233, 2258, 2280, 2443, 2559, & 2560)	Ground surface comprising, to the east, the later Period 7 ground surface (which continued in use) and, to the west, a newly deposited layer. The latter varied in thickness (0.05–0.15m) but was generally thicker to the west. Compact in places and extending across much of west end of site. Slumped slightly over larger Period 7 pits (AU 2084). Variations in content included ash/lime flecked areas, a burnt patch, and most notably a central area with much mixed rubble (limestone, cobble, iron slag) spread around a timber structure and associated cobbled surface (AU 2095). Cut/overlain by Period 8 Phase 1 and later activity and overlying much of the later Period 7 activity.	Pottery (228, av wt 3.88g, very high abrasion, dated Period 8), Bone fragments (>1925, inc fish), brick and tile (2), fired clay (27, inc 17 daub), iron objects (16, inc 5 nails), tap slag (3.563kg), smelting slag (3.884kg), smithing slag (0.064kg), hearth bottom (0.624kg), copper alloy (1 ?sheet frag), slate (1 incised), shell (1).	Continuing use of earlier ground surface overlain to the west by a series of dumped deposits including rubble from ?building demolition. This may have functioned as a rough metallurgical/ lime flecked material probably results from disturbance of Period 7 deposits. Other variations probably reflect use. Artefacts represent domestic and industrial debris. Fragmentation and abrasion of pottery suggests that these artefacts were trampled into the soil and are either residual in the dumps or a secondary deposition.
AU 2092 Movement zone: dumped soils and continued use: ground surface (CG 2322, 2341, & 2349)	Soils in the central area of the site. Largely comprised Period 7 deposited material (AU 2081) but included, to the east, a compacted dump/spread of soil (CG 2349) overlying part of that earlier deposition. Cut/overlain by Period 8 Phase 1 activity.	Newly deposited material – bone fragments (26), tile (1), smithing slag (0.022kg), glass (1).	Continuing use of earlier ground surface (AU 2081) but including new dump/ accumulation of material to east. This may have derived from upcast of pit digging (AU 2102 and AU 2104) or simply represent material accumulated during use. Material assemblage is either residual or secondary deposition of rubbish.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2093 Movement zone: dumped soils and continued use: ground surface (CG 2384 & 2420)	Soils at the east end of the site. Basically comprising eastern part of Period 7 deposited material (AU 2081) but also newly deposited soils overlying the southern part of that earlier material. These soils were 0.05–0.28m thick, and lay around and were cut by Period 8 Phase 1 activity (AU 2108 & 2109). Included fired clay and charcoal, and generally appeared burnt closest to structure AU 2109.	Pottery (87, av wt 8.64g, very high abrasion, dated Period 8. Bone fragments (164), brick and tile (7), iron objects (1), tap slag (0.186kg), smelting slag (0.356kg), smithing slag (0.017kg), hearth bottom (0.364kg).	Continuing use of earlier ground surface. Areas of newly deposited material probably represent accumulation resulting from use of area around structure AU 2109 and debris from that structure. Material assemblage partly residual but also secondary deposited rubbish.
AU 2094 Structure: floors: indeterminate ?domestic (CG 2234 & 2249)	Surfaces. To south, comprising thin spreads of charcoal interspersed with thin ashy silt clay spreads. To north, comprising a thin spread of charcoal. These overlaid Phase 1 deposit AU 2091 and were overlain by later activity (Phase 2; AU 2118).	Pottery (8, av wt 27.5g, moderate abrasion, dated Period 8. Bone fragments (>170), fired clay (40, all daub), iron objects (3, inc 1 nail)).	Series of trampled thin spreads of ash and charcoal rich material underlying a later fired clay working surface (AU 2118). The spreads probably represent waste from hearths/ovens in the vicinity which formed an internal surface.
AU 2095 Structure: timber with surface: indeterminate (CG 2224, 2225, & 2226)	Limited area of cobbling, 0.05–0.10m thick and associated small pit and posthole. Cut/overlaid Phase 1 ground surface (AU 2091) and sealed by Phase 2 activity (AU 2116). Both the cobbling and feature fills were rich in iron slag waste.	Pottery (129, av wt 9.83g, very high abrasion, dated Period 8). Bone fragments (>940), brick and tile (3), fired clay (9, all daub), iron objects (14, inc 5 nails and an 8-shaped object), tap slag (4.692kg), smithing slag (1.138kg), hearth bottom (0.398kg), copper alloy (2, strip), lead slag (1).	Contemporary and probably related features. Structural? Function uncertain but possibly industrial and related to ironworking.
AU 2096 Disposal: ditch: drain (CG 2214)	North to south aligned feature, limited in both directions by truncation. U-shaped in profile with base inclining to south. Distinctive clay clog fill. Cut Phase 1 ground surface (AU 2091) and sealed by Phase 2 deposits (AU 2110).	Pottery (50, av wt 11.68g, average abrasion, dated Period 8. Bone fragments (>200), tap slag (0.328kg), smelting slag (1.426kg).	Drainage ditch with secondary deposited rubbish in backfill.
AU 2097 Structure: timber: indeterminate (CG 2220)	Slot, near vertical-sided and flat-based, 0.23m deep, aligned north to south and limited by truncation. Distinctive fill included ash/lime and charcoal flecking, and sandstone, limestone and highly fired clay fragments.	Pottery (19, av wt 10.53g, very high abrasion, dated Period 9 (contamination). Bone fragments (50), iron objects (3, inc 1 nail), tap slag (0.138), copper alloy (2, 1 sheet frag, 1 strip), glass bead (1).	Probably slot for timber. No clear contemporary associations; however, aligned similarly to rear wall of Period 7 Phase 4 Structure (AU 2087). It may therefore represent a replacement of that feature and be related to that structure. Dating of the fill however suggests this is Period 8 or later. Rubble and daub in fill probably represent demolition material and possibly relate to material in rubbly area of contemporary ground surface to the west (AU 2091).

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2098 Disposal: indeterminate: industrial (CG 2281/2282)	South side of large feature, having a straight, near vertical, southern edge but otherwise limited by truncation (east and west) and extending beyond the north edge of the excavation. This had been excavated down onto a Roman cobbled surface (AU 2047) giving the feature a solid and flat base. 0.34m deep with a moist clayey fill flecked with ash/lime and charcoal. Cut Phase 1 ground surface (AU 2091). Phase 2 activity (AU 2114) overlaid the southern part of the fill.	Pottery 26, av wt 8.81g, very high abrasion, dated Period 8. Bone fragments (399), tile (2), iron objects (4, inc a nail and a socketed weapon), tap slag (0.112kg), smelting slag (0.61kg), smithing slag (0.3kg), stone (1, lias paving slab), shell (1).	Substantial feature of indeterminate nature. Size suggests it may be industrial – storage or processing related – and base onto earlier surface suggests that a solid foundation was required. Fill probably not primary but a backfill, incorporating secondary deposited rubbish and indicating disuse.
AU 2099 Disposal: secondary usage of pits: backfill/rubbish (CG 2362 & 2715)	Upper fills in two Period 7 cess pits (AU 2090). Comprise bands of sand and gravel interspersed with deposits of heavily charcoal and ash/lime (lime burning residue) flecked soils.	Pottery (21, av wt 31.14, moderate abrasion, dated Period 8). Bone fragments (>110), brick and tile (5), fired clay (5 ?furnace lining).	Backfilling of earlier cess pits. Ash/lime content may help to sterilise the pit whilst sand and gravel will help consolidate the area over them and lessen slumping. Includes secondary deposited (?domestic) rubbish.
AU 2100 Metalling zone: metalling: yard (CG 2285)	Patchily surviving metalled surface. Comprised pebbles within a compact sandy matrix with occasional areas of coarser material (limestone, sandstone, and slag). Approximately 0.05m thick with elements of original limits surviving to south, east, and west. To the north extended beyond the limits of the excavation. Overlay Phase 1 deposits (AU 2091) which themselves formed the ground surface beyond the metalling. Largely overlaid by Phase 2 ground surface deposits (AU 2111).	Pottery (25, av wt 4.32g, very high abrasion, dated Period 8). Bone fragments (123), brick and tile (6), tap slag (2kg), smelting slag (0.9kg), smithing slag (0.11kg), hearth bottom (0.282kg).	Yard area. No associated activity. Material assemblage probably residual or secondary deposition trampled in through use (highly fragmented and abraded). Moderate quantity of iron slag present suggests some link with ironworking activity may exist. Patchiness probably results from wear.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2101 Disposal: secondary usage of pit: industrial waste and rubbish (CG 2292)	Upper fill in substantial Period 7 cess pit (AU 2085). Volume of pit and range of material indicate that this activity may continue into Phase 2. Cut/overlain by Phase 3 activity.	Pottery (164, av wt 10.05g, high abrasion, dated Period 8). Bone fragments (1973, many small but including a high proportion of goat horncores and some butchered bone – Nicholson and Scott, Section 7.28), brick and tile (6), iron objects (23, inc 3 nails), tap slag (0.034kg), smithing slag (7.198kg), hearth bottom (3.348kg), hammerscale (200+), lead object (1), worked bone (1), tessera (1, residual), whetstone (1).	Fill of substantial pit, possibly deposited over considerable period of time to backfill a disused cess pit. Material assemblage mainly comprised primary depositions of industrial waste from two activities, ironworking (smithing – McDonnell and Swiss, Section 7.9) and bone working or more probably tanning (Nicholson and Scott, Section 7.28). The presence of hammerscale suggests that iron smithing must have been undertaken in the immediate vicinity; however, within the confines of the excavation such activity was not identified during this phase. Domestic refuse is also present and appears to be a secondary deposition since the pottery is much fragmented and abraded.
AU 2102 Disposal: pits: cess/rubbish (CG 2316, 2346, 2363, 2366, & 2653)	Five pits varying in size and degree of survival. Concentrated to south side of excavated area. Fills varied in content. One pit (CG 2653) contained mortar, tile, inc 1 nail, tap slag (1.82kg), smithing slag (0.272kg), hearth bottom (0.410), copper alloy (1?), worked bone (1). Phase 2 (AU 2118; CG 2347).	Pottery (155, av wt 17.24g, very high abrasion, dated Period 8). Bone fragments (340), tile (3), iron objects (2, inc 1 nail), tap slag (1.82kg), smithing slag (0.272kg), hearth bottom (0.410), copper alloy (1?), worked bone (1).	Group of pits lying along south side of the site. One (CG 2346) probably represents a cess pit, while the others appear to have a non-specific function, acting as waste pits incorporating both cess and secondary deposited domestic refuse. One of the latter also contained a dump of material (mortar, tile and rubble) which may represent demolition debris.
AU 2103 Boundary: circumstantial: property	No physical evidence survives directly relating to this boundary across the site, rather it is evidenced by the alignment and physical relationship of features to either side of it. Two groups of Phase 1 pits (AU 2102 & 2104) respect this division which is also followed by part of a contemporary metalalled surface (AU 2015). The maintenance of this boundary has led to the survival of a north to south aligned ridge of soil between truncating features respecting the boundary. Although later Period 8 industrial activity (AU 2129 & 2130) extends to either side of this division, later pits continue to avoid it and in Period 9 a metalalled path (AU 2150) occupies this alignment.	Nil.	Boundary which subsequent archaeological and documentary evidence demonstrate represents the east end of the properties fronting onto Birdport. This division marks the parish boundary between the parishes of St Andrew's and St Swithun's which although not mapped until the post-medieval period is suggested from this evidence to date from Period 8 (11th to 13th centuries).

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2104 Disposal: pits: rubbish (CG 2342 & 2343)	Two extensivly truncated features of which only the western edges survive. Cut Phase 1 ground surface (AU 2091) and metalling (AU 2105).	Pottery (13, av wt 12.69g, very high abrasion, dated Period 8). Bone fragments (21).	Uncertain form and function but probably pits which on disuse had secondary deposited domestic refuse incorporated in backfills.
AU 2105 Movement zone: metalled surface: yard (CG 2323, 2324, 2325, 2326, & 2328)	Surface comprising compacted coarse mixed rubble (cobble, pebble, slag, and limestone). Thin (0.10m max) and limited by site extents and truncation. Overlies Phase 1 ground surface (AU 2092) and is partially overlain by Phase 1 waste dump (AU 2106).	Pottery (50, av wt 6g, very high abrasion, dated Period 8). Bone fragments (580), brick and tile (36, inc 13 tile), fired clay (12, inc 6 daub), iron objects (6, inc 2 nails), tap slag (0.648kg), smithing slag (8.281kg), hearth bottom (1.04kg), hammer scale (>2000), shale (2 frags).	Metalled surface. Rather insubstantial but this may result from wear. May largely derive from upcast or quarried natural sand and gravel. Fragmentation and abrasion of surface material is consistent with secondary deposition on a yard area. The ironworking waste appears largely to relate to smithing. Presence of hammer scale suggests close proximity of such activity. The alignment of this partially reflects a boundary (AU 2103).
AU 2106 Disposal: dumps: industrial waste (CG 2327 & 2351)	Three small areas of ashy, charcoal flecked material overlying Phase 1 ground surface (AU 2092) and metalling (AU 2105). Overlain by Phase 2 deposits (AU 2142).	Pottery (9, av wt 5.22g, very high abrasion, dated Period 8). Bone fragments (39), fired clay (6, all daub), tap slag (0.037kg), smithing slag (0.049kg).	Waste from fire – ?hearth or oven.
AU 2107 Structure: timber: indeterminate (CG 2350, 2352, & 2353)	Posthole (not illustrated) and ?slot, dated Period 8 and sealed/cut by Phase 2 activity. The slot (CG 2352) was truncated to north and south and horizontally. It was 0.60m deep, broad (1.40m) and had steeply sloping sides and a flattish U-shaped profile. The primary fills comprised horizontally banded sand and soil layers with a single rubbly (limestone and sandstone, some burnt) deposit at its base. Daub was recovered throughout.	Pottery (5, av wt 29g, moderate abrasion, all residual Roman). Bone fragments (32), tile (3), fired clay (38, inc 36 daub and 2 frags furnace lining), smelting slag (0.43kg).	?Structural remains to east of yard (AU 2105). Daub, furnace lining fragments, and burnt stones in base of ?slot probably relate to an industrial structure – ?demolished hearth/furnace. The ?slot is similar to Phase 3 ironworking related structure (AU 2132). Smithing waste was recorded on site in the upper fill although this does not appear to have been sampled.
AU 2108 Disposal: ?ditch: drain (CG 2414)	Heavily truncated feature, possibly east to west aligned. V-shaped in profile with single fill.	Pottery 21 (av wt 7.38g, very high abrasion, all residual Roman). Bone fragments (14), tile (4), tap slag (0.114kg).	?Drainage or boundary ditch. Fill incorporates residual or secondary material.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2109 Structure: timber with associated hearth/oven: indeterminate (CG 2387, 2388, 2389, 2390, 2391, & 2392)	Fired clay structure, basically sub-circular in plan. Two surfaces were identified, one clearly replacing the other. Limestone and pebble were set into the very compact and highly fired earlier surface but not present in the later one. Two postholes and a shallow slot appear to be contemporary and are considered part of the structure.	Pottery (7, av wt 9.14g, very high abrasion, dated Period 8). Bone fragments (6), tile (2), limestone (2 unworked frags).	Oven or hearth and associated timber structure – ?covering it. Function unclear.
Period 8 Phase 2			
AU 2110 Movement zone: soils: ground surface and ?landscaping (CG 2222, 2236, & 2263)	Deposits sealing most of Phase 1 ground surface (AU 2091) and activity at the west end of the site. Comprising a number of different depositions, most of which were lightly flecked with ash/lime and charcoal. Generally 0.05–0.15m thick but thicker to east (0.35m) where it may include some earlier Period 6 or 7 material. Much of the western and central area was either sealed or cut by Phase 2 activity. The remainder (east and north) was cut by later Period 8 and early Period 9 activity, and was not sealed until Period 9 Phase 2.	Pottery (242, av wt 14.8g, average abrasion, dated Period 8/9). Bone fragments (1259), fired clay (3, all daub), iron objects (18, inc 7 nails, 1 blade and tang, 1 nail with ?hinge, 1 ?hinge, 1 ring tang – Crummy, Section 7.13), tap slag (4.563kg), smelting slag (0.742kg), smelting slag (2.553kg), hearth bottom (1.844kg), copper alloy (6, inc 1 fitting, 1 offcut, 1 sheet fragment – Crummy, Section 7.13), glass (2, 1 window, 1 bead, flint (1).	Soils dumped at west end of site, sealing Phase 1 activity. Form base for Phase 2 and later activity. Where not sealed or cut by Phase 2 and later activity forms ground surface into Period 9. These latter areas had later dated assemblages than those which were sealed. May have derived partly from the upcast from a newly excavated pit (AU 2115) thus incorporating residual material, but also included trampled material (?industrial debris and secondary deposition of domestic waste).
AU 2111 Movement zone: soils: ground surface (CG 2286, 2289, & 2308)	Deposits in the central area of the site, overlying elements of Phase 1 activity and overlain/cut by Phase 2 activity. Generally homogenous except in area of a Phase 2 hearth/oven (AU 2120) where fired clay (hearth/oven lining and daub fragments) was present. 0.05–0.15m thick being thinnest over Phase 1 yard (AU 2100). Largely sealed/cut by Phase 3 and later activity.	Pottery (7, av wt 11.39g, very high abrasion, dated Period 8). Bone fragments (1077), tile (2), fired clay (10, inc 6 frags of 'furnace lining' and 4 daub), tap slag (0.448kg), smelting slag (0.626kg), smelting slag (1.584kg), hearth bottom (3.03kg), shale ring, spindle whorl frag, worked bone.	Soils which where not sealed/cut by Phase 2 activity formed the ground surface in the central area of the site. May in part have derived from the upcast from newly excavated pits (AU 2119) but also incorporated trampled material (?industrial debris and secondary deposition of domestic waste across it).
AU 2112 Movement zone: dumped soils: ground surface (CG 2329 & 2330)	Dump of material, 0.10–0.15m thick, with compact sandy gravel element at surface. Overlies Phase 1 activity (AU 2105 & 2106) and is cut by Phase 2 activity (AU 2122). Sealed by Phase 3 activity (AU 2130).	Pottery (18, av wt 3.17g, very high abrasion, dated Period 8). Bone fragments (>100), brick and tile (3), tap slag (0.483kg).	Dump of soil (?pit digging upcast) forming ground surface. Trampling has incorporated secondary deposited domestic refuse.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2113 Movement zone: soils: ground surface (CG 2389, 2400, 2401, & 2415)	Charcoal flecked soils, 0.05m thick, overlying the southern part of the Phase 1 ground surface (AU 2093), and cut by the shallow construction cut of a Phase 2 hearth/oven (AU 2124). In the area west of the hearth/oven the soils were heavily flecked with charcoal, compact and included fired clay fragments, mortar, sand, and mudstone. These soils were cut and partly sealed by Phase 3 activity.	Pottery (14, av wt 5.93g, moderate abrasion, dated Period 8). Bone fragments (15), tile (1), tap slag (0.033kg), smithing slag (0.728). AU 2124.	Dump of soils forming a ground surface. Heavily trampled and incorporating debris from use and subsequent demolition of contemporary hearth/oven AU 2124.
AU 2114 Disposal: dump: indeterminate (CG 2283)	Dump of limestone slabs overlying the fill on the south limit of a Phase 1 feature (AU 2098). East to west aligned with a short 'return' to the north. Some slabs appeared worn while others may have been worked. There was no visible cut.	None.	Enigmatic. These may represent a sill wall for a timber structure lying mainly beyond the limits of the excavation. However, their location above the rather 'sticky' fills of a substantial feature below would be unusual for a foundation since they would be potentially subject to severe slumping and none was observed. They could form a path lying to the north of Phase 2 surfaces and structural activity (AU 2116 and 2117), but the apparent 'return' does not fit easily within this idea. They may simply represent an attempt at consolidating part of the area above the backfilled feature below although if that is the case it is somewhat unusual that they are limited to such a distinct area.
AU 2115 Disposal: pit: rubbish & industrial waste (CG 2221)	Substantial, sub-circular pit, 2.5m in diameter and over 1.00m deep. Not fully excavated. Cut the Phase 2 ground surface (AU 2110). Fills were banded and contained a large material assemblage.	Pottery (362, av wt 17.97g, dated Period 8). Bone fragments (1564, inc butchered bone), tile (4), fired clay (18, 15 daub and 3 furnace lining), iron objects (2, inc 1 nail), tap slag (3.316kg), smelting slag (4.180kg), smithing slag (0.883kg), hearth bottom (0.352kg), copper alloy (2, ring and object), stone (1, architectural fragment).	Rubbish pit containing both primary and secondary domestic refuse (especially animal bone). Also included industrial waste from ironworking, although this may be a secondary deposition.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2116 Production area: surfaces and spreads (CG 2227 & 2228)	Series of surfaces and spreads of varying composition at the west end of the site, overlying elements of the Phase 2 soils (AU 2110). Cut by Phase 2 structural activity (AU 2117) and probably associated with hearths/floors to the west (AU 2118). Comprised two main areas. Firstly, to the north, an extensive area of burnt silty clay with spreads of charcoal, burnt clay, and mortar, 0.05–0.10m thick. This had a distinct northern edge which coincided with the northernmost elements of the associated structural activity. To the south and west, was a patchy spread of mixed rubble (limestone, pebble, and iron slag) with a distinct east limit.	Pottery (595, av wt 9.90g, average abrasion, dated Period 8/9). Bone fragments (3865), brick and tile (27, inc 20 roof tiles), fired clay (39, inc 13 daub), iron objects (10, inc 5 nails and a blade – Crummy, Section 7.13), tap slag (32.625kg), smelting slag (14.516kg), smelting slag (3.387kg), hearth bottom (2.568kg), copper alloy (1, ?hooked tag – unfinished – Crummy, Section 7.13), whetstones (3), quern fragment (1), spindle whorl (1), lias slabs (7 – Roe, Section 7.24).	Spreads and dumps relating to industrial activity. The burnt spread may result from a structural fire or represent a working surface of some kind; however, it was not sufficiently compact for heavy usage. The rubbly material appears to be largely industrial waste but includes some domestic rubbish (?secondary deposition – pottery, bone, quern, spindle whorl) and possibly demolition debris (tile and stone). The obvious association is with ironworking with both smelting and smithing slags present in significant volumes (see also AU 2118). The presence of whetstones may also relate to ironworking. It may also have functioned as a rough yard area created by a series of consolidating dumps of rubbly debris.
AU 2117 Structure/s: timber: indeterminate (?industrial) (CG 2248, 2259, 2260, 2529, 2531, & 2533)	Group of structural features associated with, and cutting, Phase 2 surfaces and spreads (AU 2116 & AU 2118). No evident form to the structures though two objects (5, inc staple – Crummy, Section 7.13), tap slag (5.205kg), smithing slag (0.053kg), copper alloy (2, small pin and lace end – Crummy, Section 7.13), limestone (1 frag), worked bone (2, comb frag and bobbin).	Pottery (87, av wt 8.39g, high abrasion dated Period 8/9). Bone fragments (>785), tile (1), fired clay (17, all daub), iron objects (5, inc staple – Crummy, Section 7.13), tap slag (5.205kg), smithing slag (0.053kg), copper alloy (2, small pin and lace end – Crummy, Section 7.13), limestone (1 frag), worked bone (2, comb frag and bobbin).	Structural elements, probably representing several structures, associated with contemporary surfaces and spreads. Probably industrial timber structures (?shelters, supports, racks, or specialist structures associated with industrial processes). Some rebuild/addition may be evidenced in the Phase 3 indeterminate structure (AU 2127).
AU 2118 Production: hearths/floors: ?ironworking (CG 2237 & 2250)	Two highly fired laminar clay surfaces (CG 2237 & 2250), that to the north having cobble and limestone slab set into its surface. ⁷ These were overlaid with a series of associated ash and charcoal rich skims (AU 2227).	Pot (18, dated Period 8, av wt 6.06g, very high abrasion). Bone fragments (109 – highly fragmented), fired clay (20, all daub), iron objects (1), lead obj (1). Archaeomagnetic dating on the fired clay surfaces produced in the first half of the 13th century – CG 2237 cal AD 1105–1210 and CG 2250 cal AD 1165–1275 (Linford, Section 7.34).	Hearths/floors possibly associated with ironworking. The stone slab and cobble may function to maintain heat within the hearth or make the surface more long lasting. The material assemblage is primarily considered to represent heavily fragmented secondary deposited and possibly trampled domestic rubbish.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2119 Disposal: pits, hollows, secondary usage: rubbish and cess (CG 2293, 2347, 2364, 2473, & 2491)	Secondary usage of a Phase 1 pit (CG 2346; AU 2102) and four newly excavated features. The latter had suffered varying degree of truncation. Several cut Phase 2 ground surface (AU 2110), others are isolated through truncation but are cut by Phase 3 and later activity. The cut features varied, comprising a very substantial pit (CG 2364) with a large material assemblage, a similarly filled but smaller feature (CG 2491), a pit with a fairly sterile fill (CG 2473), and a large shallow hollow (CG 2293).	Pottery (359, av wt 13.62g, dated Period 8/9). Bone fragments (>825), tile (10), iron objects (17, inc 5 nails), tap slag (2.971kg), smelting slag (0.528kg), smithing slag (2.778kg), rotary quern (1).	Disposal area concentrating to south side of site, but also including a hollow to the north (origin unclear?) backfilled with secondary rubbish probably derived from the surrounding area. The pits appear to have various fills, the largest to the south side of the site clearly being a domestic waste pit containing an element of primary rubbish (CG 2364). Others though containing rubbish (?secondary deposition) are relatively sterile and may represent cess or other organic waste pits or pits excavated for soil (?for use in earthen floors or for infilling and levelling elsewhere). The secondary fill backfilling the Phase 1 pit also appeared to only contain a small volume of secondary deposited material and its main function was probably to backfill and sterilise the primary cess deposit below.
AU 2120 Production area: hearth and associated waste: indeterminate (CG 2287 & 2288)	Heavily truncated (vertically and horizontally) fired sandy clay surface. 0.05m thick and at least 4.00m × 1.5m in area. Above and to either side of this was an accumulation of thin smears no more than 0.05m thick in total. These smears comprised charcoal and ash with soily patches of compacted material with fired clay inclusions. This sat in a shallow depression within the Phase 2 ground surface (AU 2111) and was overlain by Phase 3 activity.	Pottery (2, av wt 26g, very high abrasion, dated Period 8). Bone fragments (65). Archaeomagnetic dating – cal AD 1100–1165 from CG 2287 (Linford, Section 7.34).	Hearth or oven base with use or demolition deposits above and around it. There was no clear evidence of the function of this hearth/oven; however, a Phase 3 hearth, which lay slightly to the east (AU 2129), had similar dimensions and was associated with ironworking and thus suggesting a possible use for this structure.
AU 2121 Movement zone: surface and industrial waste scatter: ground surface (CG 2309 & 2310)	Thin spread of ironworking waste comprising hammerscale and small slag fragments sealed beneath a compacted dump of gravel and slag. Overlay Phase 2 deposited soils (AU 2111) and was overlain by Phase 3 activity.	Bone fragments (26), iron objects (2), smithing slag (0.062kg).	Waste spread from nearby ironworking, sealed by a dump of gravel and ironworking waste which formed part of the Phase 2 ground surface and became compacted as a result.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2122 Structure: timber: indeterminate (CG 2294, 2331, & 2332)	Two postholes and a north-west to south-east aligned slot, 1.00m long, truncated to the north and having a square butt-end to the south. These cut the Phase 2 ground surface (AU 2111 and 2112) and were sealed by Phase 3 activity.	Pottery (5, av wt 3.8g, high abrasion). Bone fragments (80), tap slag (0.048kg), smithing slag 0.112kg.	Indeterminate timber structure. Form and function unknown.
AU 2123 Disposal: pit: cess and rubbish (CG 2419)	Isolated, remnant of horizontally and vertically truncated pit. Cut by later Period 8 pit (2135) and dated by ceramics to this period. Only partially excavated but at least 1.00m deep.	Pottery (20, av wt 8.3g, dated Period 8). Bone fragments (6), fired clay (1, daub), tap slag (0.146kg), smithing slag (0.05kg), stone tile (1), window glass (1).	Pit, probably organic waste or cess pit but also containing secondary deposited domestic refuse and a small quantity of industrial waste.
AU 2124 Production area: hearth/oven: indeterminate (CG 2393 & 2403)	Compact, highly fired clay surface, having a well-defined west limit but otherwise irregular or truncated at edges. This overlaid the Phase 1 hearth/oven (AU 2109). To the west of this was an associated charcoal rich, iron stained ridge of soil limited to west by truncation.	Smithing slag (0.022kg).	Oven or hearth and associated debris. Clearly a rebuild of the Phase 1 oven/hearth (AU 2109).
AU 2227 Movement zone: spreads/dumps: ground surface/floors (CG 2238, 2251, 2252, 2253, 2254, & 2255; not illustrated)	Series of thin skims of soil, mostly rich in ash and charcoal overlying hearths/floors (AU 2118) and cut to east by elements of structure (AU 2117).	Pottery (88, dated Period 8, av wt 5.27, very high abrasion). Bone fragments (927), Fe (38, inc 34 oddities possibly related to carding and 2 nails – Crummy, Section 7,13), tap slag (0.244kg), smithing slag (0.196kg), lead slag (1), tile (1), fired clay (11, all daub), spindle whorl fragment (1), flint (1).	Spreads or dumps derived from use of broadly contemporary hearth (AU 2118) – possibly representative of last use. Subsequently formed ground surface.
Period 8 Phase 3		Pottery (197, dated Period 8/9). Bone fragments (824), brick and tile (4), fired clay (5, inc 1 daub), iron objects (28, inc 4 nails, a blade and tang, ?loop handled shears – Crummy, Section 7,13), tap slag (3.754kg), smelting slag (1.434kg), smithing slag (1.442kg), copper alloy (2, belt fitting and an offcut), window glass (1).	Continuing use of earlier ground surface with repairs/infilling of hollows to/in earlier surfaces or merely waste dumps resulting from continuing (from Phase 2) ironworking activity (iron slags and objects). Also general domestic rubbish (?secondary deposition). At the far west end may represent debris from demolition and levelling of an element of Phase 2 structural activity (AU 2117) prior to a partial rebuild or repair (AU 2127).
AU 2125 Movement zone: dumps and continued use: ground surface (CG 2239, 2240, 2241, 2261, 2534, & 2535)	Ground surface comprising Phase 2 ground surface and yards (AU 2110 and AU 2116) overlain in places by newly deposited dumps and associated soils of varying composition and compaction. The latter filled in some hollows in the earlier ground surface and was concentrated towards the west end of the site. Cut by Phase 3 structural activity (AU 2127). At the far west end these comprised an accumulation of deposits approximately 0.30m thick, including a spread of mixed material (ash/lime, charcoal, pebble, fired clay, and slag) and two spreads of burnt soil. Elements of these dumps were not sealed until Period 9.		

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2126 Movement zone: dumps and continued use: ground surface (CG 2290, 2295, 2296, 2297, & 2311)	Ground surface comprising Phase 2 ground surface (AU 2111, 2112, & 2113) overlain in the central part of the site by newly deposited soils. The latter were 0.05–0.15m thick and gravelly in places. Significant iron smithing content (smithing slag, hearth bottom, hammerscale, and iron objects) in the central part of this deposit. Smelting slags concentrate to the west. Overlain and cut by Phase 3 activity.	Pottery (368, av wt 11.09g, very high abrasion, dated Period 8). Bone fragments (>1000), brick and tile (6), iron objects (18, inc 2 nails, barb-spring padlock bolt fragment, blade – Crummy, Section 7.13), tap slag (0.921kg), smelting slag (0.644kg), smithing slag (3.722kg), hearth bottom (1.158kg), hammerscale (>2000), spindle whorl, lead object.	Continuing use of the earlier ground surface overlain in part by a series of dumped deposits probably deriving from pit digging activity (upcast from AU 2132 and AU 2133). However, also further trampled accumulation of material, including substantial quantity of ironworking waste (McDonnell and Swiss, Section 7.9). Also incorporates domestic refuse (secondary deposition).
AU 2127 Structure: timber and floor surface: indeterminate (CG 2242, 2243, 2244, 2262, & 2537)	Structure comprising north to south aligned slot, butt-ending to north and also three postholes, one of which was ill-defined but appeared to have a recut. Two of the postholes cut a compact mortar flecked floor surface. This surface overlay part of the Phase 3 ground surface (AU 2125) which is felt in this part of the site to have derived from the demolition of a Phase 2 timber structure (AU 2117). This structural activity was itself overlain and cut by further structural activity in Phase 4 (AU 2135).	Pottery (82, av wt 3.5g, very high abrasion, dated Period 8). Bone fragments (>425), iron objects (3, inc ?barb-spring padlock bolt – Crummy, Section 7.13), tap slag (2.796kg), smelting slag (1.46kg).	Timber structure at west end of site probably representing a partial rebuild or repair of part of the earlier structural activity at this end of the site (Phase 2; Section 7.11.7). A further partial rebuild or repair occurs in Phase 4 (AU 2135).

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2128 Production area: oven: bread (CG 2298, 2299, 2300, 2301, 2303, 2304, & 2305) Figure 66	Oven comprising a flue/stokehole, a raking-out pit and a sub-circular baking floor set into a shallow hollow in the Phase 3 ground surface (AU 2126). Constructed of highly fired clay with pebbles set into the baking floor. Elements of the clay walls survived on the north side of the flue/stokehole and around the edge of the baking floor which probably had a domed superstructure. The baking floor had been resurfaced on two occasions, with thin smears of ash and charcoal separating the earlier surfaces from their replacements. The raking-out pit had also been refurbished, having a deposit of charcoal, ash, and charred seed lying in the initial pit which was sealed by a later fired clay surface sitting in a hollow. The whole structure was covered in a deposit of ash and charcoal and was overlain by Phase 4 demolition deposits (AU 2137).	Pottery (12, av wt 6.83g, high abrasion, dated Period 8). Bone fragments (188), fired clay (23), tap slag (0.224kg), smithing slag (0.034kg), limestone fragments (14, inc 1 tile). Archaeomagnetic dating (Linford, Section 7.34) indicated later Period 8 date (CG 2300, oven floor, cal AD 1125–1210; CG 2303, oven floor replacement, cal AD 1175–1260).	Oven, probably with domed superstructure. Resurfacings of baking floor indicate considerable period or intensity of use. Pebbles suggest that heat retention was a necessary function during use. Fired material was probably inserted from the flue/stokehole into the baking area to heat it and then raked out prior to use. The presence of charred cereal and a little chaff suggests that this may have been a bread making or corn drying oven. Although quantities of these were small this may merely be due to efficient use and cleaning of the oven.
AU 2129 Production area: hearth: ironworking (CG 2312 & 2313) Figure 68	Hearth comprising sandstone blocks and pebbles and a few slabs of limestone bonded with a highly fired sandy clay. The latter also formed the base of the hearth. A number of loose blocks of sandstone were scattered to the north of the structure. To the east and butting against the structure was a spread of sand and charcoal containing ironworking waste. This was set into the Phase 3 ground surface (AU 2126) and was overlain by Phase 4 demolition deposits (AU 2140).	Pottery (97, av wt 5.38g, dated Period 8/9). Bone fragments (>290), iron objects (13, mainly wire fragments), tap slag (0.28kg), smithing slag (1.012kg), copper alloy (1). Archaeomagnetic dating (Linford, Section 7.34) indicated later Period 8 date (CG 2312, hearth surface, cal AD 1210–70)	Hearth and associated debris accumulated against it. The ironworking material within the associated debris indicates that this was an industrial hearth, probably used for smithing of iron and also for production of finished iron objects. This is supported by the presence to the north-east of a substantial dump of waste material (AU 2130) and an associated structure (AU 2131) both containing large volumes of smithing waste and iron objects. Pottery and bone included in the material accumulated against the west side of the hearth probably represents domestic refuse (? secondary deposition) trampled around a much used working area.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2130 Disposal: waste scatter; ironworking (CG 2333 & 2334)	Accumulation, 0.20–0.30m deep, thickening to the west and comprising a spread of pebbly soil, overlain by distinctive deposits of charcoal, hammerscale, and sand. These deposits were mixed to the east but to the west were distinctively horizontally banded with charcoal and hammerscale spreads interspersed with layers of sand. These were sealed by a deposit of mixed soil, charcoal, and ironworking waste. This deposit overlay the Phase 2 ground surface (AU 2112) and was cut by a clearly associated feature (AU 2131). Phase 4 deposits and activity overlay or cut this waste material.	Pottery (34, av wt 8.23g, high abrasion, dated Period 8). Bone fragments (>580, brick and tile (1), iron objects (109, largely shafts and fragments but inc hobnails – Crummy, Section 7.13), tap slag (0.013kg), smithing slag (7.391kg), hearth bottom (1.534kg), hammerscale (>3500), shale (1, perforated fragment).	Ironworking waste. The presence of hammerscale, smithing waste and hearth bottom are all characteristic of smithing (McDonnell and Swiss, Section 7.9). The large number of iron objects, especially nails (in this AU and in AU 2131) indicates production of finished articles was also occurring. The nature (laminar and thickening to the west) of the deposits indicates that working was occurring in and around the contemporary hearth (AU 2129). The laminar nature may result from a series of cleaning out activities following distinct phases in the production process. The bone and pottery indicate that other refuse (secondary deposited domestic rubbish) was also being discarded in this area.
AU 2131 Structure: indeterminate: ?industrial (CG 2339)	Sloping-sided, flat bottomed, and apparently linear feature, aligned north to south. Limited to north by excavation limit and truncated to south. Fill was distinctive because of the high volume of smithing waste and iron objects within it. Cuts the Phase 3 industrial waste dumps (AU 2130) but is clearly associated with the ironworking activity. Overlain by Phase 4 activity (AU 2138).	Pottery (336, av wt 5.3g, very high abrasion, dated Period 8). Bone fragments (>745), tile (1), iron objects (118, inc c 70 nails – Crummy, Section 7.13), tap slag (0.375kg), smithing slag (9.763kg), hearth bottom (0.994kg), copper slag (1), window glass (1).	Structure of indeterminate nature associated with ironworking activity. Possibly timber lined – ?bank or trough for quenching. Fill contained material associated with smithing of iron and a large number of finished items, mainly nails. Also incorporated a fairly large quantity of bone fragments and highly abraded and fragmentary pottery. These probably result from disposal of domestic rubbish (secondary deposited) in a location generally recognised as a disposal area.
AU 2132 Disposal: pit and secondary usage: waste (CG 2314 & 2348)	Shallow (0.60m) backfilled pit cutting Phase 3 ground surface (AU 2126), and a backfilled slumped area over an earlier cess pit and its fills (see AU 2102, cess pit slag (0.96kg), smithing slag (3.42kg), CG 2346 & AU 2119, secondary usage CG hearth bottom (0.996kg), copper slag (1), painted glass (1).	Pottery (25, dated Period 8). Bone fragments (330), tile (8), iron objects (6, inc 2 nails), tap slag (0.432kg), smelting slag (0.96kg), smithing slag (3.42kg), CG hearth bottom (0.996kg), copper slag (1), painted glass (1).	Disposal of refuse to fill a shallow pit (?quarry hollow) and a slumped area over an earlier pit. Refuse included ironworking waste especially in the filling over the shump which was nearest to the ironworking hearth (AU 2129) and waste spreads (AU 2130). Also included secondary deposited domestic refuse.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2133 Disposal pits: rubbish/cess (CG 2359, 2368, & 2474)	Three pits cutting Phase 2 features (AU 2119). The two to the south were substantial features, one of which was only partially excavated and the other was only observed in section. The latter had a tipping and banded fill with charcoal lenses which was noted during excavation to have the appearance of cess. Both were truncated by Period 9 activity. The more northerly pit was sub-circular in plan, 1.20m deep, and had a primary fill sealed by a 0.60m deep dump of gravel. This was sealed with a further fill dated to Phase 4 (AU 2136).	Pottery (149, av wt 13.74, low abrasion, dated Period 8). Bone fragments (>490), tile (8), iron objects (4, inc 2 nails), tap slag (0.529kg), smithing slag (0.208kg), coprolite (1), shale (1, worked fragment).	Two rubbish pits containing domestic refuse and organic waste. The third pit was only observed in section. The latter may have been a cess pit since artefacts were not observed and a sandy dump sealed the slumped lower deposits which 'appeared' cessy.
AU 2134 Structure: timber and internal surface: indeterminate (CG 2394, 2395, 2396, 2402, 2404, 2405, 2406, 2407, 2410, 2397, 2398, 2416, & 2417)	Structural evidence comprising a number of elements: two postholes situated at either end of a well-defined, flat-based slot, aligned north to south and having a stakehole in its base. The slot was cut into an earlier fired clay oven/hearth (AU 2124). The southerly posthole was substantial, having a large post pit and distinct post pipe (1.30m deep) with a flat base. The postholes and the slot, together with a further shallow posthole to the north limited a dump of compacted charcoal and fired clay flecked soil lying to the west. This was cut by a small stakehole and overlain by a shallow hollow filled with a number of shallow deposits including to the base a stony one, and overlying that, one rich in charcoal and ironworking debris. These deposits lapped slightly over the structural elements along their east side but are considered broadly contemporary since they did not seal them and all were sealed or cut by Phase 4 activity. To the east were two small, heavily truncated, possibly linear structural features which are considered to be associated with the other structural activity.	Pottery (46, av wt 10.96g, dated Period 8). Bone fragments (99), brick and tile (10, 7 tile), iron objects (4, inc needle), tap slag (0.562kg), smithing slag (0.522kg), hearth bottom (0.616kg), hammerscale (1000+).	Timber structure, having a distinct east wall comprising three postholes and a wall (hurdle supported by posts) along with a number of lesser structural features (possibly supporting struts or internal elements). These cut and limited a series of compacted deposits considered to represent trampled floors and debris accumulated on them. The lowest of these may represent demolition debris from the oven/hearth. Truncation to the west has removed any evidence of overall form for the structure. No clear evidence of function was present and the material assemblage is considered to represent secondary deposition of domestic refuse and also some industrial waste from the ironworking activity to the west.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8 Phase 4			
AU 2135 Structure: timber and internal surface: indeterminate (CG 2245, 2256, 2565, 2566, 2567, & 2568)	A soil layer sealed the south part of a Phase 3 structure (AU 2127) and formed the base for a surface (floor) of crushed green limestone to the south of which was a fired clay surface. Elements of an associated timber structure survived in the form of five postholes and an east to west aligned slot. The latter was probably structural, but may represent an internal drainage gully. All features had been backfilled and were cut or overlaid by Period 9 activity.	Pottery (158, av wt 2.87g, dated Period 8/9). Bone fragments (>750), tile (3), fired clay (1), iron objects (23, inc 3 nails and a ?staple), tap slag (1.799kg), smithing slag (0.277kg). Archaeomagnetic dating indicated later Period 8 (CG 2565, fired clay surface, cal AD 1160–1290 – Linford, Section 7.34).	Rebuild or repair of Phase 3 structure (AU 2129). No form evident due to site limits and truncation, however probably represents a domestic building on the street frontage. Timber built with stone floor and an internal hearth or oven.
AU 2136 Disposal: pits: rubbish and industrial waste (CG 2335, 2355, 2465, & 2475)	Three extensively truncated pits, cutting Phase 3 activity. Variable in size and content but little of note except fired clay and charcoal debris in CG 2335. Cut or overlain by Period 9 activity. Also secondary usage of a Phase 3 pit (CG 2474; AU 2133).	Pottery (119, av wt 11.35g, dated Period 8/9). Bone fragments (>340), iron objects (11, inc socketed weapon), tap slag (0.048kg), smithing slag (0.938kg), lead object (1).	Disposal area mainly for secondary deposited domestic refuse but some ironworking waste was also present. One pit (CG 2335) contained elements of primary domestic refuse. They may also to a degree have functioned as organic waste or cess pits.
AU 2137 Production area: oven: demolition (CG 2302, 2306, 2307, & 2470)	Debris overlying Phase 3 oven (AU 2129). Comprised spreads of pebbly, charcoal flecked soils with fired clay inclusions overlaid by a dump of soil.	Pottery (59, av wt 14.61g, high abrasion, dated Period 8). Bone fragments (314), fired clay (26, all daub), iron objects (3), tap slag (0.28kg), smithing slag (0.113kg), glass bead (1).	Demolition debris from demolition, or possibly collapse following disuse, of oven. Includes some domestic refuse (?secondary deposition).
AU 2138 Movement zone: dumps: ground surface (CG 2315 & 2340)	Dumps of soil, 0.10–0.30m thick, overlying Phase 3 activity and butting up against the Phase 3 hearth (AU 2129). Cut by Phase 4 pits (AU 2139) and Period 9 activity.	Pottery (161, av wt 11.96g, dated Period 8/9). Bone fragments (>500), tile (2), iron objects (4), tap slag (0.758kg), smithing slag (0.790kg), copper alloy (1, balance fitting).	Dumps of soil, probably in part deriving from pit excavation (upcast from AU 2139) but also secondary deposited domestic and industrial waste trampled in through use a ground surface.
AU 2139 Disposal: pits: domestic and industrial waste (CG 2344 & 2345)	Two pits, cutting Phase 4 ground surface (AU 2138) which may in part derive from their upcast. Both were truncated. Only west side survived of one and the north part of the other lay beyond the limits of the excavation. Finds were more numerous in the more northerly pit (CG 2345), but were very fragmentary.	Pottery (54, 9.11g, very high abrasion, dated Period 8). Bone fragments (413), iron objects (1), tap slag (1.543kg), smithing slag (0.248kg), hearth bottom (0.562kg).	Pits containing both industrial and domestic waste (secondary deposited material?). Possibly also cess/organic waste pits.
AU 2140 Production: hearth: demolition (2492)	Large (4.30m × 3.00m), but relatively shallow (0.46m), sub-square pit with blocks of sandstone in its fill. Area coincides with Phase 3 hearth (AU 2129) which it truncates. Overlain and cut by Period 9 activity.	Pottery (42, dated Period 8/9). Bone fragments (120, tile (4), iron objects (2, inc strip hinge), tap slag (0.09kg), rotary quern (1).	Robbing and demolition of hearth structure (AU 2129). Fill includes elements of demolished structure and ?secondary deposited domestic waste.

Table 13 (cont.) Site 2 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2141 Disposal: pit: indeterminate (CG 2411, not illustrated)	Remnant of a pit, cutting a Phase 3 structure (AU 2134). Backfill not distinctive and sealed by further Phase 4 activity (AU 2142).	Pottery (29, av wt 8.9g, very high abrasion, dated Period 8). Bone fragments (59), brick and tile (2), iron objects (1, a nail), smithing slag (0.13kg), hearth bottom (0.286kg).	Limited survival and only partial excavation render interpretation problematic but presumably fulfilled a disposal or extractive function.
AU 2142 Movement zone: dumps: ground surface (CG 2399, 2408, 2412, & 2418)	Dump of cess rich material backfilling a Phase 3 posthole (part of AU 2134) and further soils sealing the Phase 3 structure of which that posthole formed an element. Largely limited by edges of excavation and later truncation. Cut by a Phase 4 pit (AU 2134) 0.10–0.15m thick, including crushed sandstone fragments and burnt limestone slabs.	Pottery (71, av wt 5.04 g, very high abrasion, dated Period 8). Bone fragments (132), iron objects (6, inc 3 nails), hammerscale (200+).	Dumps of soil, possibly derived from pit excavation (upcast from AU 2143). Formed part of the Phase 4 ground surface and also of the Period 9 ground surface.
AU 2143 Disposal: pits: cess (CG 2413 & 2421).	Two substantial pits, sub-oval in plan and 1.00m+ deep. The larger of the two cut the Phase 4 ground surface (AU 2142) and was not fully excavated. Only its west side survived owing to later truncation.	Pottery (84, av wt 10.17g, dated Period 8). Bone fragments (>295, inc 11 fish and 6 bird), tile (10), ceramic mould (1), iron objects (5, inc 1 nail), hammerscale (400+), lead object (1).	Pits, primarily cess/organic waste pits but also incorporating secondary deposition of domestic refuse.
AU 2144 Disposal: pit: rubbish (CG 2476 & 2477)	Substantial sub-oval pit with near vertical sides. 3.60m × 2.60m × 2.00+m (not excavated to base). Primary fill contained a significant material assemblage (Dalwood and Bryant, Section 4.5) sealed by a 0.20m thick dump of burnt clay. These had considerably slumped and were sealed by later secondary deposits infilling the pit (see AU 2147).	Pottery (1411, dated first half 13th century, av wt 24.41g, very low abrasion but many sherd were badly burnt and distorted). Bone fragments (1057), fired clay (1), brick and tile (14, inc 9 tile), iron objects (54, inc 21 nails, 1 needle, 1 curved sheet – Crummy, Section 7.13), tap slag (10.727kg), smithing slag (2.735kg), furnace lining (1), stone (1, has).	Rubbish pit with primary deposit and sealing layer. The material assemblage from this pit, especially the pottery, suggests that it represents a primary dump of material resulting from a house/ kitchen fire (Dalwood and Bryant, Section 4.5 & Bryant, Section 7.3.4).

Table 14 Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 9: medieval, mid-13th to mid-15th centuries			
Period 9 Phase 1	<p>AU 2145 Movement zone: dumps and continued use ground surface (AU 2126 and CG 2257, 2383, & 2569)</p> <p>The Period 8 ground surface (AU 2126) continued in use across much of the site and was overlain at both the east and west ends of the site by newly deposited dumps. The westernmost dump was 0.15–0.22m deep, overlaid Period 8 activity (AU 2135), and was cut by Period 9 features (AU 2145). The east end dump was also overlain/cut by Period 9 Phase 1 activity (AU 2155, 2156, 2157). It was uneven in deposition and variable in content from east to west, thinning to the north and west but largely limited by truncation. The far west, central, and much of the eastern end of this remained in use into Phase 2 (AU 2159).</p>	<p>The material assemblage from the Period 8 soils has already been discussed (AU 2126). The newly deposited dumped material varied and is thus considered separately: West end, CG 2257 & CG 2269: Pottery (107, av wt 7.08g, dated Period 9). Bone fragments (206), brick (2), iron objects (10, 5 nails), tap slag (1.878kg). East end, CG 2383: Pottery (59, av wt 27.69g, low abrasion, dated Period 9). Bone fragments (230), tile (23), brick (1), fired clay (1), iron objects (1, nail), tap slag (0.326kg), smithing slag (0.170kg), lead (1, slag).</p>	<p>Continuing use of earlier ground surface with additions of dumped material. The dump to the west contained a relatively large volume of finds, probably representing secondary deposited and trampled domestic refuse relating to properties on the adjacent street frontage. To the east the relatively high average weight and low abrasion of pottery shreds and composition of material assemblage suggest that this is probably a primary waste deposit which has not been heavily trampled. The tile content suggests that building demolition material is included but otherwise this appears to be domestic refuse.</p>
AU 2146 Production area: structure and spreads: indeterminate (CG 2536, 2561, 2562, & 2709)	<p>Slot and recut, a shallow posthole, and burnt spreads of sandy material. These cut and overlay part of the Phase 1 ground surface (AU 2145) and were truncated by Phase 2 activity. The slot was east to west aligned with a rounded butt-end to east. Its western limit was not observed. Burnt material in fills links them to three spreads of heavily charcoal and ash flecked, sandy, burnt material to the east. The southerly part of these deposits had probably been burnt <i>in situ</i>, having a charcoal base and a distinct, lipped, western edge.</p>	<p>Pottery (197, av wt 7.94g, high abrasion, dated Period 9). Bone fragments (>820), brick (1), tile (2, inc tegula), fired clay (1, daub), iron objects (9, 3 nails), tap slag (3.346kg), smithing slag (0.270kg), hammerscale (>500), stone (1).</p>	<p>?Industrial activity. Structural elements were limited in scope and no building form was evident. The burnt nature of the associated spreads indicate that these may have formed the focus of activity. Beyond the association with burning no clear indication of the nature of this activity was present though iron smelting waste and hammerscale suggest a link with ironworking. However, this material is virtually ubiquitous in Period 8 and 9 deposits, and since there was not a significant quantity present this cannot be regarded as a reliable indicator of function. These spreads also included secondary deposited refuse indicating disposal as well as production.</p>

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2147 Disposal: pits, hollows and secondary fills: rubbish (CG 2444, 2458, 2459, 2471, 2490, 2530, & 2532)	Three pits (CG 2444, 2458, & 2459), three Pottery (311, av wt 17.28g, low abrasion, dated Period 9). Bone fragments (1594), tile (58, inc 1 stone), fired clay (2 daub), iron objects (21, inc 7 nails, 1 blade with rivet fittings), copper alloy (3, inc 1 ring, 1 jetton – dated ?13th to 16th centuries – Crummy, Section 7.13), tap slag (1.285kg), smelting slag (0.408kg), smithing slag (1.5kg), hearth bottom (0.720kg), stone (3), glass (13, 12 vessel, 1 slag, all in CG 2490).	Group of features all used for domestic waste disposal (both organic and non-organic). The generally high average weight and low abrasion of the pottery in some of the features suggests these may include primary depositions but overall the quantities are not great considering the overall volume of the features. The rubbish appears to be mainly domestic in origin and includes a considerable volume of animal bone. Only limited evidence of industrial activity was present except for ironworking waste, both smelting and smithing waste being present. These slags were, however, virtually ubiquitous in Periods 8 and 9 and the volume present suggests residuality or secondary deposition. The pits were probably excavated for a range of purposes including disposal of waste from nearby domestic buildings. The hollows may have initially functioned perhaps as soakaways or for extraction of soil but have subsequently been used for waste disposal.	
AU 2148 Boundary/disposal: ditch and fill (CG 2367)	Linear (east to west) feature, running for at least 8.50m along the south side of the site. Partially excavated. Limited to east and west by truncation and excavation limits, but clearly not extending far to west. V-shaped in profile with a slot in the base. 0.80–0.95m wide and 1.50m deep. Cuts Period 8 activity (AU 2118). Backfilled with finds rich material and then recut in Phase 2 (AU 2164).	Pottery (154, av wt 6.79g, dated Period 9). Bone fragments (>300), tile (12), iron objects (5, inc 3 nails), stone (1, roof tile), plaster (1).	Substantial ditch probably representing a boundary between properties but also functioning as a drain. Backfilled with secondary deposited domestic refuse but also with debris from demolition of a building. Recut in Phase 2 represents continuation of boundary.
AU 2149 Structure: timber: indeterminate (CG 2318 & 2493)	Two postholes, having no obvious associated activity. 0.24–0.33m deep. Fills contained pottery dated Period 9.	Pottery (59, av wt 17.9g, low abrasion, dated Period 9). Bone fragments (13), tile (2), fired clay (2, daub), iron objects (1, nail), tap slag (0.196kg), smithing slag (0.396), copper alloy (1), stone (3).	Remains of structure/s. Possibly associated with nearby cess pits (AU 2150) – fences, shelters, or ancillary structures.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2150 Disposal: pits: cess (CG 2317 & 2500)	Two deep (1.84m and 2.00m+), sub-rectangular, near vertical-sided pits in the central part of the site. Dated Period 9 and both containing a series of banded fills with tipping lines to centre resulting from slumping. One (CG 2500) had a distinct secondary fill in Phase 2 (AU 2166). Both pits contained considerable quantities of finds, especially the smaller pit (CG 2317).	Pottery (313, av wt 18.61g, dated Period 9). Bone fragments (1,117), tile (2), fired clay (1), iron objects (39, inc 17 nails, wire, horseshoe, rod – Crummy, Section 7.13), tap slag (1.902kg), smelting slag (0.746kg), smithing slag (1.291kg), stone (1, roof tile), glass (1, vessel).	Size and shape of the pits and the nature of bone assemblage (28 fish, 18 small mammal, 2 bird) indicate that these are primarily cess pits, particularly CG 2500 (distinctly banded fills including dumps of sandy material, relatively small volume of pottery). The feature had a distinct later phase of backfilling (AU 2166). Both pits also contained domestic refuse which in CG 2317 probably represents primary deposition. The ironworking waste probably represents residual or secondary material.
AU 2151 Movement zone/boundary: metalling: ?path/street (CG 2504)	Compacted surface, comprising iron slag and stone (limestone and sandstone). To the north this filled a shallow hollow and was partly bedded in sand. The slag make-up was graded to the north, having large slag to base but more fragmentary slag to the top. 0.20–0.25m thick, with a distinct and well-defined eastern limit. Otherwise limited by truncation (surviving extents 3.00m wide and 4.35m long). Probably ran north to south along the same line as the Period 8 boundary (AU 2103). Continued in use into Phase 2.	Pottery (59, av wt 9.59g, dated Period 9). Bone fragments (148), tile (7), brick (3), iron objects (1, nail), tap slag (9.688kg), smithing slag (1.360kg).	Metallic surface, well constructed and probably linear. Its apparent linearity and location suggest that it represents a path or street along the north to south boundary first identified in Period 8 (AU 2103) and forming the parish boundary between St Andrew's and St Swithun's. This could also have functioned as a rear access to properties ranged along Birdport.
AU 2152 Disposal: gullies: drainage? (CG 2337 & 2506)	Two features, dated Period 9 and cut/overlain by Phase 2 and later activity. Both were limited in extent by truncation but appeared to represent gullies (north to south aligned). Both were of similar width (c 1.00m) and depth (0.30m and 0.48m), and both had shallow U-shaped profiles, with sloping sides. Neither fill was distinct.	Pottery (34, av wt 7.47g, very high abrasion, dated Period 9). Bone fragments (185), tile (1), fired clay (4, daub), iron objects (1), smelting slag (0.388kg), smithing slag (1.802kg).	Features of indeterminate function and nature although they were probably for drainage. Possibly linked to the hearth/oven (AU 2152) which they flanked. Fills contained secondary deposited domestic refuse, the majority of which was within CG 2337.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2153 Production area: hearth/oven: indeterminate (CG 2336 & 2338)	Structure. Comprised of sandstone blocks enclosing a semi-circular area limited to the north by the edge of excavation. To the south were further sandstone blocks burnt on their north faces. The base of the structure comprised limestone flags. The stonework was set in fired clay and stone rubble infilled between the blocks and flags. The whole structure lay within a shallow hollow. To the south and clearly associated was a further hollow, this being filled with a compact, heavily charcoal flecked soil and limestone roof tiles. The structure cut Period 8 activity (AU 2130).	Pottery (2, av wt 16g, average abrasion, dated Period 8/9). Bone fragments (14, tiny charred fragments), tile (1, decorated ridge), fired clay (6, daub), stone (6, roof tiles), mortar. Archaeomagnetic dating – cal AD 1170–1550 from CG 2338 (Linford, Section 7.34).	Hearth or oven. Stone tiles, burnt loose sandstone blocks and daub fragments probably represent collapsed or demolished superstructure. Use for the oven or hearth was not evident owing to both paucity of material evidence and extensive truncation of the areas to the south and east which may have contained associated material or structures. However, charred animal bone may indicate a domestic use.
AU 2154 Disposal: secondary fills: rubbish (CG 2360 & 2478)	Secondary fills over slumped primary fills in two Period 8 pits (CG 2476, AU 2144; CG 2359, AU 2133). In the former of these the secondary fills comprised a series of fills probably deposited throughout Period 9 and which were subject to further slumping necessitating additional backfilling through into Period 10 (AU 2206).	Pottery (1770, av wt 9.37g, high abrasion, dated Period 9). Bone fragments (2328, 2144 & 2133) incorporating a large worked bone (1), brick and tile (65, inc 64 tile – 1 stone), fired clay (1), iron objects (82, inc 59 nails, 1 ferrule/lock, 1 strap-end, 1 barb-sprung padlock key, 1 folded strip, 1 strip frag, 1 dome-headed nail, 1 tongue-ended strap and rivet – Crummy, Section 7.13), tap slag (6.370kg), smelting slag (2.120kg), smelting slag (0.492kg), Cu alloy objects (6), coal (21), worked stone (1).	Backfilling of earlier rubbish pits (AU 2144 & 2133) incorporating a large volume of probably secondary deposited domestic rubbish possibly derived from surrounding area or representing redeposition of midden material from elsewhere.
AU 2155 Disposal: dumps: waste (CG 2522)	Five patches of ashy material, averaging 0.05m thick, overlying Phase 1 dumped deposits (AU 2153), and cut by Phase 1 structural activity (AU 2155).	Pottery (5, av wt 4.6g, very high abrasion). Bone fragments (76), smelting slag (0.5kg), hearth bottom (0.016kg).	Dumps of ashy waste from a fire. No association is clear although the hearth or oven (AU 2153) about 10m to the west may be the source.
AU 2156 Structure: timber: indeterminate (CG 2521 & 2523)	Timber structure. Comprised to the north, one large posthole, 0.80m deep and limestone packed; a north to south aligned, flat-based slot, 0.28m deep and limited by site extents and truncation; the west side of a heavily truncated, ?north to south linear feature and, to the south, three smaller postholes, 0.08–0.24m deep and sub-circular, two of which had limestone packing. Both linear features had ashy fills. These features cut other Phase 1 activity (AU 2155) and elements were sealed by Phase 2 activity.	Pottery (13, av wt 9.06g, high abrasion), Bone fragments (41), tile (6), fired clay (1), tap slag (0.198kg), smelting slag (1.06kg), smithing slag (0.304kg), glass (1, vessel), whetstone (1).	Timber structure of indeterminate form and uncertain function. Possibly associated with adjacent cess pit and ?barrel latrine (AU 2157) suggesting a potential domestic function.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2157 Disposal: pits: cess (CG 2422 & 2527)	Pit, truncated to south and 0.75m+ deep, and a small sub-circular pit, 0.30m deep. Both had cess rich fills and were dated Period 9.	Pottery (106, av wt 16.19g, dated Period 9). Bone fragments (420, inc 10 small mammal, 33 fish, 8 bird), tile (6), brick (6), fired clay (2), iron objects (12, inc 7 nails), tap slag (0.059kg), smithing slag (0.218kg), stone (2, limestone architectural fragments).	Cess pit and ?barrel latrine.
Period 9 Phase 2			
AU 2158 Movement zone: dumps/ accumulation: ground surface (CG 2538, 2539, 2540, & 2541)	Deposits of varying thickness (0.05-0.30m), generally thicker to the north. Spread across the west end of the site. Bounded by excavation limits and truncation. Rubbly to south-west and variable in content, especially to the north where distinct ashy and sandy lenses were present. Generally rich in finds. Overlays Phase 1 activity and either formed part of the Phase 3 ground surface (AU 2170) or was cut/overlain by Phase 2 and later activity.	Pottery (2,051, av wt 11.19g, very high abrasion, dated Period 9). Bone fragments (8,145), tile (33), brick (12), fired clay (12, daub), iron objects (149, inc 47 nails, horseshoe, horseshoe frag, wire, riveted hooked fitting, padlock key, strip frags, ?belt-plate frag, figure-of-eight shaped hasp, buckle loop frag – Crummy, Section 7.13), tap slag (45.88kg), smelting slag (8.18kg), smithing slag (2.624kg), hearth bottom (0.686kg), copper alloy (12, inc wire and sheet frags, ring, 2 coins – ?cut medieval farthing & residual Roman), stone (4, inc quern fragment and grinding stone – Roe, Section 7.24).	Dumped material accumulated at west end of site and forming Phase 2 and later ground surface. May derive in part from upcast from pit excavation (AU 2165 & 2166). Contained a large volume of domestic refuse and also of ironworking waste from both smelting and smithing. The material assemblage probably results from deposition of domestic and industrial refuse around a yard (AU 2161), ?within a back plot. The use of this area as a ground surface has resulted in trampling and turbation leading to the fragmentation and abrasion of the material assemblage.
AU 2159 Movement zone: dump and continuing use: ground surface (CG 2524)	Continuing use of Phase 1 ground surface (AU 2145) cut by Phase 2 activity and overlain by newly deposited dumped material. The latter included a small area of dumped material at the east end of the site. This thinned at its southern edge but otherwise was limited by edge of excavation and truncation. 0.15m max thickness. An extensive spread of newly deposited dumped material at the western end of the site is separately considered (AU 2158). The ground surface continued in use into Phase 3 (AU 2170).	Only newly deposited material CG 2524 is considered. Pottery (19, av wt 8.53g, low abrasion, dated Period 7). Bone fragments (181), tile (5), brick (1), iron objects (6, inc 1 nail), tap slag (0.482kg), smithing slag (0.564kg), lead object (1).	Ground surface with dump of soil at east end of site. The latter incorporates secondary deposited domestic refuse and may mostly derive from excavation of pits (upcast from AU 2169).

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2160 Structure: timber: indeterminate (CG 2552, 2554, 2563, & 2710)	Structure, comprising five postholes, a stakehole, and a group of intercutting features. The last group was north to south aligned and all the features were truncated to the west. These cut Phase 1 activity and the Phase 2 ground surface (AU 2158). They were cut/overlain by Phase 3 activity. The postholes were generally small (0.13–0.23m deep, 0.40m across max) but one was larger (0.50m deep) with a compact base and stone packing in its fill. The stakehole was 0.45m deep. The north to south aligned group of features probably represents a series of intercutting postholes, possibly linked by or set within a trench. These were 0.30–0.40m deep but one larger posthole was evident (0.90m deep).	Pottery (295, av wt 9.57g, high abrasion, dated Period 9. Bone fragments (1,124), tile (7), fired clay (22, daub), iron objects (6, inc 1 nail), tap slag (2.471kg), smithing slag (1.586kg), stone (5, lias slabs), worked bone (2).	Timber structure of indeterminate form and function, but probably fronting onto Birdport to the west. Ironworking waste in the fills and in the yard and ground surface to the east suggest a link with that activity. The relatively large volume of finds probably represents secondary deposited domestic refuse dumped into the features following demolition of the structure prior to Phase 3 activity.
AU 2161 Movement zone: metalling: yard (CG 2553)	Patchy cobbling overlying Phase 2 ground surface and cut by Phase 2 activity (AU 2160). 0.05m thick, comprising medium to large pebbles and some iron slag. Distinct northern edge and generally thinning to east but otherwise limited by truncation. Overlain (0.554kg), ceramic crucible (1). and cut by Phase 3 activity.	Pottery (222, av wt 10g, very high abrasion, dated Period 9). Bone fragments (619), tile (6), brick (2), fired clay (4, daub), iron objects (14, inc 7 nails, key, plate with nail, strip and rivet holes), tap slag (1.38kg), smithing slag	Yard lying to east of contemporary structure (AU 2160). Patchiness and absence centrally probably result from wear – note, Phase 3 resurfacing (AU 2170). Material assemblage largely represents domestic refuse and may be a primary deposition resulting from disposal of rubbish directly onto a backyard area. Trampling through use of yard has abraded and fragmented this material.
AU 2162 Structure: surface: ?hearth (CG 2555)	Small patch of burnt sandy material with charred twigs within matrix. Overlay Phase 2 yard (AU 2161) and was sealed by Phase 3 activity.	None	Location of fire. Possibly the remains of a surface oven or hearth of insubstantial construction. No function is evident.
AU 2163 Disposal: ditch: boundary (CG 2542)	Ditch, running east to west for 8.00m. Limited east and west by truncation. U-shaped in profile, 0.17–0.20m deep and slightly sloping down to east. Cut element of Phase 2 ground surface (AU 2158). Backfilled in Phase 3 (AU 2178).	None	Backfilled in Phase 3 (see AU 2178). Drain. Possibly also represents a boundary between two plots or a subdivision within a larger one. Note, during Phase 3 and later this alignment forms the southern limit of a yard. Earlier it may also exist since an alignment of pits can be discerned, albeit slightly to the south. This also broadly formed the north limit of Period 7 ash/lime activity and Period 8 Phase 2 industrial activity.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2164 Disposal: ditch: drain/boundary – recut (CG 2424 & 2427)	Recut of Phase 1 ditch (AU 2148). Similarly aligned and truncated but U-shaped in profile. Southern edge not observed due to site limits. Backfilled prior to digging of a Phase 3 pit (CG 2430; AU 2178).	Pottery (41, av wt 10.88g, dated Period 9). Bone fragments (51), tile (1), smelting slag (0.46kg), hearth bottom (0.324kg), copper alloy (2, inc disc – Crummy, Section 7.13).	Recut of substantial ditch on southern edge of site. Probably also a property/plot division. Backfill included secondary deposited domestic refuse.
AU 2165 Disposal: pits: cess and rubbish (CG 2453/2454 & 2457)	Two pits, cutting Phase 1 activity. One (CG 2457) was sub-rectangular and measured 1.96m × 1.04m × 1.35m. The second (CG 2453) was sub-square, 1.60m × 1.50m × 1.80m and was not fully excavated. This had a primary organic fill (1.18kg), copper alloy (1, hinged belt-plate – Crummy, Section 7.13), worked bone (1). Note: also includes >5000 elder seeds and >50 blackberry seeds.	Pottery (690, av wt 12.64g, dated Period 9). Bone fragments (570, inc 80 fish, 8 small mammal, 9 bird), tile (10), brick (2), iron objects (17, inc 9 nails, rotary key), tap slag (2.631kg), smithing slag (2.631kg), copper alloy (1, hinged belt-plate – Crummy, Section 7.13), worked bone (1). Note: also includes >5000 elder seeds and >50 blackberry seeds.	Organic waste pits. Cess and other organic material in both. In particular the fruit seeds are of interest. Various activities would produce such waste. Tanning and dyeing, the former a documented local industry, both use fruit seeds. A simpler explanation, more in line with the general domestic character of the associated assemblage would be that they represent wine making residues. A further use for the elder seeds would be medicinal, as a purgative, in which case their presence in a cess pit would be unsurprising. Otherwise all fills contained some domestic rubbish, in particular the secondary fill in CG 2453 which probably represents a deliberate backfilling of the pit.
AU 2166 Disposal: pits: rubbish and cess (CG 2460/2461, 2462, 2463, 2502, & 2545)	Group of rubbish disposal related features and fills, cutting or overlying Phase 1 activity. Comprised 1 fairly large pit (CG 2457, 1.70m × 1.60m × 0.65m); two smaller much truncated pits (max 0.64m × 0.62m × 0.48m), one with a secondary fill; and finally two distinctive features, sub-oval in plan and with flat stepped bases. One of these (CG 2463) had three stakeholes in its base. Three of the smaller features (including both of the stepped-based pits), were intercutting.	Pottery (216, av wt 10.31, average abrasion, dated Period 9). Bone fragments (640), worked bone (1), tile (5), brick (1), fired clay (2 daub), iron objects (18, inc 9 nails, 4 dome-headed nails) Cu alloy objects (2, pin and binding strip – Crummy, Section 7.13), tap slag (2.457kg), smelting slag (0.964kg), glass (1), Pb slag (1)	Pits of varying size infilled with domestic refuse and soil. Some of this material may be a primary deposition, however, much of the material is likely to be secondary or residual incorporated with soils used to backfill pits which had non-determined primary functions. One pit had also been used as a cess pit (CG 2462). The two pits with stepped bases may originally have had specialist uses. No evidence of the nature of this use could be determined; however, the stakeholes in one of them suggest that they may have had timber structures or linings within them while the step suggests that some form of internal division was present.
AU 2167 Structure: timber: indeterminate (CG 2505)	Posthole. Sub-oval, 0.80m × 0.40m × 0.35m, cutting Phase 1 activity and cut by Phase 3 activity.	None	Posthole, probably part of an otherwise wholly truncated timber structure. No form or function could be determined.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2168 Structure: timber: indeterminate (CG 2525)	The northern remnants of two otherwise truncated features, interpreted as postholes. These cut the Phase 2 ground surface (AU 2159).	Bone fragments (2).	Postholes, probably part of an otherwise wholly truncated timber structure. No form or function could be determined.
AU 2169 Disposal: pits: cess and rubbish (CG 2507, 2519/2520 & 2423)	Three pits, truncated to the south and not fully excavated. One had a secondary fill (CG 2519/2520). This was the largest of the pits, (1.75m x 1.10m x 1.30m +), and appeared to have originally been sub-square. It was partly overlain by a Phase 3 rubbly dump.	Pottery (211, av wt 15.64g, dated Period 9). Bone fragments (241), tile (9), iron objects (6, inc 3 nails, hooked tag – Crummy, Section 7.13), tap slag (0.242kg), Cu alloy object (1), smithing slag (0.392kg), hearth bottom (0.326kg), stone (3, tiles).	Cess pits. Also used as waste pits. The larger in particular contained domestic refuse in both the primary base fill and the upper, backfilling deposit.
AU 2228 Disposal: secondary fill of pit: rubbish and cess (CG 2501)	Secondary fill in Phase 1 pit (CG 2500, AU 2150). Recorded as ‘cess rich’.	Pottery (503, av wt 23.62g, dated Period 9). Bone fragments (1024), worked bone (1), tile (35, inc 5 floor tile), brick (1), Fe (43 inc 1 rotary key fragment and 15 nails – Crummy, Section 7.13), tap slag (2.165kg), smelting slag (0.640kg), smithing slag (1.653kg), hearth bottom (0.558kg), hearth lining/cinder (0.008kg), Lead object (1), Cu alloy objects (12, inc 2 flattened spheres, stud, hooked tag, sheet disc frag – Crummy, Section 7.13), ceramic mould fragment (1), coprolite (1), coin (1, residual Roman – King, Section 7.20)	Backfilling of earlier pit with soil and rubbish including primary domestic rubbish and cess.
AU 2232 Movement zone/boundary path?	Continued use of surface and boundary represented by AU 2151 in Phase 1.	See AU 2151	Parish boundary between St Andrew’s and St Swithun’s. Lies at rear of properties fronting Birkport to west – surfacing may reflect use as back access.
Period 9 Phase 3			
AU 2170 Movement zone: continuing use of soils: ground surface	Continuing use of Phase 1 ground surface None (see AU 2145). Cut by Phase 2 activity and overlain by newly deposited material (AU 2158 & 2159).	Ground surface.	
AU 2171 Movement zone: metalling: yard repair (CG 2558)	Patchy metalling, comprising pebble of mixed size, bedded into sand and sat in a hollow over the central part of earlier Phase 2 yard (AU 2161).	Pottery (87, av wt 12.97, moderate abrasion, dated Period 9). Bone fragments (704), tile (11), daub (1), iron objects (17, inc 5 nails), tap slag (3.569kg), smithing slag (2.016kg), hearth bottom (1.824kg), stone (5, 2 sandstone paving slab, 3 lias frag), worked bone (1), glass (1).	Repair of worn area of Phase 2 yard. Incorporates secondary deposited rubbish, trampled in and spread on yard, reflecting use.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2172 Movement zone: accumulation/dump: ground surface (CG 2556, 2564, 2572, 2573, 2704, & 2705)	Material accumulated and dumped around edges and lapping slightly over a Phase 3 yard (AU 2171). Varying in thickness, to a maximum of 0.12m, and rubble and sandy in places.	Pottery (481, av wt 10.37g, dated Period 8/9). Bone fragments (1397, inc 50+ fish), tile (6), daub (1) iron objects (56, inc 24 nails, knife fragment, arrowhead – Crummy, Section 7.13), tap slag (3.117kg), smelting slag (0.606kg), smithing slag (0.026kg), hearth bottom (0.1kg), copper alloy (4, inc balance fragment, strip, hinged strap-tag, fitting – Crummy, Section 7.13), coal (1), stone (1, roof tile), worked bone (2), glass (2, window).	Material incorporating secondary deposited domestic refuse, dumped or accumulating on and around a contemporary yard area (AU 2171). Rubble and sand content suggest some mixing with the yard material, perhaps through use, though the nature of the material assemblage does not suggest extensive trampling. Material may in part derive from upcast from excavation of pits to the east and north-east (AU 2177). The presence of a posthole (AU 2231) within this deposit suggests that it may have accumulated over some period of time.
AU 2173 Movement zone: metalling: yard (CG 2544)	Surface, comprising pebble and iron slag, the upper part of which was almost all of iron slag and was extremely compact. It had a well defined southern edge but was otherwise limited by truncation. To the west it was rather irregular and broken at the surface. It had a maximum thickness of 0.20m and was resurfaced in Phase 4 (AU 2184).	Pottery (74, av wt 17.78g, dated Period 9). Bone fragments (506), tile (3), brick (1), iron objects (14, inc knife frag), tap slag (33.388kg), smelting slag (8.060kg), copper alloy (1), stone (1, lias frag).	Well-constructed yard. Material within and on surface derives from use although the pottery was surprisingly not heavily fragmented and may therefore have been deposited immediately prior to Phase 4 resurfacing (AU 2184).
AU 2174 Movement zone: dump/accumulation: ground surface (CG 2466 & 2503)	Areas of soil, entirely limited by truncation, overlying Phase 2 activity and cut by Phase 3 and later activity. The ridge to the east was a fairly substantial deposition, being 0.50m thick.	Pottery (63, av wt 13.24g, dated Period 9). Bone fragments (94), tile (3), iron (0.249kg).	Dumps of soil with secondary deposited domestic refuse incorporated. This, especially where thicker, may derive from upcast from pit excavation, although it is not evident where such activity was occurring in this area owing to truncation. Possibly these also represent remnants of a ground surface.
AU 2175 Movement zone: dumps/accumulation: ground surface (CG 2518, 2528, 2693, & 2694)	Consolidation over Phase 2 pit (AU 2168; CG 2519/20) and material dumped/accumulated over and around it. Comprised loose rubbly material, 0.10–0.15m thick, with denser patches and spreads of soil up to 0.15m thick. Rubble consisted mainly of large to medium pebble/cobble with some burnt limestone. Charcoal and mortar were also present. In places this material was compact but was generally not well made or regular in deposition.	Pottery (89, av wt 20.59g, dated Period 9). Bone fragments (199), tile (11), fired clay (4, 2 daub), iron objects (2), stone (1) paving frag).	Consolidation and filling material over an earlier, backfilled pit. Its rubble content and the subsequent accumulation of material above it suggest that this formed part of the Phase 3 ground surface although a relatively high average sherd weight indicates that trampling of this was limited. The material is considered in part to result from the dumping of domestic refuse in the area and in part from upcast material resulting from pit excavation (AU 2181).

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2176 Structure: indeterminate: ?hearth (CG 2706)	Shallow, fairly small depression, 1.40m × 0.50m × 0.10m, irregular in plan though vaguely keyhole-shaped having a bowl-shaped depression at one end of it. Both the bowl-shaped area and the sides of the rest of the feature were lined with a compact burned soil. Within the bowl-shaped depression, two fills, both burnt with slag, charcoal, and pebble inclusions overlaid the compact deposit.	Pottery (51, av wt 8g, dated Period 9). Bone fragments (842), iron objects (17) tap slag (0.184kg), smithing slag (0.291kg), hammeryscale (700+), stone (2, tiles).	Small feature probably representing the remains of a hearth or small furnace structure. The burning, basic shape, and smithing waste suggest that ironworking activity was occurring within the feature which may represent a bowl furnace or smithing hearth. The fills otherwise suggested disuse and backfilling having secondary deposited domestic refuse within them.
AU 2177 Production: pit: indeterminate (CG 2546 & 2547)	Sub-circular pit, 1.80m across, 0.30m deep with a small, 0.25m deep cut, in its base. Cut into the top of a Phase 2 pit (AU 2166; CG 2545) and partially truncated by further Phase 3 activity (AU 2179). The cut in the base was filled with a coarse sandy gravel which lined the sides and base of the whole feature. This lining was compacted at its interface with a soily deposit which backfilled the deposit.	Pottery (23, av wt 12.96g, low abrasion, dated Period 9). Bone fragments (106), brick (1), tap slag (0.270kg).	Lined pit. Clearly had a specialist function, probably related to industrial activity, but no evidence was recovered of the nature of such activity.
AU 2178 Disposal: secondary fill of ditch: rubbish (CG 2543)	Backfilling of a Phase 2 ditch (AU 2163) partially overlain by broadly contemporary metallised surface (AU 2173) dice), iron objects (3, inc hinged belt-plate domestic refuse and ironworking waste. and forming part of ground surface to south of the metallling.	Pottery (80, av wt 7.88g, low abrasion). Bone fragments (502), worked bone (1) - Crummy, Section 7.13), tap slag (7.821kg), smelting slag (0.516kg), smithing slag (1.352).	Backfilling representing disuse of ditch. Incorporated secondary deposited domestic refuse and ironworking waste.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2179 Disposal: pits: cess and rubbish (CG 2426, 2430, 2445, 2456, 2464, 2467/2468, 2479, 2482, 2548/2549, 2550/2551, 2570/2571, & 2685/2686)	Thirteen pits. Nine were substantial features (max 4.76m × 2.98m × 2.30m), mostly sub-square to sub-rectangular in plan and deep, with slumping primary, silt or cess rich fills to base, overlain by soily rubbish rich backfills. In three cases (CG 2467/2468, 2550/2551, and 2570/2571) secondary upper fills were separately recorded but otherwise (where present) these were only noted in section. In one pit (CG 2479), the largest of the group, a sequence of alternating layers of cess and sand was recorded, while sandy bands were noted in several others. Two further (probably large) pits were recorded, one at the southern limit of the site which was not excavated (CG 2426) and one (CG 2459) which was extensively truncated and only survived as a remnant of fill in the side of one of the other pits. Two smaller, sub-circular pits were also recorded in this area. The pits cut earlier Phase 3 activity and earlier soils and were cut by Phase 4 and later activity. Several had slumped fills over primary cess deposits and were not fully backfilled until Period 10 (AU 2206).	Pottery (2762, av wt 16.41g, low abrasion, dated Period 9). Bone fragments (8020, inc 128 fish, 37 bird, 21 small mammal), tile (145), brick (3), fired clay (7, inc 3 daub), iron objects (137, inc 68 nails, a hinge and nailed strip fragments), tap slag (14.046kg), smelting slag (6.772kg), smithing slag (3.684kg), hearth bottom/cinder (0.650kg), copper alloy (12, inc sheet frags, slag), stone (10, inc roof tile, perforated whetstone, spindle whorl), glass (4, 2 window, 2 vessel), worked bone (1?), lead (1), coprolite (2), plaster (1), mortar (1), ceramic loom weight (1)	Group of pits with fills incorporating much domestic refuse and ironworking waste. These were mostly substantial features and several of them had clearly been cess pits having cess rich primary deposits sealed with dumps of sand, although these also contained some domestic refuse, especially bone. In the secondary fills in these cess pits and in the fills of the other pits, pottery and other artefacts were more numerous. The character of the material assemblage suggests that this material largely represents primary or secondary domestic rubbish deposition, although ironworking waste was also present. In CG 2445 either smithing slag or smelting slag together with tap slag were present in separately recorded contexts but were not recovered together indicating separately deposited material for different stages of the ironworking process. The smaller pits had similarly composed fills and may represent small latrine pits.
AU 2180 Structure: pit: ?robber (CG 2508)	Much truncated feature, with only a short, straight section of the west edge surviving and part of the base. The latter was flat though slightly sloping to the east. 0.35m deep, with two fills, the lower containing nine large sandstone blocks. Both fills contained sandstone fragments, clay, tile and charcoal. Cut a Phase 2 pit.	Pottery (26, av wt 13.19g, average abrasion, dated Period 9). Bone fragments (40), tile (9), iron objects (1), tap slag (0.196kg), smithing slag (0.628kg).	Pit of uncertain function. Possibly a robber trench excavated to remove stone from the underlying hearths (AU 2153). Backfilled with unwanted rubble, soil, and secondary deposited domestic rubbish.
AU 2181 Disposal: pit: rubbish, cess and industrial waste (CG 2695)	Pt, sub-oval, 1.60m × 1.10m × 0.40m, with single fill including limestone slabs. Cuts Phase 2 activity.	Pottery (184, av wt 14.14g, dated Period 9). Bone (365, inc 25 fish, 3 bird, small mammal 1), tile (2, inc decorated ridge tile), brick (2), fired clay (1), iron objects (17, inc 9 nails, padlock case frag – Crummy, Section 7.13), tap slag (0.13kg), smithing slag (1.096kg), hearth bottom (0.92kg), copper alloy (2), mortar (1).	Pit containing domestic refuse, cess and also a small amount of ironworking waste from smithing activity.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2230 Structure: indeterminate timber (CG 2497 & 2498)	Substantial, sub-circular (1.00m diameter) post pit providing support for a squared timber measuring 0.35m x 0.34m x 0.80m. The post had been packed with a pebbly clay fill and a ring of compact clay surrounded it at ground level. The timber had been removed at a later date and the pipe infilled.	Pot (54, all dated Period 9 bar one 18th-century sherd in topmost fill which is considered to reflect robbing date). Tap slag (1.691kg), smithing slag (3.184kg), hearth bottom (0.262kg), hearth lining and cinder (0.262kg).	Apparently isolated substantial setting for a squared timber. This has been very carefully constructed and firmly set suggesting that it had a degree of permanence or was designed to take a heavy load. A possible association with ironworking/smithing can be suggested (anvil base?) or more probably it represents a boundary marker given its location on the parish boundary between St Helen's and St Swithun's.
AU 2231 Structure: indeterminate timber (CG 2557)	Truncated shallow ?linear with flat base and steep sides. Clay (lining?) to base with ashy fill over top – probably beam slot.	None	Element of much truncated timber structure, the form and function of which remain undetermined
AU 2233 Movement zone/boundary path?	Continued use of surface and boundary represented by AU 2151 in Phase 1 and by AU 2232 in Phase 2.	See AU 2151	Parish boundary between St Andrew's and St Swithun's. Lies at rear of properties fronting Birdport to west – surfacing may reflect use as back access.
Period 9 Phase 4			
AU 2182 Movement zone: dumps and continued use: ground surface (CG 2574, 2575, 2588, 2589, 2707, 2708, & 2711)	Continued use of Phase 3 ground surface (AU 2170) cut by and overlain by Phase 4 activity. This included newly deposited, dumped material at the west end of the site which varied in thickness from 0.03–0.25m. These dumped deposits were undulating at the surface, especially where they slumped over Phase 3 pits (AU 2179). They were compact in places and included gravel, pebble, rubble, and charcoal rich patches. This material also filled hollows in the Phase 3 surfaces below and generally sealed that phase of activity at the west end of the site.	Only newly deposited material from CG 2574, 2575, 2588, 2589, 2707, 2708, & 2711 is considered. Pottery (688, av wt. 8.63g, dated Period 9). Bone fragments (1.001, inc 2 small mammal, 40 fish), tile frag, arrowhead frag – Crummy, Section 7.13, tap slag (5.775kg), smelting slag (1.6kg), smithing slag (1.961kg), hammerscale (100+), copper alloy (10, inc small pin, stud, key, boss and other frags – Crummy, Section 7.13), stone (1, tile), lead (1, worked bone (1)).	Continuing use of earlier ground surface overlain in parts at the west end by newly deposited soils, possibly derived from excavation of pits (AU 2189). In places the new dumps levelled up the ground over earlier hollows and slumping but was itself irregular and subject to subsidence over earlier pits. Compact and gravel/rubble areas, along with extensive, but fragmented material assemblage indicate that these newly dumped soils formed a regularly traversed ground surface lying beyond two contemporary metalled surfaces (AU 2183 & 2184) which partially overlie it. Material assemblage largely represents dumped domestic refuse but includes some ironworking waste as well.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2183 Movement zone: metalling: yard (CG 2576)	Metalled area at west end of site, with fairly distinct but irregular north and south limits. Cut centrally by a drain (AU 2186) and overlying elements of the Phase 4 ground surface (AU 2182). Comprised crushed green sandstone with pebble and slag, compacted into a well-made, but worn, surface up to 0.20m thick. Overlain by extensive Phase 5 metalling (AU 2192).	Pottery (61, av wt 22.92g, dated Period 9). Bone fragments (135), tile (3), iron smelting slag (4.8kg), stone (1, tile).	Yard. Drain and fairly careful construction suggest that this was constructed for heavy usage. The material assemblage probably largely represents domestic refuse dumped upon the surface during its use, or maybe in the case of the pottery (which was not particularly fragmented) immediately prior to the subsequent Phase 5 remetalling (AU 2192).
AU 2184 Movement zone: metalling: yard (CG 2586)	Compact, slag and pebble metalled surface, 0.07m thick, cut by Phase 4 activity (AU 2187 & 2188) and largely overlying a Phase 3 metalled surface (AU 2172).	Pot (126, dated Period 9). Bone fragments (394), iron objects (14, inc 3 nails), tap slag (3.44kg), hearth bottom (3.24kg) hammerscale (>500), bead.	Resurfacing of Phase 3 yard. Similar construction and constraints. Drain on south limit.
AU 2185 Movement zone: metalling/ dump: yard (CG 2696 & 2697)	Hollow, filled with mixed rubble which spread to its east. Patchy and variable in composition (pebble, sandstone, slag, limestone). In places compact and well made but elsewhere fragmentary and poorly compacted. 0.06–0.20m thick, overlying Phase 3 activity and cut by Phase 4 pit (AU 2191).	Pottery (108, av wt 14.67g, dated Period 9). Bone fragments (286), tile (6), brick (2), tap slag (0.096kg), smelting slag (0.54kg), smithing slag (23.564kg), hearth bottom (1.06kg), coprolite (1), lead (1).	Yard area – rather poorly constructed with limited compaction. It may represent consolidation of an area of ground surface rather than a metalled surface laid for regular use. The relatively high average pottery sherd weight supports this. Material assemblage in part reflects dumping of domestic refuse but also has a high ironworking waste content relating to smithing. No source for this industrial waste was evident.
AU 2186 Disposal: ditch and fill: drain (CG 2578 & 2580)	East to west aligned cut, 0.15m deep and U-shaped in profile. Limited at both ends by truncation, though clearly not extending far to the east. Divided Phase 4 yard (AU 2183), and partially cut to south by subsequent Phase 4 activity (AU 2188). Fill was largely sandy gravel and contained few finds.	Pottery (14, av wt 20g, low abrasion, dated Period 9). Bone fragments (7), iron objects (1, nail), smithing slag (0.013kg).	Drain for yard. Probably deliberately backfilled rather than silted.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2187 Disposal: ditch: drain (CG 2577 & 2579)	East to west aligned ditch on the southern limit of Phase 4 yard (AU 2184). Limited both ends by truncation. 0.76m wide, with a flattish base and steeply sloping sides. The ditch must actually predate the yard since the northern part of its fill was overlain by the yard surface, however the ditch probably remained in use. The line of this reflects an earlier (Phase 2) ditch (AU 2163) which had been backfilled in Phase 3.	Pottery (18, av wt 4.55g, very high abrasion, dated Period 9). Bone fragments (50), iron objects (6, nails), tap slag (1.46kg).	Drain for yard to north, though may originally have been excavated for earlier Phase 3 yard (AU 2172). Maintains line of earlier drain/boundary (AU 2163).
AU 2188 Production: pits and fills: industrial (CG 2612/13 & 2581/82)	Two sub-circular features, cutting Phase 4 yards and sealed/cut by Phase 5 activity. Both had flat bases. One (CG 2581) had a silty clay lining and was 1.05m in diameter and 0.42m deep. The other, which had been severely truncated by later activity, had a 'rim' around the inside of its base suggesting that it may once have had a timber lining. Both features had lime burning residues laying in their bases below backfilling soils.	Note: all finds in CG 2581/82. Pottery (43, av wt 41.95g, average abrasion, dated Period 9). Bone fragments (253, inc 30 fish, 4 bird and 150+ burnt), tile (12), iron objects (22, inc 1 nail), tap slag (0.92kg), smithing slag (0.196kg).	Specialised pits, having some industrial processing function. Both may have been used as waterproofed containers, perhaps for soaking. The presence of lime residues and also of burnt bone suggests that the process required alkalinity. One possible association is with documented local industries relating to tanning and curing of animal skins (?for leather, for glovemaking or for parchment). Subsequent fills incorporated domestic refuse.
AU 2189 Disposal: pits: rubbish/cess and industrial waste (CG 2587, 2590/93, 2591/92, 2597, & 2656)	Group of five sub-circular to sub-oval, concave based pits broadly aligned east to west and cutting Phase 4 ground surface (AU 2182) or earlier activity. Sealed or truncated by Phase 5 and later activity. Varied in size and depth (max 2m), and degree of truncation. The central pits (CG 2587, 2590/92, & 2590/93) had lower cess rich, organic primary fills with soily rubbish rich upper fills.	Pottery (804, av wt 13.08g, dated Period 9). Bone fragments (2,118, inc 35 small mammal, 119 fish, 18 bird), tile (75), brick (11), fired clay (41, 1 daub but otherwise all ?oven/hearth lining frags in CG 2597), iron objects (66, inc 25 nails, CG 2597, hammer scale (800+), copper alloy (5, inc sheet frags, wire), stone (18, inc 8 tiles, quernstone, wall veneer, counter) mortar (1).	Rubbish disposal area comprising five pits. This included three cess pits with high organic content in base fills and distinct upper backfills of soily material rich in ?secondary deposited domestic rubbish. One (CG 2587) included a large volume of ironworking waste mainly from smelting activity but also including a significant volume of smithing waste. The other two pits largely contained secondary deposited domestic refuse within their backfills, although that to the west (CG 2597) included the remains of a demolished oven or hearth superstructure. This could relate to either ironworking or lime burning, waste from both of which was recorded during this phase. These two pits may have been excavated for rubbish disposal or for some other indeterminate primary function.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2190 Structure: timber: indeterminate (CG 2583, 2584, & 2594)	Four postholes (one not illustrated) and two stakeholes cutting Phase 4 ground surface (AU 2182) and metalling (AU 2183).	Pottery (13, av wt 7.38g, low abrasion, dated Period 9). Bone fragments (50), tile (1), iron objects (2), tap slag (0.026kg), smithing slag (0.3kg).	Post/stakeholes and fills representing disuse. No evidence of form or function of structure/s represented.
AU 2191 Disposal: pit: rubbish (CG 2698)	Pit, truncated to north, 0.75m deep, with sloping sides. Cut Phase 4 metalling (AU 2185) and cut by Period 10 activity. Fill was variable with three different dumps identified.	Pottery (58, av wt 10.43g, dated Period 9). Bone fragments (42), tile (19), iron objects (7) smithing slag (0.252kg), stone (1, spindle whorl), copper alloy (1, fitting).	Pit. Contains secondary deposited domestic refuse. Primary function indeterminate. However, may simply have been excavated for dumping of accumulated domestic debris in vicinity.
AU 2234 Movement zone/boundary: path?	Continued use of surface and boundary represented by AU 2151 in Phase 1, AU 2232 in Phase 2 and AU 2233 in Phase 3.	See AU 2151	Parish boundary between St Andrew's and St Swithun's. Lies at rear of properties fronting Birdport to west – surfacing may reflect use as back access.
Period 9 Phase 5			
AU 2192 Movement zone: dumps: ground surface and continuing use (CG 2595 & 2614)	Continued use of Phase 4 ground surface (AU 2182) cut by and overlain by Phase 5 activity including two patches of newly deposited dumped soil. One of these patches of soil levelled over the top of slumped Phase 4 pit fills. These new soils elements were 0.05–0.10m thick, compact and gravelly with some rubble. The patch to the south had a very regular and well-defined northern limit. Overall the Phase 5 ground surface at the west end of the site had a distinct east to west hollow lying centrally to it and above earlier pits.	Pottery (92, av wt 10.13g, dated Period 9). Bone fragments (56), tile (11), iron objects (3, inc 2 nails), tap slag (1.352kg), copper alloy (1, pin), stone (1, tile).	Continuing use of Phase 4 ground surface which incorporated two new dumps of soil including trampled secondary deposited domestic refuse. These dumps partly levelled an area over earlier slumped pits but were themselves subject to further subsidence leading to the distinct east to west hollow in the ground surface.
AU 2193 Movement zone: metalling and accumulation: yard (CG 2585 & 2598)	Metalling overlying Phase 4 yard (AU 2183), which in places showed through this later surface. Similar extents and composition, though somewhat less crushed sandstone and more pebble and slag. Cambered to the south side, generally 0.05–0.15m thick, with the most compact and well-made part overlying backfilled Phase 4 features. On its west extent a ridge of soil flecked with green sandstone and mortar had accumulated thinning over the yard and thickened to the west where it was limited by truncation.	Pottery (71, av wt 16.51g, dated Period 9). Bone fragments (191), tile (2), iron objects (5, inc 1 nail), tap slag (4.622kg), smelting slag (5.9kg), smithing slag (0.834kg), hearth bottom (0.58kg).	Yard surface, representing remake of Phase 4 yard (AU 2183). Composition included a fairly large volume of ironworking waste. The ridge to the west may have accumulated against a wall line (or similar) which has been totally truncated. Material assemblage represents accumulated debris from use of the yard through the relatively low fragmentation of pottery suggests that use was not especially heavy or that the pottery recovered was deposited immediately prior to the sealing of the yard by Period 10 deposits.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2194 Structure: ?wall; indeterminate (CG 2599)	Three large blocks of sandstone, east to west aligned, unbonded and having no construction cut. These sit upon Phase 4 ground surface and show through subsequent Period 10 soil dumps. These were aligned on the northern edge of the Phase 5 yard (AU 2193).	None	Unbonded, insubstantial, probably low, stone wall, largely robbed. Possibly on a property boundary.
AU 2195 Structure: wall (and collapse): indeterminate (CG 2616 & 2617)	Flat-based, north to south aligned feature limited by site extents and truncation. Within and standing proud of this cut (by approximately 0.10m) was a single faced sandstone block. This was sat on and packed around with a compact sandy silt. To the east was a loose rubble spread comprising several blocks of faced red and green sandstone and a couple of slabs of limestone along with tile and pebble.	None	Remnant of north to south wall. Fairly well constructed, with a construction cut and sandy silt bonding. Material to east probably represents collapsed or demolished elements of the wall. Due to extensive surrounding truncation the function and nature of the structure could not be determined.
AU 2196 Disposal: pits: rubbish (CG 2596 & 2601)	Group of pits, generally small in size, none more than 0.85m in diameter, and ranging from 0.28–0.35m deep. Clustered closely together and cutting Phase 5 ground surface (AU 2192). Largely sealed by subsequent Phase 5 dumped deposits (AU 2199).	Pottery (303, av wt 18.57g, dated Period 9). Bone fragments (451, inc 2 small mammal, 43 fish, 11 bird), tile (11), iron objects (31, inc 18 nails), tap slag (4.842kg), smithing slag (1.032kg), copper alloy (12, inc 2 lace ends, 2 small pins, strip, 2 strap-tag frag, stud head/fitting, fitting), stone (3, whetstone, 2 slate tiles).	Series of small non-structural cut features of indeterminate origin, though possibly latrines/organic waste pits given presence of fish, bird, and small personal items (lace ends and pins). Material assemblage mainly comprises primary domestic refuse, forming part of deliberate backfills.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2197 Production: indeterminate: industrial? (CG 2602 & 2603/2604)	Two features, both apparently timber lined. One (CG 2602) was linear, limited to north and south by truncation, 0.13m deep, with a flat base and evidence of a timber lining (plank impressions and rows of nails). This had a mortar/lime fill. The other was an irregular sub-oval cut, 3.20m long, 1.20m wide and 0.65m deep. The base was stepped and charred timber surviving across the base and partly up the sides of the cut suggested it had been timber lined. At the step this charred timber suggested a plank had divided the feature. Fills (CG 2604) were lensed and complex.	Pottery (394, av wt 8.71g, dated Period 9 but largely Period 8 material in lower elements of fills). Bone fragments 1294, inc 120 fish, 28 bird, tile (9), brick (3), fired clay (10, daub), iron objects (125, largely nails, also U-shaped strip – Crummy, Section 7.13), tap slag (9.321kg), smithing slag (1.004kg), hearth bottom (1.034kg), copper alloy (2, 1.032kg), stud head – Crummy, Section 7.13), stone (7, 1 millstone fragment and 6 limestone slabs), vessel glass (1), coin (1, including cess. The dating of the material assemblage is problematic, being Period 8 in the lower fill elements and with very little Period 9 present overall. This suggests either a high residuosity in the fills or that the features were long-lived and that this represents their final phase of use.	Specialist function features. Lined, probably for soaking or quenching. The two features may have been for similar, or associated functions. No certain evidence of character of industrial activity though two possibilities arise. Ironworking is a strong possibility given smithing waste present. However, association with lime burning residues raises issue of tanning or curing. Both features had been backfilled with secondary deposited refuse, possibly including cess. The dating of the material assemblage is problematic, being Period 8 in the lower fill elements and with very little Period 9 present overall. This suggests either a high residuosity in the fills or that the features were long-lived and that this represents their final phase of use.
AU 2198 Production: pit and recut: indeterminate industrial (CG 2609 & 2610)	Cut and recut, of possibly sub-circular, but heavily truncated feature. 0.45m deep, vertical-sided and with a flat base. The base was lined with a silty clay deposit. The liming where it met the side of the pit had a ridge suggestive of a timber lining which had been removed. The fill of this was flecked with mortar/ lime residue. Below the base of this a skim of flecked fill overlying a silty clay deposit suggested an earlier pit identical in character.	Pottery (71, av wt 11.14g, dated Period 9). Bone fragments (72), tile (10), iron objects (1), tap slag (0.724kg), smithing slag (0.02kg), copper alloy (1).	Postholes and fills representing disuse. Phase 4 pits (AU 2188), and probably having a soaking or quenching function perhaps associated with tanning or smithing. Finds represent secondary deposited domestic refuse within backfill.
AU 2199 Structure: indeterminate: timber (CG 2600)	Two postholes, 0.12–0.18m deep, cutting earlier Phase 5 activity and sealed by latest Phase 5 soil dumps (AU 2200).	Pottery (36, av wt 6.5g, dated Period 9). Bone fragments (149, inc 14 fish, 5 bird), tile (4), iron objects (8, inc 4 nails), tap slag (0.246kg), smithing (0.108kg).	Postholes and fills representing disuse. No evidence of character of structure.
AU 2200 Levelling: dumps: ground surface (CG 2605, 2606, & 2608; not illustrated)	Dumps of soil, 0.20–0.28m thick, occupying a roughly east to west aligned, irregular based hollow over earlier pits. Sealed elements of earlier Phase 5 activity. Overlain and cut by Period 10 activity.	Pottery (299, av wt 8.25g, dated Period 9). Bone fragments (287, inc 2 small mammal, 13 fish, 2 bird), tile (16), iron objects (16, inc 4 nails, rotary key frag – Crummy, Section 7.13), tap slag (2.422kg), smithing slag (0.164kg), copper earlier pit fills, copper shield-shaped mount – alloy (2, fitting, shield-shaped mount – Crummy, Section 7.13), coal (1).	Dumps of soil, including secondary deposited domestic refuse and possibly some cess. May represent spoil derived from pit excavation (AU 2201) levelling over hollow created by subsidence of earlier pit fills. Forms part of ground surface.

Table 14 (cont.) Site 2 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2201 Disposal: pits: rubbish and cess (CG 2622 & 2624)	Two pits, one cutting the other of which only a remnant of the south side remained. The other was sub-oval, 1.65m × 0.85m × 1.12m, with a concave base. Both cut part of the later Phase 5 ground surface (AU 2199).	Pottery (142, av wt 10.68g, dated Period 9). Bone fragments (320, inc 4 small mammal, 18 fish, 9 bird, tile (2), fired clay (1), iron objects (22, inc 9 nails, ?punch, padlock case frag – Crummary, Section 7.13), tap slag (1.068kg), copper alloy (3, bell frag, buckle tongue, ?earring – Crummary, Section 7.13), coin (1, silver, London mint, penny/halfpenny?, dated late 13th to late 14th – Mayhew, Section 7.22), Glass (1, bead).	Pits, original function not evident although possibly were small cess pits, backfilled with deposits including much secondary deposited domestic refuse.

Table 15 Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 10: late medieval/post-medieval: later 15th to late 16th centuries			
Period 10 Phase 1			
AU 2202 Movement zone: dumps and continued use: ground surface (CG 2455, 2469, 2607, 2620, & 2621)	Continued use of latest Period 9 ground surface (AU 2192) and dumps (AU 2200) cut and overlain by Period 10 activity. This ground surface incorporated newly dumped soils in the west and central parts of the site which generally varied between 0.20m and 0.60m in thickness and thinned to the east. The deposit was generally compact but uneven and sealing Period 9 activity and cut by Period 10 activity.	Note, only the newly deposited material is considered. Pottery (467, av wt 10.41g, dated Period 10). Bone fragments (672, inc 5 small mammal, 33 fish, 10 bird), tile (23), iron objects (58, inc 30 nails, buckle frag – Crummary, Section 7.13), tap slag (3.488kg), smithing slag (0.446kg), copper excavation (AU 2204 and 2206). Formed Period 10 ground surface, thus generally trampled and compact. The smaller volumes of material present in the centrally dumped material and a generally higher sherd weight in the central area indicate that intensity of use probably varied considerably.	Continued use of existing ground surface over parts of which further material was dumped. The deposits incorporated secondary deposited domestic refuse and the new material possibly represents upcast derived from localised pit.
AU 2203 Structure: indeterminate: timber (CG 2639 & 2642)	Two postholes, 0.68 and 0.13m in depth. Cut Phase 1 ground surface (AU 2202) and overlain by Phase 2 deposits.	Pottery (13, av wt 11.69g, dated Period 10). Bone fragments (17), iron objects (1), hearth bottom (0.162kg).	Structure, timber, of indeterminate form and function.
AU 2204 Disposal: pits and hollows: rubbish? (CG 2615, 2633, 2636, 2637, 2644, 2646, & 2647)	Group of seven features of varying size and shape, 0.16–0.83m in depth, with largely flat bases. One (CG 2636) had a shallow (0.05m) depression its base. Mostly cutting or cut by other Phase 1 activity, some cutting others within the group.	Pottery (229, av wt 18.6g, dated Period 10). Bone fragments (235), tile (32), iron objects (18, inc 10 nails) tap slag (1.924kg), smithing slag (0.269kg), hearth bottom (0.412kg), copper alloy (11, inc 4 lace ends, 9 small pins, buckle – Crummary, Section 7.13), shell (1), stone (1, mortar frag), worked bone (2, 1 with iron obj attached)	Pits and hollows, some possibly excavated for disposal of domestic refuse, others maybe subsidence over earlier features or pits excavated for some other

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2205 Production: pit: indeterminate industrial (CG 2618/2619)	Much truncated pit, 0.43m deep and at least 0.85m across. Probably originally sub-circular and having a silty clay lining. The clay lining had a circular impression around the base of the pit suggested a timber lining or barrel within the cut. A primary fill of lime was identified in the base of the pit and was overlain with a soily backfill.	Pottery (18, av wt 13.33g, dated Period 10). Bone fragments (11), tile (2), iron objects (1), tap slag (0.087kg), smithing slag (0.034kg).	Specialised feature, probably having industrial function. Similar to Period 9 features (AU 2188 and 2198). Possibly related to soaking process or alternatively providing waterproofed storage. Lime suggests a link to tanning or curing; however, ironworking association should also be considered.
AU 2206 Disposal: pits and secondary fills: cess and rubbish (CG 2428, 2429, 2431, 2432, 2433, 2480, 2481, 2483, 2496, 2499, 2611, 2623, 2654, 2722, & 2723)	Eleven pits, some intercutting, and the secondary fills (CG 2480, 2481, 2722, & 2723) of four earlier, partly filled pits. The features varied in size and degree of truncation and ranged from 0.25–1.46m in depth. Cut Period 10 ground surface and earlier activity. Most were characterised by mixed material assemblages within tipping fills comprising dumps of varying material. Four of the pits, located towards the south side of the site, included substantial quantities of demolition debris (sandstone blocks and frags, mortar, and tile). The remainder were characterised by silty, bone rich, cessy fills.	Pottery (1937, av wt 13.84g, dated Period 10?). Bone fragments (3184, inc 35 small mammal, 109 fish, 46 bird), tile (99), brick (9), stone (6, inc spindle whorl), iron objects (82, inc 55 nails, carding comb frags, wool comb tooth, ?metal decorating tool – Crummy, Section 7.13), tap slag (12.155kg), smelting slag (1.25kg), smithing slag (3.484kg), hearth bottom (0.596kg), hearth liming (0.077kg), copper alloy objects (17, inc shield-shaped mount, hinged plate, stud, ?buckle loop frag, strip, nail – Crummy, Section 7.13), lead objects (1), glass (5, 1 vessel, 4 window), coprolite (1), coins (Cut halfpenny of Second Hand Type (0.38g), Southampton mint, die axis 270°. The first three letters of the mint-signature H M are clean, the moneyer's name is missing – Metcalf, Section 7.21).	Pits, mostly infilled with dumps of debris, including domestic refuse, ironworking waste, and building demolition debris. There was no evident source for the ironworking waste within the confines of Site 2 though the waste suggested an association mainly with smelting activity. The pits may have been excavated specifically for rubbish disposal or may have had a different undetermined primary function. The secondary fills clearly represent infilling and levelling of earlier pits over their slumped or partial earlier fills. In one case the distinctly compact and rubbly nature of this material suggested deliberate consolidation. In addition several were clearly substantial cess pits having fills including a high proportion of bone and small finds consistent with such features, but also much domestic refuse. The latter may represent a secondary deposition as part of backfilling upon disuse. The quantities of demolition debris, including tile and stone, may relate to the demolition of a substantial building evidenced on another site (Deansway Site 7; Jackson 1992) immediately to the north.

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2229 Disposal: pit: cess, rubbish and demolition debris (CG 2625)	Large sub-square pit with near vertical sides. 2.10m × 1.40m with slight step in base. Two banded and tipping fills with much tile and finds in upper one.	Pottery (324, av wt 18.6g, dated Period 10). Bone fragments (1886, inc 330 fish), tile (184), iron objects (86, inc 68 nails, carding comb frags, lock-plate frag – Crummy, Section 7.13), tap slag (0.948kg), smithing slag (0.338kg), copper alloy (36, inc 6 small pins, 5 lace ends, hook, strip, bell frag, stud, binding, wire – Crummy, Section 7.13), jetton (1, Nuremberg dated 16th century – Mayhew, Section 7.22), window glass (7, inc 1 painted), coal (1), slate (2 inc inscribed tile).	Cess and rubbish pit including much bone, pot, and small finds. Tile, nails, and window glass and pottery frags suggest this also includes demolition debris from the substantial building lying immediately to the north (Deansway Site 7; Jackson 1992).
AU 2207 Disposal: pits: rubbish (CG 2409, 2510/2511, 2512/2513, 2526, & 2699)	Three substantial pits, 1.65–2.20+ m in depth, and two smaller, rather linear, rounded ended features. The substantial pits had steeply sloping sides and complex dumped upper soily fills, tipping to centre over primary cess rich silty fills. The two largest were not excavated to base. Both the smaller pits had sandy silt horseshoe frag – Crummy, Section 7.13, base fills, suggestive of linings, and upper tap slag (1.21kg), smelting slag (1.504kg), smelting slag (4.018kg), hearth bottom tile, paving slabs, slate tile, 2 incised slates, quern frag, whetstone), mortar (5), plaster (5), glass (60, inc 49 vessel, and 11 window – 3 painted), lead (2), coins (2, 14th- to 16th-century jetton, 1 Roman residual, dated Period 5). Note, smithing debris here but smelting debris at west end.	Pottery (592, av wt 24.62g, dated Period 10). Bone (2656, inc 30 small mammal, 120 fish, 127 bird), shell (51), tile (307, inc 24 floor tile), brick (6), fired clay (1, daub), iron objects (145, inc 35 nails, 2 rotary key bits, knife frag, ?structural fitting, hook, ?strap distributor frag, (0.788kg), smithing waste frags (300+), copper alloy (25, inc 2 hinged fitting, small painted window glass were present and may be associated with the demolition of a substantial building located	Cess pits, with primary domestic rubbish and ironworking debris forming part of upper, deliberate infilling deposits sealing the cess fills. Some of the material assemblage was also deposited during primary use. The ironworking waste suggested that it was associated primarily with smithing rather than building demolition material including
AU 2208 Structure: indeterminate: timber (CG 2509)	Two postholes, 0.12 and 0.30m deep, sub-oval in plan and cutting Period 9 activity. Both had pebbly fills.	Pottery (21, av wt 9.61g, dated Period 10). Bone fragments (23), tile (7), brick (1), iron objects (1, nail), smelting slag (0.964kg), smithing slag (0.595kg).	Postholes. Structural but with no evident form or function in area of limited survival of ground surface due to truncation and site limits.
AU 2235 Movement zone/boundary: circumstantial	Continued use of Period 9 boundary. Surfacing no longer appears in use and has been buried by soil.	None	Parish boundary between St Andrews and St Swithun's. Lies at rear of properties fronting Birdport to west.

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 10 Phase 2			
AU 2209 Movement zone: continued use: ground surface	Continued use of Phase 1 ground surface (AU 2202) cut by Phase 2 activity and overlaid by two rubbly spreads (AU 2210 & 2211).	Material assemblage considered in Phase 1.	Dumps of material forming part of Period 10 ground surface. Largely comprising building demolition debris (probably further material derived from demolition of substantial building to north – Deansway Site 7; Jackson 1992) which may have been dumped to roughly consolidate an area of ground surface to allow heavier use than soils would bear. However the material assemblage was probably primary domestic refuse thrown onto this area, rather than deposited as part of it, and the relatively limited fragmentation and abrasion of this material argues against heavy usage.
AU 2210 Movement zone: dumps: ground surface (CG 2630, 2638, 2640, 2641, & 2648)	Spreads of rubbly soil, 0.15–0.23m thick, two areas of which fill in slight hollows. The rubble largely comprised tile, fragments of brick and sandstone, large pebbles, and also smears of silty clay. These were largely compact and thinned to the east. They overlaid Phase 1 activity and were cut by Phase 2 features (AU 2212).	Pottery (139, av wt 18.50g, average abrasion, dated Period 10). Bone fragments (117), tile (18, only a sample taken), iron objects (12), tap slag (0.558kg), smithing slag (0.164kg), hearth bottom (0.676kg), copper alloy (6, inc lace end, small pin, strip, triangular sheet offcut – Grumney, Section 7.13), glass (2, vessel glass).	Dumps of soil, probably derived from upcast of Phase 2 pit digging activity. Material assemblage in part derives from residual material in that upcast but also some probably incorporated since these dumps formed part of the Phase 2 ground surface. Rubbly areas may represent consolidation.
AU 2211 Movement zone: dumps: ground surface (CG 2494 & 2687)	Three areas of soil, overlying Phase 1 and earlier activity and cut by Phase 2 pits. Variable in depth with a maximum of 0.35m. Rubbly in patches and charcoal flecked.	Pottery (260, av wt 11.09g, dated Period 10). Bone fragments (164), tile (14), brick (2), fired clay (2, daub), iron objects (2, nails), tap slag (1.174kg), stone (1, limestone slab), glass (1, window).	Patch of cobbling, probably laid to consolidate an area worn into a hollow. Formed part of the Phase 2 ground surface but relatively low fragmentation of the material assemblage suggests that this was not in heavy use. The material assemblage probably represents dumped domestic refuse.
AU 2212 Movement zone: metalling: (CG 2702)	Cobbling, comprising 0.15m of pebble, limestone, and slag compacted into a shallow hollow. Partly overlying fills of Phase 1 pit and cut by Phase 2 posthole (AU 2219).	Pottery (36, av wt 15.56g, dated Period 10). Bone fragments (41), tile (3), brick (1), iron objects (2, nails), tap slag (0.108kg), smithing slag (0.264kg), stone (2, limestone slab, spindle whorl).	

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2213 Structure: timber: indeterminate (CG 2635, 2643, & 2649)	Sixteen postholes, varying in size and depth, but mostly 0.45–0.55m in diameter, and ranging from 0.06–0.40m in depth. The fills of these were predominantly of yellowish silty clay, many having tiles tipping into their centres. These cut Period 10 Phase 2 ground surface and other earlier activity. No clear alignments or pattern was present within the group.	Pottery (68, av wt 10.44g, dated Period 10). Bone fragments 323, mostly in one posthole inc 11 small mammal, 50 fish, 16 bird, tile (40), iron objects (23, inc 4 nails), tap slag (0.873kg), smelting slag (0.514kg), smithing slag (0.015kg), hearth bottom (0.034kg), copper alloy (11, inc wire loop), stone (1, arch frag), glass (3, window – 1 painted).	Timber structure/s of indeterminate form and function. Tiles may represent packing of posts dumped in following robbing of posts. Backfills include secondary deposited domestic refuse, probably residual within infilling deposits.
AU 2214 Disposal: pits: rubbish and demolition debris (CG 2434, 2436, 2437, 2438, 2447, 2448, 2449, 2450, 2451, 2452, 2484, 2485, 2486, 2487, 2626, 2650, 2652, 2657, 2673, & 2674)	Group of twenty pits of variable size and shape, some intercutting, cutting Phase 1 activity and cut by Phase 3 or Period 11 activity. Mostly 0.70–1.00m in depth though two were shallower (0.17m and 0.35m). Two appeared to have been lined (CG 2626 & 2657). All contained quantities of domestic refuse and about half of them contained significant quantities of demolition debris, usually in the form of tipping bands of material within other fills. This debris varied in composition from pit to pit but included red and green sandstone, tile, and mortar.	Pottery (1769, av wt 16.39g, dated Period 10). Bone fragments (4828, inc 11 small mammal, 50 fish, 12 bird), tile (175), brick (11), iron objects (145, inc 25 nails, knife frag, horseshoe frag – Crummy, Section 7.13), tap slag (3.698kg), smithing slag (0.631kg), copper alloy (59, inc buckle & belt-plate, sheet, wire, small bird and fish bone and small dress items) pin – Crummy, Section 7.13), coin (1, or had extractive functions prior to C4th), lead (2, inc metal disc in lead box), coprolite (1), mortar (2), worked bone (6, inc 2 needles), glass (18, 1 bead, 7 window – 3 painted), amber (1, bead).	Pits filled with primary deposited domestic rubbish and building demolition debris. The origin of the pits was not determined – some may have been excavated specifically for rubbish disposal, but others are liable to have been cess/organic waste pits (containing bird and fish bone and small dress items) or had extractive functions prior to infilling with debris and soil. The presence of demolition debris again reflects the demolition of the building lying to the north (Deansway Site 7; Jackson 1992).
AU 2215 Structure: timber: indeterminate (CG 2446 & 2655)	Two sub-oval postholes, 0.13 & 0.79m deep. One had tiles, tipping to base, within fill. Cut Phase 1 activity.	Pottery (58, av wt 16.21g, dated Period 10). Bone fragments (55), tile (15), iron objects (3, 2 nails), tap slag (0.1kg), smithing slag (0.272kg), copper alloy (1, pin).	Structural features, possibly associated with pits in the vicinity but having no evident form or function.

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2216 Disposal: pits: (CG 2676, 2677, 2678, 2679, 2683, 2684, & 2700)	Group of seven pits occupying the central part of the site. Some were intercutting and they varied in size and degree of truncation. Surviving bases indicated depths between 0.50m and 1.75m deep. Sub-rectangular or sub-oval in plan with steeply sloping sides. These cut the Phase 2 ground surface and earlier activity. Fills were largely tipping dumps of material with many finds. 4 had primary fills of silty material – cess?, with upper rubby or soily fills rich in artefacts.	Pottery (1378, av wt 13.89g, dated Period 10 and inc in CG 2679 two 14th-century items which potentially represented antiquities - a Valencian plate and a baluster jug). Bone fragments (6341, inc 80 small mammal, 251 fish, 134 bird), clay (2), iron objects (119, inc 25 nails, staple, punch), tap slag (10.947kg), smelting slag (0.795kg), smithing slag (4.929kg), hearth bottom (0.888kg), hearth lining/cinder (0.010kg), copper alloy (61), flint (1), mortar (4), clay pipe (2), stone (5, 3 quern frags, tegula, limestone slab), glass (17, 13 vessel, 5 window – 1 painted), worked bone (2, bead, needle).	Pits, four of which primarily were probably cess pits (CG 2677, 2678, 2679, & 2683), the remainder having no evident primary function except as rubbish pits. All contained some domestic refuse and organic waste, which in the cess pits concentrated in upper backfilling deposits. Some demolition debris was also present providing further evidence for the demolition of the building to the north. The two potentially antique pottery items might also be related to the demolition and clearance of this high status property – Bryant, Section 7.3.
AU 2237 Disposal: pits: cess/rubbish/indeterminate (CG 2514, 2515, 2688, 2689, 2692, & 2701)	Six pits (one not illust) at east end of site. Some intercutting. Surviving bases indicated depths between 1.10m and 1.75m, except two shallow pits 0.60m and 0.35m deep respectively (CG 2514 and CG 2701). Sub-rectangular or sub-oval in plan with steeply sloping sides. These cut the Phase 2 ground surface and earlier activity. Fills were largely tipping dumps of material with many finds. Two (CG 2515 & 2692 the largest pits, had primary fills of silty material – cess?, with upper rubby or soily fills rich in artefacts.	Pot (294, av wt 18.04g, dated Period 10 and inc residual runic inscribed samian – Page, Section 7.23.3). Bone fragments (811, inc 21 small mammal, 17 fish, 3 bird), tile (77), brick (7), iron objects (32, inc 9 nails, blade frag, fitting), tap slag (0.327kg), smithing slag (3.428kg), hammerscale (400+), copper alloy (8), fired clay (1 daub) lead slag (1), glass (2, 1 vessel), ceramic mould (1), stone (2, both roof tiles).	Pits, two of which appear to have been cess pits, the remainder of which were of indeterminate origin. All contained limited amounts of domestic rubbish and larger quantities of organic waste which in the cess pits was concentrated in the upper fills.
AU 2217 Structure: timber: indeterminate (CG 2703)	Posthole, cutting Phase 2 metalling (AU 2211). 0.50m × 0.40m × 0.20m with limestone slabs in fill.	Pottery (3, av wt 8g, dated Period 10). Bone fragments (9), iron objects (2, 1 nail).	Posthole, with evidence in disuse fill of limestone packing. No evident form or function or associated features.
AU 2236 Movement zone/boundary: circumstantial	Continued use of Period 9 Phase 1 boundary AU 2235.	None	Parish boundary between St Andrew's and St Swithun's. Lies at rear of properties fronting Birdport to west.
Period 10 Phase 3		Ground surface.	
AU 2218 Movement zone: continued use: ground surface	Continuing use of Phase 1 and 2 ground surfaces (AU 2202 & 2209–11). Cut by Phase 3 activity.	Material assemblage discussed previously.	

Table 15 (cont.) Site 2 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 2219 Disposal: pits: cess and indeterminate (CG 2435, 2440, 2441/ 2442, 2716, 2717, 2719 & 2720)	Seven intercutting features, 0.21–1.04m deep, overlying and cutting into Phase 2 pits occupying a similar area (AU 2213). To the south were the deeper ones, clearly excavated features, while those to the north were shallower, perhaps representing upper fills in the earlier pits or fills of hollows developed over those pits. The fills were finds rich and also included cess deposits especially to the base of the three to the south.	Pottery (1359, av wt 19.11g, dated Period 10). Bone fragments (5,364, inc 83 small mammal, 350 fish, 120 bird), tile (213), brick (5), fired clay (1), iron objects (224, inc 120 nails), copper alloy (131), plaster (12), mortar (3), stone (7, inc 3 slate tiles, 1 stone tile, 1 arch frag, 1 whetstone, 1 glass frag), coprolite(1), glass (6, inc 5 window – 2 painted, 1 vessel), lead (5), worked bone (1).	Three cess pits also used for disposal of primary deposited domestic refuse. Similar refuse also included in the fills of four other features of uncertain origin, but possibly representing hollows over, or unfilled upper areas of earlier Period 10 pits.
AU 2220 Structure/s: indeterminate: timber (CG 2439, 2627 & 2718)	Four postholes, 0.13–0.61m deep. Two had tile within their fill. These were cut by or cutting elements of the Phase 3 pit group (AU 2220).	Pottery (32, av wt 17.06g, dated Period 10). Bone fragments (75), tile (8), copper alloy (6).	Postholes representing timber structures, possibly associated with contemporary pits, but of no obvious form or function. Tiles within fills may represent packing.

Table 16 Site 1 Period 2 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 2 Prehistoric period			
AU 1001 Structure (robbed): timber building (CG 1002, 1003)	Curvilinear gully, diameter c 7.0m and c 0.30m deep, with two stakeholes in base.	Burnt clay (97 fragments), bone fragment (1).	Robber trench of a timber and wattle-and-daub circular building.
AU 1002 Disposal area: pits (CG 1004, 1005, 1006, 1007, & 1010)	Five pits surrounding structure AU 1001, depths c >0.30–1.00m.	CG 1004 articulated horse skeleton, dated by radiocarbon analysis to 190 cal BC – cal AD 60 (Edwards and Dalwood, Section 7.33), and 1 cattle bone. CG 1007 pottery, burnt and unburnt bone, daub and charcoal noted, though only the bone fragments (14, including 1 herring vertebra), survived processing. CG 1006 hammerscale (>200 pieces), non-cereal seeds (9), cereal seeds (2). None from the 2 other pits, CG 1005 and 1010.	Disposal activity, selective in character. Includes deliberate horse burial. Separate pits used for domestic refuse and cess.
AU 1003 Structure: timber: indeterminate function (CG 1008, 1009, & 1011)	Three postholes, 0.09–0.48m deep.	Pottery (1 briquette sherd, wt 47g, unabraded).	Post-built indeterminate structure.

Table 17 Site 1 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3: Roman, mid-1st century to early 2nd century (c AD 50–AD 120)			
Period 3 Phase 1			
AU 1004 Cultivation: ploughsoil (CG 1013)	A site-wide layer of loamy sand, 0.20–0.30m thick, overlying natural sands and gravels and effectively sealing the Period 2 features.	Pottery (134, av wt 25g, moderate abrasion). Includes fragments of cooking pot in handmade Malvernian fabric (Fabric 3) and Belgic or Gallo-Belgic vessels (Fabrics 7 and 8), mostly from west end of site, as were the two fragments of bronze <i>lorica segmentata</i> (Roman armour) and Iron Age coin. tpq 60 AD. Bone (26), fired clay (9), tile (1).	Ploughsoil. Ploughing responsible for truncated the upper edges of the Period 2 features, which may originally have been dug from this ground surface (Macphail, Section 7.32). Virtually identical deposits identified on all three other sites.
Period 3 Phase 2			
AU 1005 Movement zone: ground surface (CG 1013)	Surface of the Period 3, Phase 1 ploughsoil, cut by Phase 2 features.	See AU 1004.	Phase 2 ground surface for the activity represented by the features cutting the layer.
AU 1006 Structure/s: indeterminate: timber (CG 1014, 1015, & 1017)	Two circular postholes, c 0.20m deep, a short, narrow east to west aligned slot, c 0.10m deep, and a similarly oriented beamslot, c 0.20m deep and 0.60m wide.	Pottery (115, av wt 11g, average abrasion) including cooking pot in handmade Malvernian fabric (Fabric 3), tpq 60 AD. Bone (49, including an eel vertebra), iron nail (1), tile (1). Contaminants, 1 shard of Black Burnished ware type 1 (Fabric 22) and 8 pieces of iron slag.	Timber structure/s of indeterminate form and function.
AU 1007 Boundary: gully (CG 1021)	Linear north to south gully, 1.10m wide. U-shaped, 0.45m deep, extending beyond north limit of excavation and truncated to south.	None	Boundary ditch separating structural activity to east (AU 1008) and west (AU 1006), and differences in the artefact distribution.
AU 1008 Structure: indeterminate (CG 1026, 1027, & 1028)	Three east to west linear gullies, all severely truncated. CG 1028 butt-ends to east; CG 1026 gently curvilinear, butt-ending to west; CG 1027 truncated at both ends. Depths c 0.15m–0.40m.	None	Timber structure/s of indeterminate form and function.
AU 1009 Disposal: pit: uncertain function (CG 1029)	Oval pit, c 0.60m deep, steep sides, flat base. Large limestone blocks in fill.	None	Cess pit, on the basis of size and form.
Period 3 Phase 3			
AU 1010 Cultivation: indeterminate (CG 1018, 1022, & 1031)	Soil layer, c 0.20m thick, covering entire site, where not truncated. Sealing Period 3, Phase 2 activity and cut and sealed by Period 3, Phase 4 features and surfaces.	Pottery (64, av wt 14g, moderate abrasion). Handmade Malvernian cooking pot (Fabric 3) and tile (15) from the west end of site. tpq 98 AD. Bone fragments (59), burnt daub (82), iron objects (4), iron slag (2), ceramic spindle whorl (1).	Possibly a period of abandonment, or turn over to low-level cultivation (?gardening).

Table 17 (cont.) Site 1 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3 Phase 4			
AU 1011 Movement: ground surface (CG 1018, 1022, & 1031)	Surface of AU 1010, cut and overlain by Phase 4 activity.	See AU 1010.	
AU 1012 Structure: timber: building (CG 1012, 1019, & 1192)	Three sub-circular postholes packed with limestone blocks, c. 0.20–0.50m deep, and a truncated area of burnt clay and charcoal.	Pottery (5, av wt 12g, unabraded), including wheel-thrown Malvernian cooking pot (Fabric 19). Bone fragment (1).	Top of AU 1010 functioning as a ground surface movement area for the features cutting and overlying it, indicating that the gardening activity had ceased. Timber building of indeterminate form, possibly domestic.
AU 1013 Disposal: pits (CG 1020, 1107, & 1205)	Three large, sub-circular pits, >0.40–1.40m deep. Fill of CG 1205 described as cessy.	Pottery (239, av wt 19g, average abrasion), including cooking pot in handmade Malvernian fabric (Fabric 3). Melon bead (1), bronze shield binding (1 fragment), bone fragments (85); CG 1205 contained fish (3) and rodent (5) bones.	Rubbish and cess disposal area.
AU 1014 Structure: timber: indeterminate (CG 1066, 1067, & 1068)	Six postholes, depths 0.05–0.38m. Four were circular, c. 0.20m diameter, two were oval. 0.45–0.65m across.	None.	Timber building of indeterminate form and function. The larger postholes on the north may mark supporting, external walls, with the smaller ones to the south perhaps representing internal divisions.
AU 1015 Structure: timber: indeterminate (CG 1030)	Two postholes, 0.07m and 0.45m deep. That on the north was almost exactly replaced by a similar feature in the much later structure AU 1038.	None.	Timber structure of uncertain form and function. Probably associated with movement zone, AU 1017, but nature and significance of relationship indeterminate.
AU 1016 Structure: timber: indeterminate (CG 1024, 1025, & 1127)	Three postholes, c. 0.25m across, 0.12–0.16m deep; one stakehole 0.14m across, 0.17m deep; one sub-rectangular cut, c. 1.5m × 1.0m, 0.13m deep. The cuts were positioned by the edges of movement zone AU 1017, or where distinct constitutional differences occurred in that surface.	None.	
AU 1017 Movement: yard (?): pebbles (CG 1023, 1032, & 1034)	Compact metalled surfaces, 0.02m thick, with clay hearth close to east limit. North area (CG 1023) showed composition differences which coincided with components of structure AU 1016. The movement zone effectively separated structure AU 1012 and pits AU 1013 on west from structure AU 1014 and pits AU 1018, to the east.	The western, CG 1023, had a differing finds assemblage to that of the east, CG 1032. Pottery (284, av wt 15g, very high abrasion), including wheelthrown Malvernian cooking pot (Fabric 19) from western, against 12 sherds (av wt 6g, very high abrasion) from eastern. Also, all the bone fragments (116), Cu alloy (12), fired clay (11), iron slag (1), and nail (1) recovered from the western.	Yards, separating areas of structural and disposal activities to east and west. Diversity in material remains implies functional differences between the east and west ends of site.

Table 17 (cont.) Site 1 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1018 Disposal: pits: indeterminate (CG 1033, 1069)	Two severely truncated, superimposed pits, >0.35m deep. The earlier pit stained its surrounds.	Pottery (1, wt 6g, abraded), residual.	Cess pits.
AU 1019 Structure: indeterminate (CG 1146)	East to west linear cut, 1.10m deep, 1.40m wide, butt-ended to west. Upper fills are uniform, 0.10m thick, horizontal deposits of pebbly sandy gravel with limestone blocks.	Pottery (28, av wt 23g, average abrasion), including handmade and wheelthrown Malvernian cooking pot (Fabrics 3 and 19 respectively). <i>tpq</i> 100 AD. Bone fragments (6).	Major load-bearing component for an unknown superstructure. The uniformly laid foundation deposits.

Table 18 Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 4: Roman, early 2nd century to mid-3rd century (c AD 120–AD 240)			
Period 4 Phase 1			
AU 1020 Natural soil accumulation (CG 1035, 1070, 1128, 1147, & 1151)	Layer of light brown soil, c 0.40m thick, covering the Period 3 activity and cut by later Period 4 features.	Pottery (304, av wt 11g, high abrasion); cooking vessels in handmade Malvernian fabric (Fabric 3) and Black Burnished ware type 1 (Fabric 22) occurred at west end, and mortaria at east end of site. Bone fragments (102), fired clay (5), iron slag (5), tile (1), copper alloy (1).	Natural soil, implying temporary abandonment following Period 3 activity. Spatial variation in the finds reflects functional differences between east and west ends of the site, but of unknown nature and significance. Similar deposits noted on Site 2 (AU 2017), Site 3 (AU 3015) and Site 4 (AU 4017).
AU 1021 Movement zone: ground surface (CG 1035, 1070, 1128, 1147, & 1151)	Surface of soil layer AU 1020, cut by numerous features.	See AU 1020.	Top of soil layer AU 1020 functioning as a ground surface associated with the activity represented by the numerous features cut into it.
Period 4 Phase 2			
AU 1022 Structure: timber: indeterminate (CG 1152, 1156, 1158, 1176, 1177, & 1193)	Six postholes, depths c 0.30–0.55m; east to west linear slot, c 0.40m wide, 0.14m deep, with post-socket in its base, and north to south linear slot, c 0.40m wide, 0.40m deep. Two of the postholes were sandstone-packed (CG 1193) and two had stepped bases (CG 1176).	Pottery (7, av wt 9g, low abrasion), bone fragments (34).	Timber structures, indeterminate form and function. Although a rectilinear arrangement of some of the structural elements is apparent, their association in a single structure is uncertain.
AU 1023 Structure/s: timber: indeterminate (CG 1036, 1071, 1072, 1073, 1075, 1080, 1087, & 1149)	Eight postholes, 0.08–0.29m deep. Dispersed in the central and eastern parts of the excavation, no alignments discerned.	Pottery (2, av wt 65g, average abrasion).	Timber structures of indeterminate form and function.

Table 18 (cont.) Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1024 Landscaping: dumping (CG 1148, & 1153)	Two restricted soil deposits. One (CG 1148) containing plentiful iron slag was confined to the area previously occupied by structure, AU 1023. The other (CG 1153), characterised by abundant clay lumps, was situated in the area previously occupied by structure, AU 1022.	Pottery (20, av wt 16g, moderate abrasion), bone fragments (45), tile (1). Iron smelting slag (115) from 1148. <i>tpq</i> 150 AD.	Mixed earth dumps to level the ground surface following removal of the structures represented by AU 1019 and AU 1022.
AU 1025 Disposal: pits: indeterminate (CG 1054 & 1114)	Two pits, one 1.2m x 0.5m, 0.06m deep (entirely upper truncated), the other 1.6m x 1.4m, 1.1m deep.	Pottery (4), av wt 12g, moderate abrasion, <i>tpq</i> 130 AD. Bone fragments (42), iron slag (10), tile (3), mortar (1).	Pits, probably for domestic rubbish.
AU 1026 Structure: timber: demolition (CG 1074 & 1076)	Strip of charcoal-rich soil c 1.2m wide, with genuine east and west limits, truncated to north and south. Along its eastern edge were two circular postholes, depths 0.18–0.23m, the larger containing a limestone packing stone.	Pottery (2), av wt 1.5g, very high abrasion, bone fragments (20), cereal seeds (25), non-cereal seeds (12), chaff (3).	Remains of a destroyed timber building of indeterminate form and function.
Period 4 Phase 3			
AU 1027 Structure/s: timber: indeterminate (CG 1154 & 1155)	Five sub-rectangular stakeholes, c 0.10m across, depths 0.08–0.16m and 4 sub-circular postholes, c 0.25m across, depths 0.10–0.21m. They occurred in an east to west band c 6m long and c 2m wide.	Pottery (2, av wt 13g, unabraded), bone fragment (1).	Timber structure/s of indeterminate form and function.
AU 1028 Building: indeterminate (CG 1166, 1167, & 1168)	Large sub-rectangular, flat-based cut, depth c 0.19m filled with compact light coloured clay. On its west side was an area of compacted pebble surface (CG 1166). Cutting this surface was a linear groove, depth c 0.04m, that was close to, and paralleled the west side of the clay-filled cut. A small area of the surface was burnt.	Pottery (44, av wt 10g, average abrasion), bone fragments (204), smithing waste (150), fired clay (5), iron slag (3).	
AU 1029 Structure: indeterminate: repair (CG 1169 & 1170)	Charcoal-filled stakehole, 0.06m deep, cut into a layer of compact light coloured clay (CG 1169). This overlay directly the clay-floored component of the indeterminate structure AU 1028, with a burnt extension to the west. This burnt patch directly overlay the burning on the AU 1028 pebble surface.	Pottery (6, av wt 11g, low abrasion). Bone fragments (82), iron slag (3). Much spelt chaff was also recovered.	Bone Repairs to the indeterminate structure, AU 1028. The burnt extension to the west may imply that the earlier partition wall had been removed. The large quantity of spelt chaff may imply that the structure served some agricultural function.

Table 18 (cont.) Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1030 Structure: indeterminate: repair A layer of compact, light-coloured sandy soil which overlies the structural repair, AU 1029 and structure, AU 1028.	A layer of compact, light-coloured sandy soil which overlies the structural repair, AU 1029 and structure, AU 1028. Although severely truncated it possessed genuine extents to north and west.	Pottery (15, av wt 11g, low abrasion), <i>tpq</i> 130 AD. Bone fragments (2), tile (1).	Further repairs to structure AU 1028. Its extent, covering both the earlier floors, implies that the partition wall that separated those floors had been removed by this stage.
AU 1031 Natural soil accumulation (CG 1037, 1078, 1129, 1150, & 1175)	Layer of light brown soil, c 0.15m thick. It did not occur in the area of the indeterminate structure, AU 1028, or its repairs (AU 1029, AU 1030), except for a small, restricted overlap at the extreme west of that structural activity.	Pottery (38, av wt 9g, low abrasion), <i>tpq</i> 120 AD. Bone fragments (22), iron slag (23), tile (2), iron nail (1). Cooking vessels in handmade Malvernian fabric, wheelthrown Malvernian fabric and Black Burnished ware type 1 (Fabrics 3, 19, and 22, respectively) from the west end of the excavation only, and the tile was from the east end.	A naturally formed soil, its virtual exclusion from the area of the structural activity represented by AU 1028–1030 implies that the soil was being formed during the life of that structure. The material remains are probably entirely residual and their spatial variation reflects functional differences in the earlier activity.
Period 4 Phase 4			
AU 1032 Movement zone: ground surface (CG 1037, 1078, 1129, 1150, & 1175)	Top of Phase 3 soil, AU 1031, cut or overlain by a number of features and surfaces.	None	The soil deposit identified at the end of Period 4, Phase 3 functioned as a ground surface in this phase.
AU 1033 Structure: timber: indeterminate (CG 1173, 1174, 1178, 1189, 1194, & 1195)	Three sub-circular postholes, c 0.6–0.7m across, 0.16–0.35m deep; one stakehole, 0.14m deep; three linear gullies, two oriented east to west, c 0.20m wide, and one north to south, c 0.60m wide. The two east to west gullies both had small, oval sockets in their bases.	Pottery (12, av wt 14g, low abrasion), bone fragments (17), iron slag (8).	Timber-built structure/s of indeterminate form and function.
AU 1034 Production area: industrial activity: indeterminate (CG 1179 & 1180)	Large (>4.3m x >3.7m), shallow (c 0.45m) cut filled with charcoal-rich soil containing patches of ash. Cut into the surface of the fill was a curvilinear gully, c 1.7m long and c 0.30m wide, that opened out into a shallow, oval bowl, c 0.60m across (CG 1180). This bowl was filled with compact, oxidised iron slag, together with pieces of sandstone and limestone.	Pottery (29, av wt 20g, low abrasion). Bone fragments (8), iron slag (57), stone (3), tile (2), Cu alloy (1 pin).	Industrial activity of uncertain nature represented by a possible bowl furnace on a prepared foundation and working floor. The exact nature of the industrial activity undertaken is indeterminate but may have been iron smelting.
AU 1035 Movement zone: metalled: street (CG 1130, 1131, 1132, & 1145)	A number of cobble, pebble, and iron slag deposits (CG 1130, 1131, 1132, and 1145) on the north side of the excavation. Genuine extents to the south, and the absence of similar deposits was noted in the extreme north-east corner of the site. In all cases iron slag was a minority component, or not present at all.	Pottery (22, av wt 12g, very high abrasion). Bone fragments (9), iron slag (15), tile (2), iron nail (1).	An east to west street, width c 5.50m. As a functioning street or lane it probably served, and was associated with, the structural activity represented by AU 1033 and AU 1038 on its south side, and AU 1040 to the north.

Table 18 (cont.) Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1036 Structure: indeterminate: timber (CG 1135 & 1136)	Two oval postholes, c. 0.50–0.75m across and 0.35–0.49m deep. One contained blocks of limestone and sandstone.	Pottery (3, av wt 13g, very high abrasion), fired clay (4), iron slag (2).	Postholes, one containing packing stones, representing a timber structure of indeterminate form and function. Their presence on AU 1035, the movement zone, may indicate encroachment or that it had ceased to function as a street or lane.
AU 1037 Disposal: pits (CG 1045, 1046, 1047, 1048, 1049, 1053, 1115, & 1121)	Six severely truncated pits, 0.25–1.80m, deep on north and east sides of structure, AU 1038. One lined with a thin, compact layer of clay (CG 1046) and subsequently filled with mixed soils (CG 1047).	Pottery (402, av wt 27g, average abrasion), including mortaria in Oxford White ware and from the Pas de Calais (Fabrics 33 and 36 respectively), part of a concentration of such vessels at the end of the excavation. <i>Tpq</i> 150 AD. Bone fragments (169), iron objects (21), iron slag (11), fired clay (10), vessel glass (2), Cereal seeds (140), non-cereal seeds (14), and chaff (1).	An area of disposal activities, including domestic rubbish and cess pits, possibly associated with structure, AU 1038.
AU 1038 Structure: domestic building? (CG 1038, 1039, 1040, 1041, 1042, 1043, 1051, & 1052)	Truncated area of limestone blocks and large mortar fragments, some adhering to the limestone, overlying a narrow strip of mortar and limestone fragments and a layer of brown sandy soil. All were in a c. 0.15m deep, flat-bottomed foundation cut whose straight east edge was aligned north to south. A posthole, 0.18m deep, cut the lowest fill of the foundation trench. To east and north of the rubble were areas of pebble and iron slag surfacing (AU 1039). At the east edge of these surfaces was a line of three circular postholes, 0.15–0.25m deep and, between these and the rubble concentration, a north-west to south-east gully which paralleled the arrangement of postholes. Two postholes, 0.12–0.20m deep, were truncated by the flat-based cut.	Pottery (8, av wt 16g, high abrasion). Iron slag (11), mortar (10), tile (2), iron objects (2), copper alloy (1, Colchester-derivative brooch), and chaff (1).	Stone or stone-founded domestic building and associated structure, possibly a covered walkway.
AU 1039 Movement zone: yard: slag and pebbles (CG 1050 & 1116)	Areas of compact iron slag and pebble surfaces situated between the rubble and posthole alignment of structure, AU 1038, and also to the north of that structure. Iron slag was the minority component.	Pottery (10, av wt 10g, very high abrasion).	Yards or covered walkways around structure AU 1038.

Table 18 (cont.) Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1040 Structure: indeterminate (CG 1079)	Elongated oval cut, 0.16m deep, filled with yellow sandy soil. Directly superimposed on structure AU 1026, with the east edge occurring above the two postholes that constituted part of that earlier structure. Located to the north of the street, AU 1035.	None	Timber structure, repair or rebuild of AU 1026.
Period 4 Phase 5			
AU 1041 Movement zone: yard: slag and pebbles (CG 1117)	Two separate areas of compact iron slag and pebble surface, 0.07–0.13m thick. Situated in area previously occupied by movement zone, AU 1039. Iron slag was major component.	None	Yards or walkways, possibly a relaying or repair of the earlier surface, AU 1039.
AU 1042 Structure: timber: indeterminate (CG 1183, 1184, 1185, & 1186)	Eight sub-circular postholes, 0.06–0.52m deep. Five occurred in a north-east to south-west line closely corresponding with the south edge of movement zone, AU 1043. The others were situated north of this line.	Pottery (5, av wt 3g, very high abrasion). Bone fragments (2), brick (2), iron objects (2). Timber structure of unknown form and function, associated with the adjacent movement zone, AU 1043. The posthole alignment, and its correspondence with the edge of movement zone AU 1043, is interpreted as a major, external wall.	Yard or similar walkway laid on a bedding or foundation deposit, associated with the adjacent timber structure, AU 1042.
AU 1043 Movement zone: yard: slag (CG 1181 & 1182)	Compacted iron slag surface overlying mixed soil layer, mostly confined to the area previously occupied by industrial activity, AU 1034. South edge closely corresponded with posthole alignment of structure, AU 1042.	Pottery (61, av wt 13g, very low abrasion). Iron slag (17), bone fragments (14), tile (2), stone (17tile).	Robbed and backfilled foundation element of unknown nature, possibly associated with the adjacent timber structure, AU 1042.
AU 1044 Structure: indeterminate (CG 1188)	Large oval cut, c 3.30m × c 2.50m. Very shallow (c 0.25m) with a concave to flat base. Filled with dark, mixed soil.	Pottery (14, av wt 15g, very low abrasion). Iron slag (8), bone fragments (7).	Timber structure of indeterminate form and function.
AU 1045 Structure: indeterminate (CG 1138 & 1161)	Posthole, 0.60m across (unexcavated), and sub-rectangular, flat-based bedding trench, >1.20m × 1.0m, c 0.12m deep. Both located on north side of movement zone, AU 1048.	Pottery (3, av wt 5g, very high abrasion). Bone fragments (4), iron slag (3).	
AU 1046 Structure: timber: indeterminate (CG 1125, 1139, 1140, 1141, 1143, & 1144)	Four postholes, 0.14–0.28m deep, a shallow scoop, 1.23m × 0.57m, and a linear or curvilinear slot, c 1.30m × 0.40m. (CG 1144). All were located by the south side of movement zone, AU 1048.	Pottery (13, av wt 15g, very low abrasion). Bone fragments (11), copper alloy (1 hairpin).	Timber structure of indeterminate form and function, situated alongside movement zone, AU 1048.
AU 1047 Structure: timber: indeterminate (CG 1110 & 1112)	Two postholes, 0.08–0.48m deep.	Iron slag (2), iron object (1 staple).	Timber structure of indeterminate form and function.

Table 18 (cont.) Site 1 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1048 Movement zone: street: slag and pebbles (CG 1109, 1133, 1134, & 1137)	Very compact iron slag and pebble surface, c 0.25m thick, covered by a thin layer of dark, mixed soil and overlying layers of dark pebbly soil containing iron slag. Aligned east to west, observed length c 28.0m, width c 5.0m. Location closely corresponds with that of the underlying movement zone, AU 1035.	Pottery (187, av wt 9g, high abrasion), <i>tpq</i> c 155/160 AD. Iron slag (1228), smithing waste (>1000), bone fragments (133), tile (11), furnace lining (12), iron objects (7), coins (2, including possible Faustina issue of AD 138–161), brick (2), copper alloy (1 ?slag).	An east to west street, with an associated layer of trampled soil, closely corresponding to location and limits of earlier movement zone, AU 1035. Underlying soil layers interpreted as foundation bedding.
AU 1049 Disposal: pits (CG 1122 & 1123)	Two pits, 0.39–>0.97m deep. One severely truncated with only a portion of its west side remaining.	Pottery (5, av wt 16g, very high abrasion), bone fragments (25), iron slag (2), iron object (1), brick (1).	Cess pits.
AU 1061 Movement zone: ground surface (CG 1037, 1078, 1129, 1150, & 1175)	Top of Phase 4 soil, AU 1032, cut or overlain by a number of features and surfaces.	None	The soil deposit identified in Phase 4 functioned as a ground surface in this phase.
Period 4 Phase 6			
AU 1050 Movement zone: ?yard: slag and pebbles (CG 1187 & 1196)	Compact iron slag and pebble surfacing overlying similar but smaller area of compact surface.	Pottery (41, av wt 13g, low abrasion), <i>tpq</i> 140 AD. Bone fragments (13), worked bone strip (1 – Section 7.27) tile (2), brick (1).	Yard, working floor, or similar walkway associated with structure, AU 1051, and industrial activity, AU 1052.
AU 1051 Structure: timber: indeterminate (CG 1190 & 1191)	Two postholes, c 0.20m deep.	Pottery (15, av wt 17g, unabraded), bone fragments (25), tile (2), iron slag (2).	Timber structure/s of unknown form, possibly functionally associated with industrial activity AU 1052, and the yard or working floor, AU 1050.
AU 1052 Production area: industrial activity: indeterminate (CG 1200 & 1201)	Restricted soil layer with an oval bowl shaped cut c 0.20m deep with channel leading into it. Cut contained charcoal, limestone and iron slag. Soil around cut severely burnt.	Pottery (18, av wt 12g, low abrasion), bone fragments (41), iron slag (19), daub (3).	Industrial activity of uncertain nature, possibly iron smelting. Associated with yard/working floor AU 1050 and structure AU 1051.
AU 1053 Boundary: ditch: (CG 1159)	Linear east to west gully c 20m long, built-end to east. Width 0.60m, widening to 1.00m at butt.	None	Boundary ditch
AU 1054 Disposal: pit: cess (CG 1108)	Pt, >0.80m deep. The lowest, possibly primary, fill is rich in ash and charcoal.	Pottery (10, av wt 70g (25g excluding amphora), moderate abrasion), <i>tpq</i> 130–195 AD. Iron slag (10), bone (2) fragments.	Cess pit and primary fill.
AU 1062 Movement zone: ground surface (CG 1037, 1078, 1129, 1150, & 1175)	Top of Phase 5 soil, AU 1061, cut or overlain by a number of features and surfaces.	None	The ground surface identified in Period 4, Phase 5 continued to function as a ground surface in this phase.

Table 19 Site 1 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5: Roman, mid-3rd century to late 4th century (c AD 240–AD 400)			
AU 1055 Natural: soil accumulation (CG 1059, 1081, 1126, 1142, 1160, 1197, & 1202,)	Dark soil, c 0.20–0.40m thick.	No finds can be directly attributable to this phase owing to the reworking of this deposit in Period 6 and its use as a ground surface in Periods 7 and 8.	Dark earth. Analysis of the soil micromorphology suggests that this deposit represents the accumulation of a natural soil due to the use of the site for stabling of herbivores.
AU 1056 Boundary: ditch: disuse (CG 1634)	Backfill of linear east to west gully (AU 1053). A discrete layer of green tinged sand and soil with a moderate amount of finds and large limestone and sandstone blocks.	Pottery (128, av wt 18g, average abrasion, includes a near-complete New Forest ware beaker (Fabric 115), <i>tpq</i> 270 AD, some residuum), Bone (124 fragments), iron slag (100), tile (4), iron nail (1), copper alloy (1, Colchester-derivative brooch), 1 fragment of window glass, 1 fragment of vessel glass.	Backfilling of ditch in use in Period 4 Phase 6. The backfill has a <i>tpq</i> of 270 AD.
AU 1057 Disposal: backfill of pit (CG 1106)	Compact soil with iron slag and moderate finds.	Pottery (18, av wt 36g, very high abrasion, <i>tpq</i> 240 AD, much residual material). Iron slag (140), bone (32 fragments), tile (5), plaster (2), iron nail (1).	Secondary fill of pit (AU 1054). This fill has a <i>tpq</i> of 240 AD

Table 20 Site 1 Period 6 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 6: post-Roman and early to middle Anglo-Saxon (5th to late 9th centuries)			
AU 1058 Cultivation: pasture and ploughsoil (CG 1059, 1081, 1126, 1142, 1160, 1172, 1197, & 1202)	Dark soil, c 0.20–0.40m thick. At the west end of the site the bottoms of four parallel, east to west oriented, V-shaped grooves were identified. These grooves were c 0.05m wide and 0.02m deep and scored the underlying Roman surface.	In plough furrows: pottery (1, 9g, very high abrasion, Roman, residual). No other finds can be directly attributable to this phase because of its continued use as a ground surface in Periods 7 and 8.	Pasture with at least one episode of ploughing. Analysis of the soil micromorphology suggests that this deposit represents the re-working of the Period 5 dark earth by earthworms.

Table 21 Site 1 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 7: late Anglo-Saxon (late 9th to late 11th centuries)	Surface formed by the top of the agricultural soil seen in Period 6. Context groups 1197 and 1160 to the west of the site, are sealed by Period 8 deposits. Context groups 1059, 1081, 1126, 1142, and 1202 to the centre and east of the site continued to be used as a ground surface into Period 8.	Finds from ground surfaces sealed after this period: pottery (48, av wt 13g, average abrasion, all Roman, all residual). Bone fragments (21), iron slag (4), coins (2, AD 286–93 and AD 330–35), ceramic tile (1), shale ring (1) see Roe, Section 7.24. All finds were Roman in date.	Ground surface. Continued use of this deposit led to some deposition of contemporary material in the centre and east of the site but the majority of the deposits laid down in this period derive from the upcast of features dug into Roman levels.
AU 1060 Structure: indeterminate (CG 1198 & 1199)	An oval of burnt clay c. 0.70m by 0.60m embedded on and between sandstone and limestone blocks within a shallow depression. To the west of this was a group of three sub-circular postholes c. 0.40m across and c. 0.12m deep. The central posthole contained traces of timber.	Pottery (10, av wt 2g, very high abrasion, all Roman, all residual) Bone fragments (5), iron nail (1), iron slag (29).	Timber structure and associated hearth.
AU 1063 Disposal area: secondary usage (CG 1262 & 1263)	Two very truncated, probably oval, cuts, 1.10m by 1.20m and 1.8m by 1.2m, surviving to a depth of 0.45m and 0.20m respectively. Compact dark fill with moderate amounts of iron slag and charcoal.	Pottery (1, av wt 6g, very high abrasion, Roman, residual). Bone fragments (11), iron slag (10), roof tile (1), burnt clay fragments (16).	The poor preservation of these features makes interpretation difficult. There is no record of cessy deposits and the fragmentary nature and Roman date of the finds assemblage suggests that the primary function was not rubbish disposal.
AU 1064 Disposal area: cess pits (CG 1162, 1165, 1398, 1257, 1258, & 1264)	A group of six pits in the north-west area of the site. All were truncated by the cut for an 18th-century cellar and little contemporary ground surface survived in this area. The tops of the truncated features ranged in size from 1.0m to 2.6m across and the pits survived to 0.5m to 1.3m in depth. With the exception of the largest pit, primary and secondary fills were not identified during excavation. The fills were generally loose sandy soil, sometimes stained green and with lenses of natural sand and gravel and very few finds. The largest pit had a dump of limestone and a mid-10th-century coin at the bottom and also contained the majority of the finds.	Pottery (87, av wt 14g, very high abrasion, tpg very late 10th to early 11th centuries but the majority of the pottery was Roman in date, much or all residual). Bone fragments (310), seeds, roof tile (4), brick/tile (1) shale disc (1) see Roe Section 7.24, iron slag (80), coin (1, penny of Eadred AD 946–955), Cu alloy object (1), iron U shaped strip and other fragment (2) see Crummy Section 7.13, glass bead (1), smithing waste.	Cess pits backfilled with upcast from pit digging and possibly ironworking waste.

Table 21 (cont.) Site 1 Period 7 activity unit table

AU 1065 Disposal area: pit: indeterminate (CG 1077)	Severely truncated cut feature. Steep-sided with flatish base. 1.10m × 0.95m across surviving to a depth of 0.56m. Filled with pebbly dark brown soil with frequent large pieces of charcoal.	Pottery (5, av wt 5g, very high abrasion, <i>tpq</i> very late 10th to early 11th centuries, much or all residual, 1 sherd intrusive). Bone fragments (1).	Pottery (5, av wt 5g, very high abrasion, function unclear. Similar material to the backfill of the cess pits in AU 1064 to the west but no primary deposits were identified during excavation.
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Table 22 Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8: medieval, late 11th to mid-13th centuries			
Period 8 Phase 1 late 11th to 12th centuries			
AU 1066 Movement zone: ground surface (CG 1059, 1081, 1118, 1126, 1142, 1202, 1207, & 1221)	Surface comprising the Period 7 ground surface (largely to the centre and east of the site) and newly deposited layers (mainly to the west of the site). New deposits were mixed sandy pebbly soils with few residual finds and were c 0.10m thick.	No finds were directly attributable to this phase because of its continued use as a ground surface in Period 8 Phase 2.	Continued use of ground surface seen in Period 7 and dumps created by upcast from pit digging.
AU 1067 Movement zone: yard (CG 1208, 1209, & 1210)	Truncated patches of compacted pebbles and slag in sandy soil at the west end of the site. To the south these include some fragments of burnt limestone. Depth not recorded. CG 1208 was sealed by Period 8, Phase 2 deposits but CG 1209 and 1210 continued in use as a ground surface during that period.	Pottery (48, av wt 11g, very high abrasion, <i>tpq</i> 12th century, much residual material). Bone fragments (276), iron slag (29), iron nail (1), architectural fragment (1).	External yard associated with activities represented by AU 1068 and 1069.
AU 1068 Structure: indeterminate (CG 1216 & 1211)	One larger truncated posthole (c. 0.50m diameter, 0.60m deep with steep sides) and two smaller postholes (0.20m diameter and 0.10m deep with steep sides). All three were filled with mixed grey soil but the two smaller postholes contained limestone blocks and cobble packing.	Pottery (9, av wt 19g, abrasion not noted, <i>tpq</i> late 11th to 12th centuries, some residual). Bone fragments (32), iron shaft (1), iron slag (15).	Postholes of a timber structure associated with external yard surface (AU 1067) and shallow pits (AU 1069) at west end of site.

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1069 Structure/extraction area: pits (CG 1217, 1222, 1223, & 1245)	Truncated remains of four sub-angular pits to the west of the site. From the surviving portions it would seem that these were originally about 1.10m to 1.20m wide. They had flat bottoms and ranged in depth from 0.20m to 0.60m. The fills of two pits to the east had concentrations of slag at the bottom and one had burnt clay and limestone fragments. The fills of the pits to the south-west had loose grey pebbly soil fills.	Pottery (35, av wt 12g, very high abrasion, <i>tpq</i> 11th to 12th centuries, much or all residual). Bone fragments (62) iron fragment (1), iron slag (5, sample), ceramic roof tile (3)	Pits associated with a yard surface and structure behind the Birdport frontage. <i>Tpq</i> for the disuse of these features is the 12th century. It is possible that they are structural elements perhaps associated with the more easily identifiable postholes (AU 1068). In this case the slag and limestone fragments may be packing for timbers. Alternatively the pits may have been dug to extract gravel or earth for construction purposes. Although the backfills contain some domestic refuse the small number of finds suggests that rubbish disposal was not their primary function.
AU 1070 Disposal area: cess pits (CG 1088, 1120, 1203, 1204, 1213, 1214, 1367, 1368, 1372, 1399, 1400, 1403, & 1608)	A series of truncated sub-rectangular pits located, with one exception, in the central portion of the site. Where they survive the dimensions at the surface are 2.00–2.5m × 1.50–2.00m. Not all the pits were fully excavated but the more complete examples were about 1.50–1.70m deep. One truncated pit close to the northern edge of the site (CG 372) had stake holes (CG 1203) around the edge, possibly the remains of a wattle lining. The more complete examples had a variety of fills with cessy layers sealed by the upcast from new pit digging.	Pottery (134, av wt 14g, abrasion ranges from low to very high, <i>tpq</i> 12th century, cessy deposits have some residual material, backfill deposits have all residual material). Bone fragments (692), seeds, iron fragments (4), iron nails (2), iron slag (7), hearth bottom (1), ceramic roof tile (2), stone roof tile (1), bone skate (1 see Greep Section 7.27), worked bone waste (1).	Cess pits at the back of a plot or plots fronting Birdport. <i>Tpq</i> for the disuse of these features is the mid- to late 12th century.
AU 1071 Disposal/ extraction area: pits (CG 1055, 1376, 1383, 1384, 1388, 1389, 1392, & 1612)	Very truncated fragments of eight pits in the centre of the site. They were generally 0.2m to 0.5m deep with a flat base. The fills were generally fine grey-brown soils with moderate pebbles and no primary or secondary fills were identified during excavation. The exception to this was the most southerly pit of this group. This had two fills the lowest being a grey sandy pebbly clay which may have been a lining.	Pottery (30, av wt 25g, abrasion ranges from moderate to very high, <i>tpq</i> 12th century, much to all residual). Bone fragments (44), iron slag (17), ceramic roof tile (1), ceramic mould (1 – intrusive)	Pits associated with cess pits at the back of plots fronting Birdport. <i>Tpq</i> for the disuse of these features is the mid- to late 12th century. Although the backfills contain some refuse the small number of finds does not suggest that rubbish disposal was their primary function.
AU 1072 Extraction area: pit (CG 1611)	Truncated remains of a large, shallow, sub-circular pit at least 3.0m in diameter and 0.65m deep. Filled with grey brown sandy loam with abundant charcoal and moderate pebbles.	None	Possibly pit for the extraction of gravel or earth for construction purposes.

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1073 Disposal area: drain (CG 1380)	Severely truncated linear feature 0.90m wide and 0.44m deep. The sides were gently sloping and the base sloped from the north-west to the south-east. Three fills were identified, all brownish yellow soils.	Pottery (12, av wt 16g, high abrasion, <i>tpq</i> 12th century, some residual material). Bone fragments (12), iron slag (10).	Drain. This feature may also represent a boundary. 12th-century <i>tpq</i> for the disuse of this feature.
AU 1074 Boundary: ditch (CG 1060)	Truncated large, linear feature 2.0m wide and 1.3 deep with a flat base 0.6m wide along its length.	No finds related to primary function.	Boundary ditch aligned north to south across the site. Back boundary of plots fronting Birdport.
AU 1075 Disposal area: cess pit (CG 1063)	Truncated, sub-circular, steep-sided pit at least 1.5m in diameter with a depth of 1.20m. The fill was excavated as one but an ash band within, or below, a dark grey pebbly soil was noted.	Pottery (23, av wt 42g, low abrasion, <i>tpq</i> 12th century, some residual material). Bone fragments (36), ceramic roof tile (1), worked bone point (1) see Greep, Section 7.27.	Cess pit at the back of a plot. No mention is made of cessy deposits in the excavation record but the feature was poorly recorded and the shape and depth suggest a cess pit. <i>Tpq</i> for the disuse of this feature is the 12th century.
Period 8 Phase 2 12th century			
AU 1076 Movement zone: ground surface (CG 1059, 1081, 1105, 1118, 1126, 1142, 1202, 1207, & 1221)	Surface comprising the Period 8 Phase 1 ground surface and new deposits of dark grey brown soil.	Pottery (275, av wt 13g, abrasion ranges from high to very high, <i>tpq</i> 12th century much to all residual, 2 intrusive). Bone fragments (517), worked antler tine (1) see Greep, Section 7.27, seeds, iron slag (243), iron nails (4), iron tanged blade, padlock case fragment, spur fragment, U shaped strip (4) see Crummy, Section 7.13, ceramic roof tile (18), ceramic mould (1 – intrusive), Cu alloy slag (3 – intrusive), stone arch fragment (1), mortar (1), organic preserved in iron corrosion (3).	Continued use of ground surface seen in Period 8 Phase 1. Sealed by Period 8 Phase 3 deposits. Finds assemblage contains a high proportion of Roman and 10th- to 11th-century material.
AU 1077 Movement zone: yard with dumps of sand (CG 1209, 1218, 1219, & 1265)	Truncated patches of compacted pebbles and slag in sandy soil at the west end of the site. To the south the surface showed traces of burning. On top of these are two small dumps of compact orange sand and clay.	Pottery (18, av wt 22g, high abrasion, <i>tpq</i> early 12th century, much residual). Bone fragments (31), iron slag (1), iron nail (1), and possible structural elements AU iron padlock key (1) see Crummy, Section 7.13.	External yard associated with activities represented by the structure AU 1078 with the external yard surface (AU 1077), and possibly the shallow pits (AU 1079), at the west end of site. There is no evidence of timber within the features and the fill probably relates to the disuse and dismantling of this structure. There is a 12th century <i>tpq</i> for the backfill of these features.
AU 1078 Structure: indeterminate (CG 1224 & 1266)	One truncated linear cut with a flat base (>1.20m long, 0.10m deep, maximum width 0.5m) and one posthole (0.40m diameter, 0.30m deep with a conical profile). The linear feature was filled with a mixed, charcoal rich, pebbly soil. The fill of the posthole was grey-brown pebbly soil.	Pottery (4, av wt 6g, very high abrasion, <i>tpq</i> 12th century, all residual). Bone fragments (25) iron nail (1), iron slag (7), lead weight (1).	Posthole and foundation trench of a timber structure or structures associated with the external yard surface (AU 1077), and possibly the shallow pits (AU 1079), at the west end of site. There is no evidence of timber within the features and the fill probably relates to the disuse and dismantling of this structure. There is a 12th century <i>tpq</i> for the backfill of these features.

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1079 Structure/extraction area: pits (CG 1215, 1268, & 1365)	Truncated remains of three sub-circular pits to the west of the site. The largest had a diameter of c. 2.4m and a depth of 0.12m. It was filled with a grey soil and a number of large pieces of limestone and a quantity of iron slag. The pit to the west had a diameter of c. 1.6m and a depth of 0.5m. The fill of this feature included large blocks of sandstone and limestone, clay, and a piece of wood. The heavily truncated pit to the east was 1.1m by 0.9m and 0.15m deep. This was filled with dark mixed soil.	Pottery (49, av wt 15g, high abrasion, <i>tpq</i> 12th century, much residual). Bone fragments (91) iron nail (1), iron slag (61), roof tile (2)	Pits associated with a yard surface and structure behind the Birdport frontage. It is possible that these were structural elements perhaps associated with the more easily identifiable posthole and foundation trench (AU 1078). In this case the pieces of stone are probably packing for timbers. Alternatively the pits may have been dug to extract gravel or earth for construction purposes. Although the backfills contain some domestic refuse the small number of finds suggests that rubbish disposal was not their primary function. The <i>tpq</i> for the backfilling of these features was the 12th century.
AU 1080 Structure: indeterminate (CG 1369 & 1370)	Truncated layer of compacted sand and gravel with three stakeholes driven through it. Depth of the layer not recorded.	Pottery (1, av wt 33g, no abrasion noted, <i>tpq</i> 12th century, no residual material). Bone fragments (4).	Bedding material for a floor with associated stakeholes. This indeterminate structure was the first evidence for activity on the Powick Lane frontage and may suggest that the north south boundary seen in later periods was already in place in the 12th century.
AU 1081 Disposal area: cess pits (CG 1119, 1381, 1382, 1396, 1400, & 1401)	A series of truncated sub-rectangular and sub-circular pits located in the central portion of the site. Where they survived the dimensions at the surface were 2.00–2.2m × 1.40–1.90m. Not all the pits were fully excavated but the more complete examples were between 1.50m and 1.80m deep and had a variety of fills with cessy layers sealed by the upcast from new pit digging and other material.	Pottery (155, av wt 26g, moderate abrasion, <i>tpq</i> 12th century, some residual material). Bone fragments (854), seeds, iron objects (3), iron slag (174), smithing waste, Cu alloy strip (1), Cu alloy slag (1), ceramic roof tile (1), sandstone sharpening stone (1) see Roe, Section 7.24, ceramic lamp base (1) see Bryant, Section 7.8, worked bone (1) see Greep, Section 7.27.	Cess pits at the back of a plot or plots fronting Birdport. <i>Tpq</i> for the backfilling of these features was the 12th century.
AU 1082 Disposal area: secondary usage (CG 1089, 1377, 1393, 1613, 1615, & 1616)	Six truncated scoops and pits ranging in depth from 0.20m to 0.75m. The most northerly was filled with charcoal but the rest contained dark pebbly soil.	Pottery (8, av wt 21g, high abrasion, <i>tpq</i> 12th century, all residual material). Bone fragments (7), iron slag (3), ceramic roof tile (2).	Pits associated with cess pits at the back of plots fronting Birdport. <i>Tpq</i> for the disuse of these features was the 12th century. This area of the site was heavily truncated by later features and includes an area of confused stratigraphic recording which made interpretation of these features difficult. Although the backfills contain some refuse the small number of finds indicates that rubbish disposal was not their primary function.

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1083 Boundary: ditch (CG 1060)	Truncated large, linear feature 2.0m wide and 1.3 deep with a flat base 0.6m wide along its length. Backfilled with brown, pebbly sandy loam with charcoal and mortar flecks.	Pottery (15, av wt 28g, abrasion not noted, <i>tpq</i> 12th century, much residual material). Bone fragments (25) iron fragment (1).	Back boundary of plots fronting Birdport first seen in Period 8 Phase 1. Given that the functions occurring on the site seem to be very similar in Phases 1 and 2 of Period 8 it is possible that this boundary ditch remained in use from the late 11th century throughout the 12th century. The <i>tpq</i> for the disuse of this feature is the 12th century.
Period 8 Phase 3 (early 13th century)			
AU 1084 Movement zone: ground surface (CG 1269, 1371, & 1603)	Surface of backfilled pits and three truncated areas of dark soil. The soil deposit in the area of AU 1089 was not fully recorded. The deposit on the southern edge of the site was very pebbly. The depth of this deposit was not recorded. The deposit to the north was 0.20m deep.	Pottery (72, av wt 14g, very high abrasion, <i>tpq</i> 12th century, all residual material). Bone fragments (132), bone plate from composite handle (1) see Greep, Section 7.27, iron nail (1), iron slag (17), Cu alloy ring or collar (1) see Crummy, Section 7.13, roof tile (1), daub (2).	Ground surface formed by the backfill of Period 8 Phase 2 features with two areas of new deposits probably derived from the upcast of pit digging.
AU 1085 Production area: workshop (CG 1212, 1220, 1228, 1231, 1232, 1233, & 1238)	A rectangular structure represented by three truncated slots, each with a surviving butt-end and a width of 0.4m, and steep-sided posthole 0.35m deep. All filled with a mixed grey soil. These were associated with a ground surface of charcoal rich soil which includes a number of limestone blocks. On top of this ground surface was a truncated patch of very compact burnt soil, ash, and av wt 10g, very high abrasion, <i>tpq</i> early 13th century, much residual material.	Foundation slots and postholes: pottery (24, av wt 18g, high abrasion, <i>tpq</i> early 13th century, much residual material). Bone fragments (36), iron nail (1), iron slag (1), roof tile (1).	Part of a rectangular timber structure with associated ground surfaces, a hearth and dumps of ash and charcoal.
AU 1086 Disposal area: secondary usage (CG 1225, 1259, 1260, & 1261)	Hearth: no finds	Foundation slots and postholes: pottery (28, av wt 10g, very high abrasion, <i>tpq</i> early 13th century, much or all residual material). Bone fragments (41), worked bone (1) see Greep, Section 7.27, iron slag (1).	Part of a rectangular timber structure with associated ground surfaces, a hearth and dumps of ash and charcoal.
Period 8 Phase 4 (late 13th century)			
AU 1087 Disposal area: secondary usage (CG 1225, 1259, 1260, & 1261)	Three truncated sub-circular pits 1.0m to 2.0m in diameter and 0.4m deep. The most complete example had steep sides and a flat bottom. The lower fill of this feature (CG 1259) was a fine, loose, green soil and the upper fill (CG 1260) a mixed green brown soil. The lower fill of the most westerly pit was a compact silty grey clay with a backfill of mixed dark soil. The fill of the third pit was not recorded.	Pottery (155, av wt 13g, moderate to high abrasion, <i>tpq</i> 13th century, some to all residual). Bone fragments (221), roof tile (5), floor tile (1), quern fragment (1) see Roe, Section 7.24, iron slag (11), iron nails (2), iron fragments (2), Cu alloy slag (3), lead object (1), ceramic lamp base (1) see Bryant, Section 7.8.	Pits associated with the workshop or shed (AU 1085), possibly for the storage or disposal of liquids. The backfills contain some refuse but the small number of finds suggests that rubbish disposal was not their primary function. One pit contained cessy deposits but the shallowness of this feature suggests that these deposits may be redeposited. <i>Tpq</i> for the disuse of these features is the 13th century

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1087 Movement zone: floor (CG 1373)	Thin layer of green sandy clay 0.02m thick only recorded in section. May originally have extended further south.	No finds	Floor. Ephemeral remains but the first in a series of floor layers in this area.
AU 1088 Disposal area: secondary usage (CG 1379, 1404, & 1419)	Remains of three pits in the centre of the site. Two may have been sub-rectangular and all had flat bases. The depth of the features varied from 0.4m to 0.7m. The largest feature had a lower fill of pebbly sandy yellow soil and an upper fill of dark pebbly soil. The two other features were filled with dark pebbly soil.	Pottery (127, av wt 16g, high abrasion, <i>tpq</i> 13th century, some to much residual material). Bone fragments (151), roof tile (3), smithing waste, iron slag (9), iron nails (12), iron fragments (2), charcoal (5).	Pits in centre of site. Association with other activity units is unclear. The backfills contain some refuse but the small number of finds suggests that rubbish disposal was not their primary function. <i>Tpq</i> for the disuse of these features is the 13th century
AU 1089 Production area: workshop (CG 1604, 1607, 1617, 1618, 1619, 1620, & 1622)	Eight postholes and one foundation slot associated with an earth and clay floor. The postholes were generally between 0.5m and 0.75m in diameter and varied in depth from 0.15m to 0.8m. The foundation slot was 0.3m deep and was filled with a compact clay.	Postholes: pottery (9, av wt 12g, high abrasion, <i>tpq</i> 13th century, all residual). Bone fragments (4), iron slag (3), ceramic roof tile (1).	Workshop or shed. No deposits which might indicate the nature of the activity occurring here were identified.
AU 1090 Disposal area: secondary usage (CG 1605 & 1606)	Two possibly sub-rectangular cuts at least 1.8m across and 0.35m to 0.5m deep. Fills not well recorded.	No finds.	Pits possibly associated with the workshop or shed (AU 1089). No finds are recorded but these features were inadequately excavated and recorded.
AU 1091 Disposal area: cess pits (CG 1062, 1064, 1086, 1099, 1104, & 1602)	Six truncated pits at the east end of the site. The more complete examples range in size from 1.3m to 2.20m long by 0.9m to 2.10m wide. The majority were between 1.00m and 1.5m deep. The deposits were generally excavated as one but where fills have been differentiated they included layers of ash within the backfill. The backfill was usually dark pebbly soil often with charcoal flecks.	Pottery (204, av wt 18g, moderate to high abrasion, <i>tpq</i> 13th century, much residual material). Bone fragments (517), seeds, roof tile (7), iron slag (351), iron nails (2), iron objects (2), ceramic mould (1 – intrusive).	Cess pits. <i>Tpq</i> for backfill of these pits is the 13th century. In one example the very high proportion of Roman pottery and slag within the backfill suggests that this derives directly from the excavation of Roman deposits during pit digging.
AU 1092 Structure: indeterminate (CG 1082 & 1113)	One circular and three oval postholes. The diameter of the circular posthole was 0.55m and the oval postholes were c 1.0m long and 0.4m wide. The postholes were between 0.4m and 0.6m deep.	Pottery (10, av wt 10g, very high abrasion, <i>tpq</i> 13th century, probably all residual). Bone fragments (22), iron slag (7).	Line of substantial postholes. Possibly part of industrial process, for example, the remains of a tenting frame used to dry cloth after fulling.

Table 22 (cont.) Site 1 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1148 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed by the cellar of a post-medieval building.	None	Inferred line of north to south boundary. The first structural evidence for a fence boundary is seen in Period 9 Phase 2 but the spatial distribution and type of functions on the site in Period 8 Phase 3 suggests it might date to the 13th century.

Table 23 Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 9: medieval, mid-13th to mid-15th centuries			
Period 9 Phase 1 (late 13th to early 14th centuries)			
AU 1093 Movement zone: ground surface (CG 1272)	Surface of backfilled pits and three small patches of orange clay.	Bone fragments (1).	
AU 1094 Production area: workshop (CG 1230, 1235, 1236, 1237, 1239, 1240, & 1284)	A truncated scoop 0.15m deep and part of a slot 0.10m deep, filled with charcoal rich soil, were associated with an area of compact dark soil and ashy soil. To the west was a spread of ash and charcoal. To the south of the ash and charcoal deposit was a small hearth of compact burnt clay in a slight hollow.	Scoop and slot: pottery (17, av wt 17g, abrasion not noted, <i>tpq</i> late 12th to 13th centuries, all residual material). Bone fragments (2).	Ground surface formed by the backfill of Period 8 Phase 3 features, up cast from pit digging and a dump of sand. Workshop or shed to the rear of buildings fronting Birdport.
AU 1095 Structure: domestic (CG 1374, 1375, & 1385)	Layer of green-grey clayey soil 0.11m deep covered by a layer of crushed green sandstone and limestone 0.05m deep. Sandstone layer cut by a sub-oval feature 0.6m × 0.3m and 0.15m deep filled with pebbly soil.	Soil layer: pottery (268, av wt 6g, very high abrasion, <i>tpq</i> 13th century, much to all residual material). Bone fragments (686), seeds, iron slag (14), iron objects including a buckle loop and nails (28) see Crummy, Section 7.13.	Ground surface and dumps: pottery (12, av wt 8g, very high abrasion, <i>tpq</i> late 12th to 13th centuries, much to all residual material). Bone fragments (35), iron slag (1).
			This area of the site was damaged by the machine in the first stage of excavation and other deposits possibly associated with the surface and posthole were only recorded in section. The deposits may represent an external yard surface with some form of timber structure or part of a more substantial building.
			Sandstone surface and posthole.: pottery (1, av wt 4g, very high abrasion, <i>tpq</i> 13th century, all residual material). Bone fragments (6), iron slag (1).

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1096 Disposal area: cess pits (CG 1083, 1090, 1098, 1103, 1273, 1386, 1390, 1391, 1394, & 1397)	Ten truncated pits in the centre and east end of the site. Seven of the ten were sub-rectangular and the more complete examples of these ranged in size from 2.0–2.4m long by 1.4–1.9m wide. The sub-circular pits ranged between 2.2m and 3.4m in diameter. All the pits had very steep or vertical sides and were over 1.2m deep. The deposits were generally excavated as one but where fills have been differentiated they include green cessy layers at the bottom and layers of sand and ash within the backfill.	Pottery (892, av wt 20g, moderate to high abrasion, <i>tpq</i> late 13th to early 14th centuries, much residual material). Bone fragments (1957), seeds, ceramic roof tile (17), stone roof tile (1) iron slag (254), smithing waste (in pit to west of AU1148), iron nails and other objects (56), lead objects (2), lead cross (1) see Okasha, Section 7.23.1, Cu alloy pin and Cu alloy loop (2) see Crummy, Section 7.13.	Cess pits. <i>Tpq</i> for backfill of these pits was the late 13th to early 14th centuries.
AU 1148 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed by the cellar of a post-medieval building.	None	Inferred line of north to south boundary. The first structural evidence for a fence boundary is seen in Period 9 Phase 2 but the spatial distribution and type of functions on the site in Period 9 Phase 1 suggest it was present in the later 13th century.
AU 1149 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed to the north by subsequent building and to the south by post medieval quarry pits.	None	Inferred line of north to south boundary. The first structural evidence for boundary is seen in Period 9 Phase 3 but the spatial distribution and type of features on the site in Period 9 Phases 1 and 2 suggest it might date to the later 13th century.
AU 1150 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed to the north by subsequent building and to the south by post-medieval quarry pits.	None	Inferred line of north to south boundary. The first structural evidence for boundary is seen in Period 9 Phase 3 but the spatial distribution and type of features on the site in Period 9 Phases 1 and 2 suggest it might date to the later 13th century.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 9 Phase 2 (early 14th century)			
AU 1097 Movement zone: ground surface (CG 1424, 1428, & 1623)	The surface of backfilled pits and areas of new soil deposits. Where they have been recorded these new deposits were dark, sandy clay, loams 0.16m to 0.18m thick. The patch at the northern edge of the centre of the site was damaged by machining and was only recorded in section although it probably extended much further south. Not all the finds from these deposits were recovered or recorded.	Pottery (38, av wt 16g, moderate to high abrasion, <i>tpq</i> 13th century, all residual). Bone fragments (58), iron slag (2), iron fragment (1).	Ground surface formed by the backfill of Period 9 Phase 1 features and new deposits of soil probably deriving from the upcast of pit digging.
AU 1098 Production area: workshop (CG 1226, 1227, 1229, 1234, 1241, 1248, 1249, 1255, 1256, 1277, 1278, 1279, & 1285)	A rectangular structure represented by four truncated slots, two with a surviving butt-end, and three postholes. The depth of the slots was not recorded but they were 0.4m to 0.6m wide and the most western one contained large limestone blocks. The two postholes to the south of the structure were about 0.12m deep and that to the north was 0.5m deep and contained two large sandstone blocks.	Beam slots and postholes: pottery (34, av wt 16g, very high abrasion, <i>tpq</i> 12th century, all residual). Bone fragments (63), iron slag (7), roof tile (3).	Rebuilding of workshop or shed to the rear of buildings fronting Birkport first seen in Period 8 Phase 3. The pebbly soil layer to the west of the structure may represent an external yard.
AU 1099 Disposal area: cess pits (CG 1274, 1275, & 1280)	This structure was associated with a series of truncated patches of yard floor surface and dumps. Within the structure the floor was compact orange pebbly sand with small patches of soil and pebbly soil. To the west of the structure was a surface of pebbly soil containing large pieces of limestone and iron slag. On top of this was a thin layer of dark charcoal rich soil. To the east of the building, and perhaps just inside the entrance was a layer of charcoal rich soil similar to that seen in Period 9 Phase 1.	Ground surfaces: pottery (202, av wt 9g, very high abrasion, <i>tpq</i> 12th century, all residual). Bone fragments (205), iron slag (12), iron buckle and padlock key (2) see Crummy, Section 7.13, iron nails (2), roof tile (4).	Cess pits probably associated with buildings on plots fronting Birkport. The smithing waste and large numbers of iron fragments in the pit just to north of the workshop (AU 1098) may relate to the function of that or nearby buildings.
	Three truncated pits at the west end of the site. The pits were sub-rectangular, 1.5m long and at least 1.0m wide. They had steep sides and are over 1.0m deep. No primary or secondary fills were identified but the large amount of iron objects and smithing waste found in the pit just to the north of the workshop was thought to come from the backfill.	Pottery (326, av wt 18g, high abrasion, <i>tpq</i> 14th century, much residual material). Bone fragments (1090), seeds, worked bone (1) see Greep, Section 7.27, iron slag (45), iron nail (1), iron buckle and arrowhead fragment (2) see Crummy, Section 7.13, other iron objects (54), smithing waste, ceramic roof tile (36), window glass (1)	

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1101 Disposal area: cess pits (CG 1065, 1084, 1091, 1095, 1097, 1101, 1395, 1402, 1405, 1418, &1592)	Ten truncated pits in the centre and east end of the site. Six of the ten were sub-rectangular and the more complete examples of these were 1.5m to 2.8m wide with a maximum length of 3.2m. The group included one very large pit at least 5.0m in length, on the southern edge of the site. This seems very large for a cess pit but contained primary cessy deposits. The sub-circular pits range between 1.7m and 2.6m in diameter. All the pits had very steep or vertical sides and, where fully excavated, were over 1.2m deep. The deposits were generally excavated as one but where fills have been differentiated they included green cessy layers at the bottom of the features and backfills of pebbly sandy soil with charcoal flecks.	Pottery (254, av wt 30g, moderate to high abrasion, <i>tpq</i> early 14th, much to all residual material). Bone fragments (655), seeds, iron slag (51), smithing waste, iron nails (4), iron rotary key fragment, horseshoe fragment and decorated plated strip (3) see Crummy, Section 7.13, marble handle (1) see Roe, Section 7.24, roof tiles (5)	Cess pits. The finds from the backfill of the western section of this feature have not been included in the summary as they were Phase 4 deposits which had slumped into a hole as a result of the decay of organic matter.
AU 1102 Disposal area: secondary usage (CG 1594, 1595, 1597, &1598)	Four truncated pits in the centre of the site. Only a tiny proportion of one survived but the other three were about 1.4m to 1.5m wide and 1.5m to 2.2m long. They ranged in depth from 0.5m to 0.6m. The fills were not recorded.	Pottery (25, av wt 25g, abrasion not noted, <i>tpq</i> 13th century, all residual). Bone fragments (13), iron nail (1), iron slag (1). Finds were recorded from only one feature.	Severe truncation by later features and poor recording during the excavation of this area made interpretation difficult. The excavator suggested that the features may have been robbed and backfilled postholes.
AU 1103 Structure: domestic buildings: conjectural	The lack of cess pits or other features to the north of the site suggests that the timber framed buildings seen in Period 9 Phase 3 were constructed in Phase 2 or earlier.	None	Timber framed buildings fronting Powick Lane.
AU 1148 Boundary: indeterminate (CG 1270 & 1271)	Linear strip of loose, orange, pebbly soil with a patch of clay on top.	Pottery (1, av wt 40g, abrasion not noted, <i>tpq</i> 10th century, residual).	Remains of a north to south boundary dividing plots fronting Birdport and plots fronting Powick Lane.
AU 1149 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed to the north by subsequent building and to the south by post-medieval quarry pits.	None	Inferred line of north to south boundary. The first structural evidence for boundary is seen in Period 9 Phase 3 but the spatial distribution and type of features on the site in Period 9 Phases 1 and 2 suggest it might date from the later 13th century.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1150 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed to the north by subsequent building and to the south by post medieval quarry pits.	None	Inferred line of north to south boundary. The first structural evidence for the boundary is seen in Period 9 Phase 3 but the spatial distribution and type of features on the site in Period 9 Phases 1 and 2 suggest it might date from the later 13th century.
Period 9 Phase 3 (mid- to late 14th century)			
AU 1104 Movement zone: ground surface (CG 1276)	The surface of backfilled pits and unplanned layers of mixed deposits.	Pottery (66, av wt 9g, abrasion not noted, <i>tpq</i> 14th to 15th centuries, some residual material). Bone fragments (20), iron slag (2), iron nail (1).	Reconstructed ground surface formed by the backfill of Period 9 Phase 2 features and upcast of pit digging.
AU 1105 Structure: indeterminate (CG 1243, 1250, 1251, 1253, 1254, 1281, & 1283)	Two truncated slots and associated yard surfaces. Both slots were aligned north to south and were 0.1m to 0.25m deep. The most complete example was 0.55m wide and filled with a dark mixed soil containing a number of limestone and sandstone blocks. To the south of these were truncated patches of rough cobbles over which was a layer of compacted, pebbly, charcoal-rich soil with small patches of loose pebbly sandy soil.	Beam slots: pottery (24, av wt 11g, very high abrasion, <i>tpq</i> 12th century, all residual material). Bone fragments (68), iron slag (3), iron nails (1), roof tile (2). Ground surfaces: pottery (50; av wt 15g, very high abrasion, <i>tpq</i> 13th century, all residual). Bone fragments (67), iron slag (12), iron nails (3), roof tile (2).	Post and slot structure with yard surfaces to the rear of buildings fronting Birdport. Final phase of workshop first seen in Period 8 Phase 3.
AU 1106 Disposal area: secondary usage (CG 1244, 1267, & 1282)	One circular cut and two truncated features at the west end of the site. The circular cut was 1.7m in diameter and 0.9m deep with steep sides and a flat base. The fill was excavated as one but retained traces of at least three different contexts one of which may have been the remains of a wooden lining. To the west of this were the remains of a feature at least 1.2m by 0.9m and over 0.4m deep filled with loose mixed soil. To the north another cut, at least 1.0m by 0.6m and over 0.2m deep. Filled with sandy soil containing abundant large fragments of mortar and occasional clay lumps.	Pottery (96, av wt 22g, moderate abrasion, <i>tpq</i> 14th century, much or all residual material). Bone fragments (83), iron nail (1), iron slag (3), roof tile (4).	Pits probably associated with the workshop or shed (AU 1105), possibly for the storage or disposal of liquids. Backfilled with rubbish in the 14th century. The back fill of the northernmost feature suggests that its disuse may have been associated with the demolition of buildings in the area.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1107 Structure: buildings (CG 1406, 1407, 1408, 1409, 1428, 1429, 1431, 1435, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1448, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1513, 1523, 1524, 1525, 1526, 1548, 1552, 1559, 1568, 1568, 1579, 1625, & 1626)	Foundations of a range of buildings on four plots. With the possible exception of room H they all seem to be of one build. The best preserved wall was that on the eastern side of room H. Here flat limestone slabs were laid in a shallow slot 0.3m wide. On top of the limestone was a wooden beam with the remains of wattle and daub above this. Only the walls of room G and the west and east walls of room C had foundation slots 0.25m deep. It is possible, given the problems of excavation in this area, that the slight remains of other slots were not identified. In the wall between rooms C and G three stone slabs were set on edge on top of a flat laid stone to form a post setting. The stone foundations to the south of room H and between rooms F and I were completely removed by Phase 4 robber trenches.	Finds associated with the stone foundations: pottery (10, av wt 150g, high abrasion, <i>tpq</i> 14th to 15th centuries, much to all residual material). Bone fragments (6), iron slag (1), iron nails (1), roof tile (1), ceramic mould (1 – intrusive), coal (10).	Stone foundations and part of the framed buildings within four tenement plots fronting Powick Lane.
	<i>Plot 1</i> No finds		
	<i>Plot 2</i>		
	Room B Pottery (5, av wt 16g, moderate abrasion, <i>tpq</i> 14th century, much residual), bone fragments (90), roof tile (1), iron objects (3), iron slag (1), Cu alloy slag (4).		
	Room C No finds		
	<i>Plot 3</i>		
	Room D Pottery (83, av wt 18g, moderate abrasion, <i>tpq</i> 14th century, much residual), bone fragments (55), roof tile (2), iron slag (6).		
	<i>Plot 4</i>		
	In room A a series of earth and sand floors and levelling deposits slumped into a large Period 8 cess pit were seen in section. Associated with one of these floors was a pitched tile hearth and associated stake holes. The stake holes contained smithing waste.		
	<i>Plot 5</i>		
	Room E No finds		
	<i>Plot 6</i>		
	Room F No finds		
	<i>Plot 7</i>		
	Room G Pottery (8, av wt 9g, much abrasion, <i>tpq</i> 13th century, all residual) tile from hearth (30).		
	<i>Plot 8</i>		
	Room H Pottery (20, av wt 5g, much abrasion, <i>tpq</i> 14th century, much to all residual), roof tile (39), iron objects (9), iron slag (4), Cu alloy objects (8), Cu alloy slag (17 – intrusive), mould fragments (30 intrusive).		
	<i>Plot 9</i>		
	The floor of room E was not planned or recorded. F may have been an internal corridor or a passage way providing access to the back of the plot. Room G had a floor of tiles set in clay and the base of a pitched tile structure.		

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
	There was no evidence of heat associated with this feature but this may be due to its truncation by a Phase 4 robber trench. Room I Quernstone (1) A truncated posthole just to the east of the pitched tiles may be part of an associated structure. Room H originally had an earth floor later replaced by a tile floor set.	Plot 4 Surface J Pottery (5, av wt 10g, much abrasion, <i>tpq</i> 13th century, all residual), bone fragments (11), vessel glass (6).	Cess pits associated with the tenement plots fronting Powick Lane. The <i>tpq</i> for the disuse of these pits is the 14th century.
	<i>Plot 4</i>	Room K No finds	
	Room I had a floor of stone slabs over compacted stones in a sandy soil. The stone slabs included a reused quern stone. An external pebble surface (J) lay to the south of room I. A further room K to the east of room H was almost entirely destroyed by later features.	<i>Plot 1</i> Pottery (142, av wt 21g, some abrasion, <i>tpq</i> 13th century, all residual), bone (504), burnt bone (100), seeds, roof tile (2), iron fragments (5), iron slag (21), hammerscale, charcoal (1), coin (1 unidentifiable)	<i>Plot 1</i> Pottery (142, av wt 21g, some abrasion, <i>tpq</i> 13th century, all residual), bone (504), burnt bone (100), seeds, roof tile (2), iron fragments (5), iron slag (21), hammerscale, charcoal (1), coin (1 unidentifiable)
AU 1108 Disposal area: cess pits (CG 1085, 1092, 1093, 1100, 1102, 1410, 1411, 1412, 1413, 1414, 1417, & 1427)	Eight truncated pits in the centre and east end of the site. The pits were generally sub-rectangular, 1.8m to 2.0m long and 1.4m to 1.9m wide. They had steep sides and were 1.0m to 1.5m deep. Where they were excavated the lower fills were cessy with coarse sandy loamy backfill often flecked with charcoal. In some cases the cessy layers were sealed with a layer of ash or charcoal.	<i>Plot 2</i> Pottery (29, av wt 12g, some abrasion, <i>tpq</i> 14th century, much all residual), bone (15), iron nails (2), iron slag (3), limestone (2), mould core (1 – intrusive).	<i>Plot 3</i> No cess pits surviving.
		<i>Plot 4</i> Pottery (48, av. wt 20g, some abrasion, <i>tpq</i> 14th century, much to all residual), bone (85), roof tile (1), coin (1 unidentified).	<i>Others</i> Pottery (772, av wt 31g, some abrasion, <i>tpq</i> 14th century, much to all residual), bone (54), roof tile (1), floor tile (1), iron slag (1).

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1109 Disposal area: secondary usage (CG 1111)	Truncated stepped feature at south-east corner of the site. More than 2.00m long and 1.0 wide and over 0.5m deep. Filled with orange brown pebbly coarse sandy loam.	Pottery (4, av wt 11g, high abrasion, tpq 14th century, much to all residual material). Bone fragments (1), iron slag (1).	Possibly a soakaway.
AU 1148 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed by subsequent buildings.	None	North to south boundary dividing plots fronting Birdport and plots fronting Powick Lane. Seen in Period 9 Phase 2 and mapped in 18th and 19th centuries.
AU 1149 Boundary: wall	Line of sandstone and limestone wall and None foundation trench.	None	North to south boundary dividing Plots 2 and 3 on Powick Lane.
AU 1150 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed to the north by subsequent building and to the south by post medieval quarry pits.	None	North to south boundary to east of Plot 4.
AU 1151 Boundary: wall	Line of sandstone and limestone wall and None foundation trench.	None	North to south boundary dividing Plots 1 and 2 on Powick Lane.
AU 1152 Boundary: wall	Line of sandstone and limestone wall and None foundation trench.	None	North to south boundary dividing Plots 3 and 4 on Powick Lane.
Period 9 Phase 4 (late 14th to 15th centuries)			
AU 1110 Cultivation: garden (CG 1286)	Dark mixed soil up to 0.30m deep. Extends over the eastern part of the site.	No finds can be directly attributable to this phase because of its continued use as a ground surface in Period 9 Phase 5 but it contained a large amount of small, abraded, domestic refuse.	A soil developing on the western part of the site during the 14th century. Perhaps the result of gardening. Finds indicate it derives from previous occupation deposits and possibly midden waste.
AU 1111 Boundary: ditch or wall (CG 1487)	North to south linear feature at least 1.5m wide but only 0.25m deep.	No finds relating to this phase.	Shallow drainage ditch or robbed out foundation for a wall between plots fronting Birdport and those fronting Powick Lane (see AU 1048).
AU 1112 Movement zone: ground surface (CG 1447, 1501, 1503, 1519, 1520, & 1567)	Mixed soil layers on the northern edge of the site (depth not recorded) and the backfill of Phase 4 features.	Pottery (92, av wt 17g, very high abrasion, tpq 14th century, much residual material). Bone fragments (171), iron slag (12), iron nails (14), iron plate (1), lead (3), ceramic roof tile (34), ceramic mould (17 barrow loads recovered, 101 fragments retained), Cu alloy objects including strap-tag fitting, sheet offcuts and slag (102) see Crummary, Section 7.13, coal (3), charcoal (1).	Ground surface formed in two ways. Firstly by the backfilling of Period 9 Phase 3 features and the upcast of pit digging prior to bronze casting on the site. Secondly by the backfilling of robber trenches along the walls of the Phase 3 tenement buildings during the use of the site as a foundry.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1113 Production area: bronze casting (CG 1521, 1522, 1537, 1549, 1555, 1556, 1557, 1558, 1560, 1561, 1562, 1563, 1565, & 1566)	<p>Two large casting pits and associated features in the centre of the site. The most southerly pit was 1.4m in diameter and 1.0m deep. There was evidence of two castings and the remains of the last mould was found in situ in the bottom of the pit. The pit was filled with small fragments of mould material. Associated with this feature were two postholes, 0.4m to 0.6m in diameter and 0.15m to 0.25m deep filled with fine soil, and spreads of broken mould, ash, and charcoal. The second pit was 1.1m in diameter and 1.0m deep. Here again there was evidence of two castings and <i>in situ</i> mould. Possibly associated with this feature was a rectangular pit 1.9m by 0.65m and 0.15m deep which had a thin layer of charcoal on its base and sides and may have been timber lined.</p>	<p>Finds from back fill of pits and associated structures: pottery (101, av wt 14g, high abrasion, <i>tpq</i> 14th to 15th centuries, much residual material). Bone fragments (160), iron slag (64), ceramic mould (13,279g), Cu alloy slag (55), Cu alloy objects (62), iron objects (35 – including nails, hinge, belt-plate, stud boss, thick plate), lead (2), ceramic roof tile (178), slate (1), mortar (2), coal (18), flint (1).</p> <p>Finds from associated floors and dumps: pottery (18, av wt 4g, high abrasion, <i>tpq</i> 14th to 15th centuries, all residual material). Bone fragments (75), seeds, iron slag (9), ceramic mould (>2,420g), Cu alloy slag (154), Cu alloy fragments (123), charcoal (1), iron anvil for making Cu alloy wire, padlock case fragments and padlock bolt fragments (5) see Crummy, Section 7.1.3, other iron objects (65 including nails, chain links, plates, spike loops, blade, wire), smithing waste, lead (1), ceramic roof tile (36), floor tiles (2), stone fragments (3).</p>	<p>Two bell casting pits and associated structures. The two postholes are probably the remains of a shearlegs structure allowing the bell mould to be lifted in and out of the pit. The timber-lined pit may have been used to hold water.</p> <p>Furnace and associated external yard surface with traces of structures.</p>
AU 1114 Production area: furnace (CG 1096, 1543, & 1589)	<p>The remains of a clay bonded tile and sandstone wall c.1.8m long and 0.4m wide surviving to 0.55m high. The wall overhang and may have been curvilinear but this feature had been very truncated by later activity. The north side of the wall was burnt. To the south of this structure was a surface of gravel with patches of charcoal, burnt sandstone, limestone, mortar, tiles, and mould material. On this surface were flat limestone and sandstone blocks forming a right angle and a number of stake holes.</p>	<p>Finds from furnace construction: pottery (10, av wt 38g, abrasion not noted, <i>tpq</i> 14th century, some residual material). Bone fragments (10), ceramic mould (noted on site but not retained), Cu alloy slag (15), stone mortar (1) see Roe, Section 7.24, ceramic roof tile (5).</p> <p>Finds from yard surface: pottery (4, av wt 8g, high abrasion, <i>tpq</i> 12th century, all residual material). Bone fragments (2), iron object (1), ceramic mould (235g), Cu alloy slag (10), Cu alloy object (1), ceramic roof tile (4).</p>	

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1115 Production area: smithy (CG 1449, 1450, 1451, 1452, 1464, 1465, 1466, 1502, 1504, 1505, 1506, 1507, & 1508)	A group of features at the southern limit of the site all very disturbed by later activity. From the west these were: a rectangular clay-lined pit 0.75m long, 0.45m wide and 0.15m deep; an oval, burnt clay hearth 1.5m long by 0.7m wide; a patch of crushed sandstone 0.7m long and 0.6m wide; a clay-lined circular cut 0.75m in diameter and 0.4m deep; a fragment of a red sandstone floor and padstones with associated fire residues and a posthole 0.3m in diameter and 0.2m deep.	Pottery (312, av wt 14g, moderate abrasion, <i>tpq</i> 14th century, much residual material). Bone fragments (787 – including small mammal and fish), seeds, iron slag (8), smithing slag, iron nails (26), iron tanged blade fragment (1) see Crummy, Section 7.13, ceramic mould (22), Cu alloy slag (7), Cu alloy strip offcut and two other fragments (3) see Crummy, Section 7.13, lead object (2), ceramic roof tile (11), charcoal (2), mortar (1).	A timber framed structure and associated hearths and clay-lined water vats. Possibly a smithy.
AU 1116 Disposal area: secondary (CG 1415, 1422, 1423, 1437, 1577, 1628, & 1629)	Six pits in the centre of the site. The two features between AU 1113 and AU 1114 were not fully excavated or recorded. The two pits to the south-west were large and between 0.5m and 1.0m deep. They were backfilled with light coloured soils with large amounts of ceramic mould fragments. The two remaining features were oval cuts between 0.25m and 0.3m deep and backfilled with mould rich soil.	Pottery (110, av wt 17g, high to moderate abrasion, <i>tpq</i> 14th to 15th centuries, much to all residual material). Bone fragments (261), seeds, iron slag (56), smithing slag, iron objects including chain links (12) see Crummy, Section 7.13, ceramic mould (>97 + 6,440g), Cu alloy slag (43), Cu alloy fragments including strip offcuts (10) see Crummy, Section 7.13, charcoal (1), ceramic roof tile (5), mortar (1).	Pits associated with the ironworking and bronze founding activity on the site. The primary function cannot be determined but they were backfilled with large amounts of metal working debris and domestic refuse probably towards the end of the 14th century or early 15th century.
AU 1152 Structure: building (CG 1531)	The positioning of the Phase 5 furnace building (see AU 1125) directly on top of the walls of the Phase 3 Room G (see AU 1107) indicates that part if not all of this structure was visible in this phase. A compact clay surface respects the eastern wall of this structure.	Pottery (35, av wt 12g, moderate abrasion, <i>tpq</i> 14th to 15th centuries, much to all residual), bone fragments (51), ceramic roof tile (44) ceramic floor tile (2) plaster (44), Fe slag (1), lead and Cu alloy object (1), iron (5 including nails and fragments of a padlock), Cu alloy slag (209), ceramic mould >3,550g, stone fragments (3).	Reuse of part of the timber framed buildings seen in Phase 3.
Period 9 Phase 5 (15th century)			
AU 1117 Movement zone: ground surface (CG 1286)	Dark mixed soil up to 0.30m deep. Extends over the eastern part of the site.	Pottery (488, av wt 14g, very high abrasion, <i>tpq</i> 14th century, much residual material). Bone fragments (507), iron slag (50), ceramic mould (1), iron tanged blade fragment, padlock key and horseshoe fragment (3) see Crummy, Section 7.13, other iron objects including nails (11), charcoal (1), window glass (1), ceramic roof tile (19), mortar (1), lead (1).	Ground surface formed by top of Period 9 Phase 4 garden soil.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1118 Structure: indeterminate (CG 1343, 1344, & 1345)	Three features possibly truncated from the top by the initial machining of the site. Surviving depth was 0.2m. Filled with mixed dark soils. The slot to the south also contained branch-like seraps of charcoal, lumps of clay and fragments of tile.	Pottery (84, av wt 15g, very high abrasion, <i>tpq</i> 14th century, much to all residual material). Bone fragments (113), iron slag (12), iron object (1), Cu alloy collar (1) see Crummy, Section 7.13, ceramic roof tile (14+), floor tile (1), charcoal (9).	Possible postholes and beam slot of a structure behind the Birdport frontage.
AU 1119 Structure: indeterminate (CG 1296, 1329, & 1331)	Truncated linear feature 0.5m wide and 0.25m deep filled with orange sandy soil. To the north was an cut containing a clay-lined feature 0.8m in diameter.	Pottery (39, av wt 12g, very high abrasion, <i>tpq</i> 14th century, much to all residual material). Bone fragments (111), iron slag (11), iron objects including a rotary key (4) see Crummy, Section 7.13, silver coin (1 – not identified), ceramic roof tile (28).	Beam slot and clay-lined water vat possibly associated with AU 1118.
AU 1120 Structure: indeterminate (CG 1350, 1353, 1354, 1357, & 1366)	Group of four features at southern edge of the site. All features were probably truncated from the top by the initial machining of the site. Surviving depths were 0.1m to 0.4m. The circular cut to the west was 0.4m in diameter and filled with fine grey soil. The truncated cuts to the east were at least 0.6 to 0.9m across with very steep sides and mixed soil backfills.	Pottery (74, av wt 5g, very high abrasion, <i>tpq</i> 14th century, much to all residual material). Bone fragments (68), iron slag (4), iron objects (5), Cu alloy slag (1), Cu alloy ring (1) see Crummy, Section 7.13, other Cu alloy objects (9), ceramic roof tile (22), charcoal (4).	Posthole/s and possible beam slot of a structure at the back of the plot fronting Birdport.
AU 1121 Disposal area: cess pits (CG 1299, 1363, & 1364)	Three truncated features. The two cuts to the west were the bases of features truncated by the construction of a Period 11 cellar. Surviving dimensions were c 1.2m by c 1.0m across. The depths were not recorded but both features had fills of fine green soil. The large feature to the east was probably not one, but a series of intercutting steep-sided features not fully recorded. The group was 3.8m by over 3.1m but the depth was not noted.	Pottery (510, av wt 22g, moderate to high abrasion, <i>tpq</i> 14th century, much residual material). Bone fragments (640), iron slag (36), iron padlock key and hasp (2) see Crummy, Section 7.13, other iron objects (16), ceramic roof tile (26), stone roof tile (1).	Cess pits.
AU 1122 Disposal area: secondary usage (CG 1319, 1320, 1321, 1322, 1330, & 1332)	Group of three truncated shallow features. That to the east was at least 1.4m by 1.3m and is 0.4m deep. Its first fill was a mixed soil. Above that was a light grey sandy soil, dumps of fire ashes and finally a mixed soil backfill. The other two features were at least 1.5m to 2.0m long and 1.0m wide and 0.3m deep. They were filled with mixed soil with large amounts of residual iron slag.	Pottery (267, av wt 15g, high abrasion, <i>tpq</i> 14th century, much to all residual material). Bone fragments (118), iron slag (>56), iron nails (3), Cu alloy object (1), ceramic roof tiles (18).	Shallow features possibly associated with activity represented by AU 1118, 1119, 1120, and 1121. Primary function not determined although the excavator suggested that the most easterly of the group had been open for some time.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1123 Boundary: ditch or wall (CG 1487)	North to south linear feature at least 1.5m wide but only 0.25m deep.	Pottery (9, av wt 12g, moderate abrasion, <i>tpq</i> 14th century, much or all residual material. Bone fragments (2), iron slag (2), ceramic roof tile (11).	Shallow drainage ditch or robbed out foundation trench for a wall between plots fronting Birdport and those fronting Powick Lane first seen in Phase 4. The artefact assemblage suggests that if it was a ditch it was back filled at some point after the later 14th century. If it was a wall foundation the finds may relate to its construction in Period 9 Phase 4
AU 1124 Movement zone: ground surface (CG 1453, 1457, 1462, 1463, 1509, & 1510)	Surface of backfilled pits and extensive areas of mixed soil containing mould fragments and waste from bronze casting. The depth of these deposits was not recorded.	Pottery (502, av wt 17g, moderate to high abrasion, <i>tpq</i> 14th to 15th centuries, much residual material). Bone fragments (993), seeds, iron slag (22), iron objects (24), hammerscale, ceramic mould (<i>c</i> 50 fragments recovered), Cu alloy slag (30), Cu alloy objects including riveted bar fragment, sheet offcuts, bar, buckles, belt-plate, strap-tag, plate fragments, objects, and offcuts (74) see Crummy, Section 7.13, iron nail (1), ceramic roof tile (64), mortar (1), charcoal (2), whetstone (1) see Roe, Section 7.24.	Ground surface contemporary with the second phase of the bronze foundry to the east of boundary ditch AU 1123. The deposit contains debris from bronze casting but also substantial amounts of domestic refuse indicating that it derives from the upcast of the casting pits, clay-lined pits, and other negative features.

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1125 Production area: furnace, bell casting pit and associated features (CG 1430, 1432, 1433, 1436, 1458, 1459, 1460, 1488, 1489, 1490, 1491, 1512, 1514, 1515, 1517, 1518, 1528, 1529, 1532, 1538, 1569, 1570, 1572, 1574, 1575, & 1627)	<p>A substantial structure of clay bonded tile, sandstone, and limestone. The best preserved wall was to the north. This was an abrasion, <i>tpq</i> 14th to 15th centuries, much to all residual material). Bone fragments (483 including fish and birds), seeds, iron slag (94), smithing waste (600+), iron tanged blade, box fitting and ?collar fragments (4) see Crummy.</p> <p>eastern and western walls were not so well preserved but seem to have been about 0.2m wide. The northern and eastern walls were constructed in shallow foundation slots. The western wall was thought by the excavator to have been built straight onto the footings of Phase 3 tenement building. The first floor of this structure was burnt earth. Later a tile floor set in clay was constructed. This seemed to have originally covered the whole furnace area. At some point a shallow scoop was excavated in the tile floor. This was filled with foundry debris prior to the construction of the south wall and the creation of two chambers. In the northern chamber a clay-lined scoop had been used to melt lead. No floor surface survived in this area. To the east of this structure was a cobble yard or path resurfaced at least once and including patches of crushed mould material. To the east of this was a fragment of a burnt tile floor set in clay and a linear east to west slot 0.4m wide and 0.2m deep. To the west of the main structure was a circular pit. This was 1.7m in diameter and 1.0m deep with vertical sides. Within this pit were the remains of three <i>in situ</i> circles of clay, the remains of, or supports for, ceramic moulds. The first was sitting on the bottom of the pit. The pit was partly filled in and another base created. On this stood another clay circle. The operation was repeated for a third time and then the pit was completely backfilled with mould debris and other rubbish. Next to the casting pit were two rectangular clay-lined pits 3.0m long by 1.4m wide and 0.6m to 0.8m deep.</p>	<p>Finds from backfill of negative features: pottery (379, av wt 14g, very high abrasion, <i>tpq</i> 14th to 15th centuries, much to all residual material). Bone fragments (483 including fish and birds), seeds, iron slag (94), smithing waste (600+), iron tanged blade, box fitting and ?collar fragments (4) see Crummy.</p> <p>Section 7.1.3, other iron objects including nails (78), ceramic mould (>6, 144g + 17), Cu alloy slag (386), Cu alloy objects (6) see Crummy, Section 7.1.3, ceramic roof tile (122), floor tile (2), Roman roof tile (2), stone floor tile (1), whetstone (1) see Roe, Section 7.24, vessel glass (6), flint (1).</p>	<p>Furnace for melting copper alloy with associated bell casting pit, clay-lined water vats, and cobbled yard surfaces.</p>

Table 23 (cont.) Site 1 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1126 Production area: indeterminate (CG 1454, 1455, 1456, 1461, 1493, & 1511)	A group of disparate features to the north-west of AU 1125. To the south were <i>tpq</i> 14th century, much residual two limestone blocks. To the north-west of these was a sandstone packed posthole mould (7), Cu slag (5), ceramic roof tile 0.65m long by 0.55m wide and 0.3m deep. Near the northern edge of the site was a very truncated area of clay bedded tile and sandstone wall 0.25m wide and to the east of that a small oval clay-lined pit 0.5m in diameter backfilled with mixed brown soil.	Pottery (16, av wt 17g, high abrasion , material) Bone fragments (11), ceramic mould (7), Cu slag (5), ceramic roof tile (14), coal (4).	Ephemeral evidence of a structure or structures probably related to metal working. The northern part of this area was identified as a smithy in Phase 4 and this function may have continued.
AU 1127 Production area: furnace (CG 1096, 1544, & 1635)	The furnace wall identified in Phase 4 with associated surfaces of compacted silty clay and mortar and compact yellow clay. Depth not recorded.	Finds from yard surface: pottery (14, av wt 332g, moderate abrasion, 114th century, some residual material). Bone fragments (6), iron slag (2), iron object (1), ceramic mould (retained c 100g), Cu alloy slag (17), Cu alloy objects (3), charcoal (3).	Furnace and associated external yard surface.
AU 1128 Disposal area: secondary usage (CG 1578, 1587, 1588, 1599, & 1600)	Group of six truncated features not fully recorded. Depths and fills not known.	Pottery (125; av wt 26g, high abrasion or abrasion not noted, <i>tpq</i> 15th century, much residual material). Bone fragments (93), iron slag (5), iron objects (2), ceramic mould (retained 1447g), Cu alloy slag (23), Cu alloy objects (8), ceramic roof tile (12), mortar (sample).	Features possibly associated with activity represented by AU 1125 and 1126. Primary function not determined but backfilled with rubbish including foundry waste.

Table 24 Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 10: late medieval/post-medieval: later 15th to late 16th centuries			
Period 10 Phase 1 (late 15th to early 16th centuries)			
AU 1129 Movement zone: ground surface (CG 1301, 1302, 1303, 1304, 1305, 1333, 1334, & 1481)	Patches of thin deposits surviving under the machining at the western part of the site. These were dark with charcoal and ash and a relatively large number of finds. The thickness of these layers was not recorded.	Pottery (284, av wt 12g, very high abrasion, <i>tpq</i> late 15th to early 16th centuries, much residual material). Bone fragments (383), seeds, iron slag (80), iron arrowheads, horseshoe fragment, and staple and ring fragment (4) see Crummy, Section 7.13, other iron objects including nails (23), Cu alloy slag (6), Cu alloy objects (4), ceramic roof tile (45), brick (1), window glass (1), architectural fragment (1), charcoal (2).	Ground surface. The large amount of abraded, residual pottery in these deposits indicates that they are probably derived from the upcast of pit digging.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1130 Disposal area: cess pits (CG 1246, & 1288)	Truncated sub-rectangular cuts. The most northerly was at least 1.8m wide and 0.8m deep with steep sides and a flat base. It was filled with compact soil containing a lot of slag and charcoal. The more southerly pit is very truncated, the top having been removed by machining. It is 1.3m long by at least 0.8m wide but only the bottom 0.3m survived.	Pottery (326, av wt 8g, very high abrasion, <i>tpq</i> late 14th to 15th centuries, much to all residual material). Bone fragments (138), iron slag (11), iron nails (2), plaster (2), vessel glass (1), quernstone (1) see Roe, Section 7.24.	Cess pits.
AU 1131 Boundary: ditch (CG 1289, 1290, 1291, 1292, & 1293)	A truncated but very large linear feature running north to south. The cut was 1.4m wide and 1.7m deep with a fairly flat and level base. The lower fill was a thin layer of orange sand. Backfilled with mixed dark soil and cessy material.	Finds from backfill. Pottery (955, av wt 20g, very high abrasion, <i>tpq</i> late 15th to early 16th centuries, much to all residual material). Bone fragments (679), iron slag (47), iron objects including tanged blade and nails (41) see Crummy, Section 7.13, Cu alloy including sheet offcuts (1) see Crummy, Section 7.13, ceramic roof tile (117), ceramic floor tile (1), Roman tile (1), vessel glass including fragments of urinal (49) see Cool, Section 7.18, spindle whorl and whetstone (2) see Roe, Section 7.24, coal (1).	Boundary ditch. The bottom fill was probably formed by erosion while the ditch was in use. The backfill was cessy material. And the large quantity of pottery and other domestic refuse from the fill suggests that it was derived from pit digging.
AU 1132 Disposal area: secondary usage (CG 1300, 1315, 1318, 1336, & 1356)	Five truncated features at the western end of the site. Four of these features were close together and may represent the remains of a structure associated with the dump deposits in this area (AU 1129). These varied in width but were all about 0.35m to 0.5m deep. They were filled with mixed soils, in one case including flecks of mortar. The other feature lay to the east of this group and may not be related. This was a linear feature 0.8m wide and 0.4m deep with very steep sides.	Pottery (44, av wt 27g, moderate abrasion, <i>tpq</i> late 15th to early 16th centuries, some residual material). Bone fragments (124), iron slag (26), iron objects (3), Cu alloy terminal fragment (1), iron ring (1), lace end (2) see Crummy, Section 7.13, ceramic roof tile (32), plaster (2), charcoal (1).	Five features of unknown function. The group in the centre may be structural elements. The feature to the east may be a boundary ditch. <i>Tpq</i> for the disuse of these features is the late 15th to early 16th centuries.
AU 1133 Movement zone: ground surface (CG 1494, 1497, & 1601)	Patches of mixed soils and pebbles surviving under the machining in the central and eastern part of the site.	Pottery (72, av wt 20g, high abrasion, <i>tpq</i> 15th century, some residual material). Bone fragments (192), seeds, iron slag (1), iron ring (1), iron nails (17), smithing waste (500+), ceramic mould (40g), Cu alloy slag (4), Cu alloy fragments (4), ceramic roof tile (13), ceramic tile with Cu alloy on surface (1), worked bone (1) see Greep, Section 7.27.	Most of the deposits in this phase probably derived from the upcast of pit digging but some demolition debris was also present.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1134 Production area: demolition (CG 1530)	Spread containing many ceramic tiles, restricted to area of furnace seen in Period 9 Phase 6.	Pottery (93, av wt 15g, abrasion noted, <i>tpq</i> late 15th to early 16th centuries, some residual material), Bone fragments (20), iron slag (7), iron objects (4), ceramic mould (625g), Cu alloy slag and sheet offcuts (128) see Crummy, Section 7-13, ceramic roof tile (13).	Deposit deriving from the demolition of the furnace at some date after AD 1380 to 1410.
AU 1135 Disposal area: cess pit (CG 1434)	Oval cut 1.6m by 1.9m. Truncated from the top with only the bottom 0.5m surviving. Lower fill of green soil upper fill included mortar.	Pottery (12, av wt 17g, very high abrasion, <i>tpq</i> 15th century, much residual material), Bone fragments (6), iron slag (2), iron objects (2), Cu alloy slag (3).	Cess pit.
AU 1136 Structure: indeterminate (CG 1492, 1496, & 1585)	Three sub-circular cuts in the central and eastern part of the site. Range from 0.85 to 1.0m in diameter. The most northerly had been truncated from the top and only the bottom 0.15m survives. This was filled with slightly burnt yellow brown clay. The largest feature, at the east end of the site, was 0.35m deep and was backfilled with a mixed soil containing occasional large stone blocks and ceramic tiles. The third was a sub-circular cut 1.0m in diameter and 0.5m deep. The fill of this included mortar and charcoal.	Pottery (60, av wt 16g, moderate abrasion, <i>tpq</i> late 15th to early 16th centuries, some residual material). Bone fragments (103), iron objects (3), iron slag (18), Cu alloy slag (4), ceramic roof tile (28), charcoal (1).	Postholes.
AU 1148 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed by subsequent buildings.	None	North to south boundary dividing plots fronting Birdport and plots fronting Powick Lane. Seen in Period 9 Phase 5 and mapped in 18th and 19th centuries.
Period 10 Phase 2 (early to mid-16th century)			
AU 1137 Movement zone: ground surface	All contemporary ground surfaces were removed in this area by later activity including the machining of site prior to excavation.	None	No contemporary ground surface survived to the west of AU 1148.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1138 Production area: quicklime production (CG 1307, 1308, 1309, 1312, 1313, 1316, & 1317)	A line of three pits and an associated shallow cut. The pits were circular, 1.2m to 1.3m in diameter and 0.75m to 0.9m deep. Inside each pit was set a wooden barrel externally coated with a layer of clay 0.1m to 0.15m thick. The barrel wood had largely decomposed leaving only its impression in the clay. The gap between the cut and the clay was backfilled with mixed soils. Primary deposits of lime burning and slaking residues containing coal and a fragment of a lime burning clamp were identified at the bottom of the barrels (Marsden, Section 7.25). The barrels were backfilled with cessy deposits containing many finds. To the west of the line of pits was an irregular shaped cut at least 1.4m wide and 0.4m deep. This contained a thin layer of ash and charcoal which resembled a liming and small burnt bone fragments. This feature was backfilled with mixed soils.	Finds from construction and primary deposits: pottery (362, av wt 13g, very high abrasion, <i>tpq</i> 16th century, much residual material). Bone fragments (1014), seeds, bone handle (1) see Greep, Section 7.27, iron slag (124), iron objects (18), Cu alloy slag (1), Cu alloy objects (3), ceramic roof tile (85), brick (2), window glass (1), stone mortar and whetstones (3) see Roe, Section 7.24, wood (8), charcoal (4), vitrified ceramic with lime and lime samples (3) see Marsden, Section 7.25.	Barrel-lined pits for slaking burnt limestone to produce quicklime.
AU 1139 Disposal area: cess pits (CG 1341, 1342, & 1355)	Two sub-rectangular cuts in the western part of the site. The largest was 1.6m long, over 1.0m wide, 0.8m deep and with very steep sides. The lower fill was a dark compact soil and the backfills lighter yellow and grey soils. The smaller pit was 0.9m wide, at least 1.0m long and 1.0m deep with very steep sides and a flat base. This was backfilled with a number of mixed soils.	Pottery (74, av wt 23g, moderate abrasion, <i>tpq</i> 16th century, some residual material). Bone fragments (159), iron slag (21), iron objects (14), vessel glass (1), ceramic roof tile (86), architectural fragment (1), charcoal (1), medieval ?penny and Edward I-II halfpenny, AD 1280–1377 (2) see Mayhew, Section 7.22.	Cess pits.
AU 1140 Structure: indeterminate (CG 1247, & 1349)	Two small cuts at the western end of the site. Both are truncated from the top and the features are only 0.2m to 0.3m deep. Filled with mixed soil.	Pottery (20, av wt 31g, very high abrasion, <i>tpq</i> 14th to 15th centuries, all residual material). Bone fragments (36), iron slag (1), iron object (1).	Two postholes. Indeterminate structures.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1141 Disposal area: secondary usage (CG 1294, 1337, 1338, 1339, & 1351)	Three features in the western part of the site. The best preserved was that just to the south of the barrel-lined pits (AU 1138). This was sub-rectangular, 1.1m long and at least 0.6m wide. It was 0.12m deep with sloping sides and was filled with a mixed grey soil containing tile and fragment (1). a ceramic water channel. The other two features were so truncated that the original shape was difficult to distinguish. They were 0.3m deep and were filled with mixed soils with few finds.	Pottery (60, av wt 38g, moderate abrasion, <i>tpq</i> 16th century, much residual material). Bone fragments (85), iron slag (9), iron objects (5), ceramic mould (1), ceramic roof tile (50), brick (3), ceramic water channel (1), limestone fragment (1).	Heavily truncated features. These may be structural elements and if so might relate to the postholes in this area (AU 1140).
AU 1142 Movement zone: ground surface (CG 1495, 1499, 1500, 1527, & 1584)	Large area of spreads of mixed soil containing large amount of sandstone and limestone fragments, tile, and mortar. Depth not recorded.	Pottery (347, av wt 16g, very high abrasion, <i>tpq</i> 16th century, much residual material). Bone fragments (122), worked antler (1) see Greep, Section 7.27, iron slag (35), iron objects (15), ceramic mould (962g), Cu alloy slag (126), Cu alloy objects (22), ceramic roof tile (86 not all recovered), brick (5), plaster (1), burnt clay (2), window glass (1), stone fragments noted on context cards but not recovered.	Ground surface created from upcast of pits and demolition of structures associated with the bronze foundry.
AU 1143 Movement zone: ground surface (CG 1545)	Compact clay layer immediately under machining. Depth not recorded.	Pottery (50, av wt 17g, abrasion not noted, <i>tpq</i> 16th century, much residual material, a few shreds of intrusive 19th-century pottery). Bone fragments (395), bone 'pen' (1) see Greep, Section 7.27, iron slag (2488), iron objects mainly nails but also wire, chain link, plate and rivet hole, tool head, and sheet metal (64), ceramic mould (53,359g), Cu alloy slag (2774). Cu alloy objects including pins, brooch, vessel rim, sheet fragments, and finger-ring (11) see Crummy, Section 7.13, lead objects (5), ceramic roof tile (206), ceramic floor tile (2), brick (2), mortar (1), stone fragment (1), charcoal (13), Cu alloy coin (1 not identified).	External surface associated with the extraction/rubbish pits (AU 1144) incorporating large amounts of debris from the bronze foundry.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1144 Extraction/disposal area: pits (CG 1547, 1581, 1582, 1631, & 1632)	Three large pits in the centre and east end of the site. The only fully excavated pit was that to the west. This was 7.5m by 5.5m and 3.5m deep. To the east of this was another massive feature 10.0m by 4.0m. This was not fully excavated but was at least 2.5m deep. Between the two large pits was a smaller feature 2.9m wide at least 4.2m long and only 0.7m deep. The fills of these features were largely sandy loams with layers of sand, building debris and mixed soils.	Pottery (3587, av wt 17g, high abrasion, tpq mid-16th century, some residual material). Bone fragments (2527), bone die, bone points and a bone tuning peg (4) see Greep, Section 7.27, shell (14), seeds, insect remains, iron slag (578), iron objects largely nails but including horseshoe and sheet metal fragments (334) see Crummy, Section 7.13, ceramic mould (5436g), furnace material and hearth bottom (13), crucible fragments (7) see Taylor, Section 7.12, candlestick mould (1) see Taylor, Section 7.11, Cu alloy slag (416), Cu alloy objects including cauldron foot and other vessel fragments, spoon handle, candlestick fragments, balance arm, rings, pins, wire loops, lace ends, strap-tags, buckles, belt-plates, studs, and bosses (565) see Crummy, Section 7.13, lead objects (4), stone roof tile (4), ceramic roof tile (465), floor tile (7), brick (6), window glass (3), vessel glass including medieval bottles (45) see Cool, Section 7.18, limestone fragments (6), architectural fragments (1), mortar (1), plaster (5), whetstones (2) and jet bead (1) see Roe, Section 7.24, charcoal (68), English jetton AD 1292-6, Cu alloy French jetton 16th century, Cu alloy English jetton early 14th century, medieval English penny (4) see Mayhew, Section 7.22, flints (2).	Quarry pits. Rubbish pits used for the large scale disposal of domestic waste in the earlier 16th century. The pits went out of use prior to the construction of the almshouses at some time after AD 1567.
AU 1145 Disposal area: secondary usage (CG 1438, 1498, & 1546)	Three very truncated features observed at the base of the machining. Only the bottom deposits survived. The two features to the west were 0.25m deep and filled with mixed soil. The dimensions of the feature to the east were not recorded but it must have survived to some depth as a very large number of finds were recovered.	Pottery (430, av wt 23g, high abrasion, tpq 16th century, much residual material). Bone fragments (2766), seeds, iron slag (322), iron objects mainly nails (218), ceramic mould (24,638g), Cu alloy slag (402), Cu alloy objects including pins belt-plate, terminal fragment, and wire objects (3), ceramic roof tile (263), ceramic floor tile (6), stone tile (2), brick (3), plaster (3), mortar (1), glass (4), charcoal (44), whetstone (2), amber bead (1) and jet bead (1) see Roe, Section 7.24.	Three pits filled with debris from the bronze foundry and domestic waste, probably derived from the upcast of pit digging. The majority of the finds came from the most easterly feature which may have been a cess pit.

Table 24 (cont.) Site 1 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 1146 Structure: indeterminate (CG 1539)	Three small cuts. Two were rectangular and 0.45m and 0.15m deep and one was circular and 0.3m deep.	Pottery (39, av wt 19g, abrasion not noted, <i>tpq</i> 16th century, little residual material). Bone fragments (169), iron slag (1), iron objects (3), Cu alloy lace end and wire (3) see Crummy, Section 7.13, ceramic roof tile (20), mortar (6)	Line of postholes. May relate to a building or a fence.
AU 1147 Disposal area: indeterminate (CG 1295, 1297, 1298, 1340, 1346, 1347, & 1348)	The bottoms of seven intercutting features seen at the base of the machining.	Pottery (361, av wt 21g, moderate to high abrasion, <i>tpq</i> 16th century, some to much residual material). Bone fragments (639), shell (6), iron slag (12), iron objects and nails (36), ceramic mould (142g), Cu alloy slag (11), Cu alloy objects (19), ceramic roof tile (167), brick (7), mortar (3), window glass (1), vessel glass (8).	Possible cess pits, slots, and unidentified features. The surviving backfill indicates that these features went out of use during or after the 16th century.
AU 1148 Boundary: conjectural	No physical evidence was recovered but the area was heavily disturbed by subsequent buildings.	None	North to south boundary dividing plots fronting Birdport and plots fronting Powick Lane. Seen in Period 9 Phase 5 and mapped in 18th and 19th centuries

Table 25 Site 3 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3: Roman, mid-1st century to early 2nd century (c AD 50–AD 120)			
Period 3 Phase 1			
AU 3002 Cultivation: ploughsoil (CG 3005)	Site-wide layer of loamy sand, c 0.15m deep, overlying natural sands and gravels and apparently sealing Period 2 activity.	Pottery (1).	Ploughsoil. Ploughing responsible for truncating upper edges of Period 2 features which may originally have been dug from this ground surface (see also soil report). Identical deposits noted on all 3 other sites.
Period 3 Phase 2			
AU 3003 Movement zone: ground surface (CG 3005)	Top of ploughsoil AU 3002 cut by numerous features.	See AU 3002.	Phase 2 ground surface terminating Phase 1 ploughing activity.
AU 3004 Boundary: ditch: ?defensive (CG 3011 & 3115)	V-shaped ditch, c 3.80m wide and c 1.70m deep, with rectangular slot c 0.30m wide in base. Oriented east to west, observed length c 6.50m. Mixed sandy gravel fill in lower c 0.80m of ditch.	Pottery (2).	Possibly a defensive ditch on basis of size and shape, with a cleaning-out slot and rampart slighting.

Table 25 (cont.) Site 3 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3 Phase 3			
AU 3005 Disposal: pits (CG 3007, 3008, & 3009)	Two pits, depths >0.65 –1.10m, one (CG3008) containing a secondary fill (CG3009).	Pottery (10, redeposited, av wt 12g, very high abrasion), <i>tpq c AD 70</i> . Bone fragments (21), burnt daub (6), vessel glass (1).	Pits for cess and domestic rubbish.
AU 3006 Structure/s: indeterminate (CG 3006, 3010, & 3015)	Linear east to west gully (CG3006), c 0.90m wide and c 0.45m deep; flat-based cut (CG3010), c 0.20m wide and c 0.15m deep; 2 stakeholes (CG3015), c 0.10 deep.	None. (1 medieval sherd, contaminant).	Elements of one or more structures of indeterminate form and function.
AU 3007 Disposal: drain & backfilling (CG 3012, 3013, & 3070)	East to west gully (CG3012), c 1.00m wide and c 0.45m deep, dipping along length to east and entering ditch AU 3004, to north. Backfilling of gully and upper part of ditch (AU 3004), and subsidence in ditch backfill levelled by charcoal dumps (CG 3070).	Pottery (245, redeposited, av wt 10g, high abrasion), bone fragments (241), tile (3), vessel glass (1), burnt daub (1), copper alloy (4), including a Hod Hill brooch and a piece of <i>lorica segmentata</i> (armour), coins (2, 1 Iron Age, 1 Nero) and human bone (2). Also, mortar (132) and iron objects (22) from the charcoal dumps. <i>tpq c AD 75</i> . (1 samian sherd dating c AD 130–55, intrusive).	Use of earlier defensive ditch for drainage, and subsequent deliberate backfilling with mixed rubbish, probably trawled from the surrounding area.
AU 3008 Structure: timber: domestic building (CG 3016, 3017, & 3018)	Restricted soil layer, with limit to north, area c 3.0m × 2.8m. The layer was flecked with abundant fragments of burnt daub. Dug into the surface of this soil were four postholes, c 0.25–0.40m deep, three with stone packing. A clay hearth (failed archaeomagnetic analysis) was placed over one of these robbed and backfilled postholes.	Pottery (33, residual, av wt 15g, high abrasion), plaster (7), bone fragments (5), tile (3). <i>Tpq c 75 AD</i> .	Timber building of unknown size with a trampled earth floor. Daub flecking suggests wattle and daub walls, possibly with a tiled roof. The hearth is the only internal feature. Function indeterminate, possibly domestic.
Period 3 Phase 4			
AU 3009 Disposal: pit (CG 3021)	Pit, c 0.65m deep.	Smithing slag (11), bone fragment (1).	Cess pit (on size and paucity of finds), upper edges truncated by cultivation (AU 3010).
AU 3010 Cultivation: indeterminate (CG 3019, 3020, 3022, 3024, 3029, & 3033)	Site-wide layer of fine sandy loam, c 0.10m thick.	Pottery (4, redeposited, av wt 15g, high abrasion), bone fragments (8).	Transformation of naturally formed soil by low-level cultivation (gardening).
Period 3 Phase 5			
AU 3011 Movement zone: ground surface (CG 3019, 3020, 3022, 3024, 3029, & 3033)	Top of AU 3010, cut by Phase 5 features.	See AU 3010.	Termination of Phase 4 gardening by ground surface associated with Phase 5 features.
AU 3012 Structure: indeterminate (CG 3054)	Restricted area of cobbling, crushed and vertically displaced to south.	1 briquetage sherd (Period 2)	Foundation for structure of unknown form and function.

Table 25 (cont.) Site 3 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 3013 Production area: oven (CG 3065 & 3066)	Limestone and mortar debris on burnt soil, overlain by burnt clay, mixed soil deposit alongside.	Pottery (25, redeposited, av wt 6g, very high abrasion), <i>tpq c</i> 100 AD. Bone fragments (34). Failed archaeomagnetic dating analysis.	Oven or hearth and foundation, with soil surround.
AU 3014 Structure: timber: indeterminate (CG 3058 & 3064)	Two postholes, c 0.20–0.25m deep.	Pottery (4, redeposited, av wt 3g, average abrasion), bone fragments (10), tile (2).	Timber structure represented by two postholes. Form and function unknown.
Period 3 Phase 6	AU 3015 Natural: soil accumulation (CG 3034, 3055, & 3067)	Site-wide layer of fine sandy loam, c 0.02m thick.	Pottery, redeposited, av wt 16g, very high Natural soil formation, implying abrasion) fragments (6), plaster (2), iron slag (1).
Period 3 Phase 7	AU 3016 Movement zone: ground surface (CG 3034, 3055, & 3067)	Top of natural soil AU 3015, cut by numerous features.	See AU 3015.
	AU 3017 Structure: indeterminate (CG 3035, 3036)	Flat-based cut, >1.90m × >1.00m, c 0.40m deep, and backfill.	Pottery (9, redeposited, av wt 15g, very high abrasion), iron slag (2).

Table 26 Site 3 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 4: Roman, early 2nd century to mid-3rd century (<i>c</i> AD 120–AD 240)			
Period 4 Phase 1			
AU 3018 Structures: timber: indeterminate (CG 3027, 3028, 3030, 3031, 3032, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, & 3056)	Ten postholes, 0.40–1.3m across, depths 0.20–0.90m, and one wide (>2.10m) and shallow (<i>c</i> 0.35m), flat-based cut (only recorded in section). Eight of the postholes were in very close proximity to each other, with several cross-cutting others.	Pottery (68, redeposited, av wt 15g, high abrasion), <i>tpq c</i> 130 AD. Bone fragments (216), iron slag (182), hammer-scale (>100), 3 iron objects (3), brick (1), tile (4), and fired clay (2).	Timber structures of indeterminate function. The size and form of the structures is unknown, though posthole sizes indicated the use of substantial timber uprights. Replacements or rebuilds of the structures was indicated by the cross-cutting of postholes.
AU 3019 Extraction area: quarry (CG 3025, & 3026)	Two large (one <i>c</i> 4m across, the other c 2.0m × 2.5m) oval pits, both >1.30m deep.	None.	Quarry pits for the extraction of sand and gravel, on the basis of size.

Table 26 (cont.) Site 3 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 3020 Disposal: pits and secondary usage (CG 3025, 3026, 3057, 3060, 3068, 3069, & 3116)	Four shallow pits (each c 0.30m deep) and the backfills of the quarries, AU 3019.	Pottery (c 800, including 57 sherds constituting most of 1 vessel from CG 3057), tile (31), brick (4), burnt clay (c 40) and mortar/plaster (20). Iron objects (>100, mostly nails), iron slag (>250) and furnace lining (9). Individual fragments of glass and copper alloy and a Colchester-derivative brooch. Dressed sandstone block (1, 0.50m × 0.40m × 0.18m). Human bones (5) and animal bones (>500), including remains of two dogs. Much cereal grain from CG 3060, about half of which was germinated. <i>Tpq</i> c AD 120, with one contaminant dating to c AD 250–400.	Backfilling of quarries with general mixed, non-specific debris, and disposal of a more restricted nature in conventional pits.
Period 4 Phase 2			
AU 3021 Disposal: pit (CG 3051)	Large, linear cut, >2.20m × >1.10m, c 0.70m deep. Partially dug into the quarry backfills, AU 3020.	Pottery (180 shards, mostly primary, av 400); iron slag (>500), hammer-scale (>1500), iron objects (65). Copper alloy (11) including a military fitting, a ring fragment and a toilet spoon. Tile (7), fired clay (8), lead (1) and a glass bead also recovered. <i>tpq</i> c AD 155.	Pits with primary rubbish, and secondary rubbish trowled from the surrounding area comprising industrial debris and redeposited material possibly from the backfill of quarry pit AU 3020.
AU 3022 Structure: indeterminate (CG 3053)	Flat-based east to west linear slot, 1.20m long, 0.30m wide and c 0.40m deep.	Pottery (17, redeposited, av wt 4g, very high abrasion). Iron slag (>200), hammer-scale (>500), iron objects (4). Bone fragments (115).	Robbed foundation trench for a timber structure of indeterminate form and function. Possibly associated with the posthole structure, AU 3018.
AU 3023 Production: hearth (CG 3061, 3062, & 3063)	Pit, 1.40m × 0.75m, c 0.40m deep, lined with burnt clay and containing charcoal.	None.	Hearth or incinerator.

Table 27 Site 3 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5: Roman, mid-3rd century to late 4th century (c AD 240–AD 400)			
Period 5 Phase 1			
AU 3024 Cultivation: indeterminate (CG 3050 & 3107)	Soil layers, 0.20–0.40m thick, only recognised on north side of site. One was dark brown and overlay a similar pit fill. The other was medium brown and occurred above layers and fills of similar material.	Pottery (95, redeposited, av wt 14g, very high abrasion), <i>tpq</i> c 240 AD. Bone fragments (35), tile (5), brick (3), mortar (6), iron slag (1), and iron object (1).	Naturally formed soil, transformed by cultivation.

Table 27 (cont.) Site 3 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5 Phase 2			
AU 3025 Movement zone: ground surface (CG 3107 & 3177)	Top of AU 3024, and thin (<i>c</i> 0.05m) compact pebbly layer (CG 3177).	See AU 3024.	Top of AU 3024 functioning as an unmade surface, and a deliberately laid area, indicating reoccupation.
AU 3026 Disposal: cemetery: cremation (CG 3071 & 3072)	Small pit, <i>c</i> 0.40m deep, containing complete pot which in turn contained calcined bone.	1 near-complete Severn Valley ware pot (form 59) and 1 other sherd, <i>tpq c</i> AD 250. Large quantity (>1000 pieces) of burnt human bone. Furnace base (1), iron slag (>50).	Cremation burial.
AU 3027 Structure: building (CG 3073, 3074, 3075, 3076, 3077, 3078, 3080, 3095, 3100, 3102, 3103, & 3104)	Deposits of cobbles in sandy gravel, observed over a distance of 12.50m in an east to west band, >6.50m wide north to south. These occurred as two superimposed layers, the lower <i>c</i> 0.10m thick, the upper <i>c</i> 0.20m thick, above the backfilled Period 3 ditch, AU 3004. The lower layer (CG 3073), cut by two postholes, 0.15m and 0.35m deep (CG 3074 and 3075), had smears of clay and soil on its surface. Several postholes and beam slots (CG 3077, 3078, 3095, 3103, 3104), <i>c</i> 0.10–1.00m deep, together with a sub-rectangular (2.00m × >0.90m), flat-based foundation trench (CG 3100), <i>c</i> 0.10m deep, were cut into the surface of the upper layer (CG 3076). On the surface of the layer was a confined area of limestone and sandstone rubble (CG 3102) and a soil layer, 0.01m thick (CG 3080), which occurred in patches.	Pottery (847, av wt 12g) with amphora sherds in the upper layer (100, av wt 25g), <i>tpq c</i> 250 AD. Bone fragments (316), iron objects (3) and slag (19). Copper alloy (8), including a hairpin. Tile (9), brick (4), and lime fragments (2).	Building platform, used as a foundation to counteract subsidence of the backfilled Period 3 ditch, (AU 3004). Constructed in two phases, using amphora as hardcore. Trample soil and timber structures of indeterminate form and function on the platform surface.
AU 3028 Extraction: quarry (CG 3046 & 3110)	Two pits, (truncated but at least 3.80m × 3.00m and 3.80m × 2.70m), both >1.20m deep.	Pottery (35, redeposited, av wt 15g, average abrasion), bone fragments (68), hammer scale (>1000), iron slag (>100), iron object (1).	Quarry pits for sand and gravel, on basis of size (volume of each in excess of 10m ³).
AU 3029 Disposal: pits and secondary usage (CG 3047, 3049, 3052, 3108, 3109, & 3111)	Four pits (CG 3049, 3052, 3108, & 3109), <i>c</i> 0.50–1.00m deep, and backfilling deposits of quarry pits AU 3028.	Pottery (1058, mostly primary, av wt 25g, high abrasion), bone fragments (>450), iron slag (>500), hammer scale (>1000), furnace lining (6), iron objects (8), copper alloy (9, including 2 brooches), glass (4), brick and tile (24 pieces), burnt clay (26 fragments), and stone (3). <i>Tpq c</i> 275 AD.	Rubbish pits and dumps of rubbish in quarries (AU 3028). Mixed primary rubbish and redeposited secondary rubbish.

Table 27 (cont.) Site 3 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5 Phase 3			
AU 3030 Disposal: pits (CG 3079, 3096, 3098, & 3099)	Four pits, c 0.70–1.10m deep.	Pottery (363, av wt 26g, very high abrasion), <i>tq</i> c 300 AD. Bone fragments (185), tile (8), brick (3), copper alloy (1), plaster (1), fired clay (1), iron objects (6), and slag (24).	Rubbish disposal, probably domestic.
AU 3031) Structure: timber: indeterminate (CG 3048)	Posthole, c 0.10m deep, filled with dark soil.	Pottery (1, wt 3g), iron slag (11).	Timber structure of indeterminate form and function represented by a single robbed and backfilled posthole.
Period 5 Phase 4			
AU 3032 Natural: soil accumulation (CG 3101, 3105, & 3112)	Site-wide layer of very dark soil, c 0.20m thick. Identified with the dark earth deposits occurring on the other sites.	Pottery (131, residual, av wt 12g, very high abrasion), dated Period 3, 4 & 5. tile (10), brick frag (1), Fe slag (>47 pieces), furnace material (1 frag), 3 Fe nails, copper alloy (2), and bone (38).	Accumulation of animal dung and other material resulting from animal penning, creating soil horizon (Macphail, Section 7.32).
Period 5 Phase 5			
AU 3033 Movement zone: ground surface (CG 3101, 3105, & 3112)	Surface of AU 3032.	See AU 3032.	Surface of the buildup of dark earth formed ground surface in this phase. Presence of burial suggests that this area no longer used for intensive animal penning.
AU 3034 Disposal: cemetery: inhumation (CG 3106)	West to east extended inhumation of neonatal infant in shallow (c 0.20m deep) grave.	Articulated human skeleton with radiocarbon date of cal AD 60–400 (Edwards and Dalwood, Section 7.33). Pottery (18, av wt 4g, very high abrasion). Daub (5 frags), iron nails (5), iron slag (>600), animal bone (32 frags).	Inhumation burial of neonatal infant.

Table 28 Site 3 Period 6 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 6: post-Roman and early to middle Anglo-Saxon (5th to late 9th centuries)			
AU 3035 Production: oven (CG 3082 & 3083)	Severely truncated burnt clay structure (>1.20m × 0.60m), laid on deposit of cobbles in a flat-based cut (0.10m deep). Underlying soil burnt. Covered by a layer of mixed burnt and unburnt clay.	Pottery (3, av wt 3g, abraded), bone fragment (1).	Clay bread oven. Dated by archaeomagnetic analysis to cal AD 580 to 805 (Linford, Section 7.34).
AU 3058 Movement zone: ground surface (conjectural)	Not recorded.	None	By analogy with soil micromorphological evidence from the other sites, the Period 5 soil accumulation developed into a grassland soil in the post-Roman period (Section 7.32).

Table 29 Site 3 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 7: late Anglo-Saxon (late 9th to late 11th centuries)			
AU 3059 Movement zone: ground surface (conjectural)	Not recorded.	None	The area presumably continued as grassland behind the burh defences.

Table 30 Site 3 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8: medieval, late 11th to mid-13th centuries			
Period 8 Phase 1			
AU 3036 Landscaping: levelling (CG 3084, 3085, 3130, & 3168)	Layer of soil, recorded in four isolated areas. Descriptions vary, but include pebbly and charcoaly soils, some containing slag. CG 3130 along north section of the site was 0.75m thick, CG 3168 was 0.20–25m thick, and the other CGs were less than 0.10m thick.	Pottery (38, av wt 6.3g, <i>tpq</i> Roman), tile (10), fired clay (4), plaster (1), Fe nail (1), Fe frag (1), Cu alloy coin (1), Fe slag (>139), bone (>223), charcoal (1), shale (2).	Deposits resulting from the levelling of the burh defences, hence considerably thicker along northern section of the site. This origin also accounts for the difference in deposit descriptions.
Period 8 Phase 2			
AU 3037 Movement zone: ground surface (conjectural)	Not recorded	None	Reconstructed ground surface.
AU 3038 Disposal: pits (CG 3059, 3092, 3094, & 3097)	CG 3059 sub-rectangular pit, 1.4m × 2.0m × >0.40m deep. CG 3092 severely truncated oval pit, 1.6m × 1.1m × >1.1m deep, filled with dark, pebbly charcoal flecked soil with moderate quantity of pot and bone. CG 3097 severely truncated oval pit (3.6m × 1.3m × 0.7m deep) with charcoal flecked pebbly green soil fill. CG 3097 sub-rectangular pit (1.7m × 1.7m × >1.0m deep) Fill of mixed dark soil, moderate amount of finds.	Pottery (83, av wt 19.8g) <i>tpq</i> 12th to 14th centuries, tile (1), Fe slag (6), bone (127).	Pits, possibly including cess pits to the west of structure AU 3039.
AU 3039 Structure: indeterminate (CG 3171, 3174)	CG 3171 oval cut 1.0m × 0.9m × 0.85m deep, with padstone in base. CG 3174 shallow flat-bottomed linear cut orientated north to south, 1.0m × 0.5m × 0.3m deep with a deeper socket at the southern end.	Pottery (28, av wt 11.1g) <i>tpq</i> 12th to 14th centuries, tile (1), Fe frags (6), Fe slag (>104), bone (>125).	Flat-bottomed gully and posthole indicates building, possibly a latrine associated with some or all of the pits represented by either AU 3039 or 3040.

Table 30 (cont.) Site 3 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 3040 Disposal: pits (CG 3170, 3172, 3173, & 3175)	CG 3170 severely truncated oval pit, 3.0m × >0.8m × 0.7m deep. Fill not described. CG 3172 very large sub-rectangular pit 4.0m × 2.5m × >0.9m deep (probably two features excavated together); fill dark brown silty soil, with much pottery and small quantity of varied other finds. CG 3173 shallow oval pit, 1.6m × 1.0m × 0.3m deep, filled with fine grey soil with moderate quantity of varied finds. CG 3175 rectangular pit, 1.6m × 1.6m × >1m deep, filled with layers of clay and soil above a dark grey soil. Numerous finds, especially bone.	Pottery (235, av wt 23.3g) <i>tpq</i> 12th to 14th centuries, tile (17), brick (1), fired clay (7), stone (2), Fe nails (10), Fe shafts (5), Fe frags (5), Fe slag (>174), vessel glass (1), window glass (1), bone (>449), worked bone (2).	Rubbish and cess pits. CG 3175 most clearly a cess pit.
AU 3041 Disposal: pits (CG 3145, 3153, 3162, & 3163)	CG 3145 truncated rectangular cut, 1.2m × >1.0m × 1.1m deep, steep-sided with rectangular base. Fill green slag-rich soil, moderate quantity of bone and pottery. CG 3153 shallow, heavily truncated cut, V-profiled, 0.80m × 0.60m. Fill grey soil, few finds. CG 3162 linear feature aligned north to south, truncated to north, extended outside excavated area to south, 0.6m × >0.6m long, 1.1m deep. Fill mixed green soil, cressy looking with varied inclusions and finds. CG 3163 linear feature aligned east to west, truncated at both ends. 0.8m × >1.3m long, 0.8m deep. Fill mixed grey brown soil, moderate inclusions and finds. No signs of silting.	Pottery (68, av wt 17.9g) <i>tpq</i> 12th to 14th centuries, tile (6), brick (1), fired clay (1), Fe nail (1), Fe slag (>909), vessel glass (1), bone (>227), quern fragment (1).	Rubbish and cess pits. CG 3062 and 3063 probably also cess pits, rather than drains (original interpretation).
AU 3042 Structure: indeterminate (CG 3113)	Severely truncated flat bottomed cut with stone and tile on base, laid flat, not overlapping one another. 1.0m × 0.6m × 0.2m deep. Truncated to north, extended outside excavated area to east.	Pottery (1, wt 13g) <i>tpq</i> 12th to 14th centuries, tile (1).	Indeterminate structural feature.

Table 31 Site 3 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 9: medieval, mid-13th to mid-15th centuries			
Period 9 Phase 1			
AU 3043 Disposal: pits (CG 3114, 3117, 3118, 3119, 3120, 3121, 3122, 3127, 3134, 3137, 3151, 3152, 3156, 3157, 3159, 3164, & 3165)	CG 3114 severely truncated stepped oval iron slag, upper fill mixed soil. CG 3117 heavily truncated pit, form uncertain. 0.70m × 0.25m × 0.25m deep. Fill greenish grey soil. CG 3118 truncated sub-rectangular pit, 2.0m × 1.0m × 1.0m deep, steep sides, flat base. Fill red-brown soil, moderate varied finds. CG 3119 Large rectangular pit, 2.3m × 1.7m × 1.5m deep, steep sides and flat rectangular base. Fill predominantly brown soil with varied inclusions, and thin lenses of sand, patches of clay, and organic matter. Large quantities of pottery and bone. CG 3120 heavily truncated pit, 1.4m × 0.9m × 1.2m deep. Fill brown soil with varied inclusions, moderate finds especially iron slag and smithing waste. CG 3121 large sub-rectangular pit, 3.2m × 2.7m × 1.6m deep. Filled with greenish brown soil with varied inclusions, especially bone. CG 3122 rectangular pit, 1.5m × 1.5m × 1.6m deep. Fill yellow-green-brown soils with very varied inclusions and pieces of organic matter, inc decayed wood in base of fill. Finds varied but not great quantities.	Total pottery 783 sherds, av wt 19.4g, tile Rubbish and cess pits. (83), fired clay (5), Fe nails (15), Fe shafts (8), Fe frags (4), Cu alloy (1) Cu alloy brooch (1, Context 18052), Pb (1), Ag (1), Fe slag (>1998), window glass (1), bone (>1434), shell (3), leather (1), ceramic furnace lining (9), smithing waste (>300).	

Table 31 (cont.) Site 3 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
CG 3127	CG 3127 severely truncated possibly oval pit, 1.8m × 1.8m × 1.3m deep, filled with greeny soil, described as cessy, with few-moderate quantity of finds, bone most frequent. CG 3134 large pit, mostly seen in section, 3.0m wide × 1.8m deep. Fill mixed and banded. CG 3137 heavily truncated rectangular pit, 2.5m × >1.2m × >1.6m deep. Fill mixed gravelly grey soil, moderate finds. CG 3151 sub-oval cut, 2.2m × 1.7m × 0.6m deep. Fill green-flecked brown soil, varied inclusions, varied finds, pot plentiful. CG 3152 truncated pit, oval at top 2.4m × >1.0m, rectangular shaft 1.4m × 0.9m. Depth >1.8m. Fill grey cessy soil. Few-moderate finds, bone most common. CG 3156 heavily truncated, prob oval large pit, >2.5m × >1.2m × >0.8m deep. Fill dark greeny mixed soil, varied inclusions and finds including concentrations of iron slag and moderate to plentiful pottery. CG 3157 truncated large rectangular pit, 2.7m × 2.0m × >1.4m deep. Fill mixed dark soil, varied inclusions, plentiful and varied finds, especially bone, though also large quantities of pot. CG 3159 heavily truncated pit, only partly excavated. 1.2m × 0.4m × >0.3m deep. Form unknown. Fill greeny-brown mixed soil, moderate finds. CG 3164 large sub-rectangular pit, 2.7m × 2.8m × >1.4m deep filled with dark soils with varied inclusions and layers, eg mortar, occasional sandstone and limestone blocks, numerous and varied finds, inc large quantity of bone, inc cattle and sheep horncores. CG 3165 severely truncated large pit, >3.6m × >1.6 × >1.5m deep. Very steep and overhung sides. Fill dark mixed soil containing plentiful varied finds, bone especially.		

Table 31 (cont.) Site 3 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 3044 Structure (CG 3086, 3087, & 3090)	Two oval postholes and a stakehole. Postholes 0.5m × 0.3m × 0.45m deep and 0.25m × 0.20m × 0.15m deep; stakehole 0.15m × 0.10m × 0.20m deep.	Pottery (2, av wt 10.5g), <i>tpq</i> 4th century, Fe slag (3), bone (2).	Indeterminate structure.
AU 3045 Natural (CG 3088)	Layer of charcoal-flecked pebbly, slaggy dark soil with few finds. 0.05m thick, occurs as island truncated on all sides.	Bone (2), Fe slag (not retained).	Soil accumulation.
Period 9 Phase 2			
AU 3046 Movement zone: conjectural	Reconstructed surface.		
AU 3047 Disposal (CG 3089, 3091, & 3093)	CG 3089 severely truncated (1.8m × 1.0m) cut with dark soil fill with plentiful inclusions and varied finds. Only part excavated.	Pottery (72, av wt 23.3g), <i>tpq</i> mid-13th century to 1700, tile (28), fired clay (1), Cu alloy frag (1), Cu alloy shaft (1), Fe nail (1), Fe shaft (1), Fe slag (9), bone (75).	Rubbish pits.
	CG 3091 severely truncated cut (1.4m × 0.8m × 0.25m deep, filled with dark mixed soils with moderate but varied amount of finds.		
	CG 3093 severely truncated but large oval pit 3.3m × 1.6m × >1.15m deep, with two distinct fills. Upper fill contained much tile, limestone, and sandstone blocks. Lower fill contained some demolition debris, also pot, bone, and slag.		

Table 32 Site 3 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 10: late medieval/post-medieval: later 15th to late 16th centuries			
AU 3048 Disposal (CG 3123, 3124, 3125, 3128, 3129, 3131, 3132, & 3133)	<p>CG 3123 large oval cut 2.7m × 2.6m × 1.7m deep, stepped flattish base, steep sides. Contained three wooden barrels alongside each other aligned north to south. Fill around barrels was mixed brown soil. Above two of the barrels the external fill was impressed with horizontal grooves, some retaining wooden material. Fills of barrels brownish soils with few though varied finds; bones and tiles most common.</p> <p>None had intact base. CG 3124 large rectangular pit, 2.6m × 2.7m × >1.4m deep. Lower fill cassy and clayey, upper fill included building debris. Fragments of wood indicated timber lining. CG 3125 steep-sided, flat bottomed oval cut 2.2m × 1.7m × 1.7m deep. Fill grey clayey soil with many varied inclusions including demolition debris. CG 3128 large cut with stepped flat base, 2.0m × 1.5m × 0.7m deep (total depth 1.3m, top machined off). Fill grey sticky soil with moderate varied finds. Backfilled with CG 3129, which included considerable quantity of demolition debris. CG 3131 truncated cut 1.3m × >0.8m × 0.45m deep, oval shape, flattish base. Fill light greyish soil darker towards base. Moderate varied inclusions including smiting waste from sample. CG 3132 large rectangular cut, 3.0m × 1.6m × 0.85–1.7m deep, with stepped base. Fill mixed greenish-grey soil with varied inclusions, and patches of organic matter. CG 3133 large heavily truncated rectangular cut 2.3m × 1.6m × 1.7m deep, with steep sides and flat base. Fill banded grey-greenish brown soil with varied inclusions.</p> <p>Small slightly truncated oval cut, 0.35m × >0.25m × 0.1m deep.</p>	<p>Pottery (223, av wt 26.0g), <i>tpq</i> mid-13th century–1700, clay pipe (1 frag), tile (173), stone (11), mortar (1), plaster (2), Fe nails (31), Fe shafts (6), Fe frags (19), Fe brooch spring (1), Cu alloy (4), Cu alloy coin (1), Fe slag (>366), vessel glass (4), window glass (4), bone (>1460), shell (9), leather (7), charcoal (1), wood (36), smithing waste (>300).</p>	<p>Cess pits. CG 3123 set of three barrel-lined cess pits. Horizontal grooves above 2 of these were interpreted as impressions of withies or basket-work. CG 3124 timber-lined cess pit</p>

Indeterminate structure represented by a single robbed and backfilled posthole.

AU 3049 Structure (CG 3160)

Table 34 Sites 4 and 5 Period 2 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 2: Prehistoric period			
AU 4001 Boundary: enclosure ditch (CG 4046)	Linear U-shaped ditch aligned south-east to north-west, inclined slightly from 1.00m to 0.70m deep south-east to north-west, primary silting in base, upper fill of light brown loamy fine sand. Three small postholes.	18 fragments of fired clay or daub, 1 sheep tooth.	Possibly stock enclosure; did not form boundary to disposal activity (AU 4003).
AU 4002 Structure: indeterminate structure (CG 4052, 4055, & 4056).			
AU 4003 Disposal area: pits (CG 4048, 4051, 4053, 4054, 4060, 4061, & 4062).	Seven pits in west of area, varied depth: CG 4061 c 0.10m deep, CG 4053, 4054, c 0.30m deep; CG 4060, 4061, c 0.50m deep; CG 4051 c 0.80m deep; CG 4048 c 0.90m deep.	Pottery (27, av weight 49g).	Timber structures, function unknown; one feature (CG 4056) aligned with AU 4001.
AU 4004 Disposal area: pit (CG 4047)	Single pit c 0.30m deep, differentiated from AU 4003 by light grey-brown loamy fine sand fill; later than AU 4001.	None	Pit group, uncertain function owing to absence of materials.

Table 35 Sites 4 and 5 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 3: Roman, mid-1st century to early 2nd century (c AD 50–AD 120)			
Period 3 Phase 1			
AU 4005 Cultivation: ploughsoil (CG 4002 & 5001).	Uniform and homogeneous layer (c 0.10m) of light brown loamy fine sand. Soil micromorphology indicated that this had been used for agriculture (Macphail, Section 7.32).	None (all artefacts intrusive; see AU 4006).	Ploughsoil.
Period 3 Phase 2			
AU 4006 Movement zone: ground surface (CG 4002, 5001, & 5002)	The surface of the ploughsoil AU 4005 formed a ground surface.	Pottery (36, av wt 9g), plaster (2), Fe slag (18 fragments), glass (1 fragment), bone (4 fragments).	Interpreted as ground surface with material trampled into it.
AU 4007 Boundary: ditch (CG 4003)	Linear U-shaped south-west to north-east ditch, 0.30m deep, at north limit of area, only part excavated, parallel to AU 4008 and terminated to west.	None	Plan incomplete, but ?boundary ditch (see AU 4008).
AU 4008 Boundary: ditch (CG 4005)	Linear U-shaped ditch, c 0.40m deep, south-west to north-east, west end truncated.	Pottery assemblage (20, av wt 28.3g) with Butt-ended boundary ditch related to parallel ditch AU 4007 to north. Precise function uncertain: not an enclosure ditch, resembles later boundaries (see Period 4).	tpq of c 75–c 120 AD, and bone fragments (29).

Table 35 (cont.) Sites 4 and 5 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4009 Structure/s: indeterminate: timber (CG 4006, 4008, 4009, 4013, 4058, 4059, 4069, 4081, 4093, 4095, & 4110)	A group of 44 postholes and ten stakes (CG 4081), some with evidence of removal of large posts, but no certain alignments. Not all features were stratified below Period 4 or 5 deposits.	Pottery (35, av wt 19.8g, very high abrasion), Fe objects (6), one coin (dated AD 44–68), Fe slag (89 fragments), bone fragments (19).	Timber structures, but without regularity indicative of post-built buildings. There is a similar alignment to a boundary ditch (AU 4008), and this could be interpreted as a fence line.
AU 4010 Disposal area: pits: uncertain function (CG 4007, 4012, 4072, 4073, 4074, 4076, 4077, 4078, 4079, 4080, 4102, & 4103)	Group of 12 shallow pits (c 0.08–0.10m), not all stratified beneath Period 4 or 5 deposits.	Pottery (46, av wt 18.6g, very high abrasion), Fe objects (1), nails (4), Fe slag (160 fragments), bone fragments (34).	Group of pits, unknown function.
AU 4011 Extraction area: quarry pits (CG 4004, 4014, & 4145)	Three large pits, CG 4004 c 0.90m deep, c 4.0m ³ ; CG 4014 c 1.05m deep c 5.0m ³ , CG 4145 2.00m deep, c 10m ³ . CG 4145 had a group of small shallow rectangular depressions in the base. Primary fills were fine sand.	None	Quarry pits for extracting gravel, backfilled with sieved sand. One pit showed possible evidence that a ladder was used for access. It is possible the gravel was extracted for the purpose of constructing metalled surfaces.
AU 4012 Movement zone: metalled yards (CG 4067, 4068, & 4070)	Two separate areas (and a third small area) of metalling with small pebbles 0.05m thick; no distinct edges were defined due to later truncation but not interpreted as a single surface.	None	Separate yard surfaces of uncertain function but probably related to agricultural processes.
Period 3 Phase 3			
AU 4013 Movement zone: metalled trackway (CG 4016 & 5003)	Extensive linear spread of pebbles c 4.00m wide, 0.05m thick, north side of the excavated area. South edge and most of north edge ill-defined because of truncation, west end mostly truncated. Also observed in section to north of excavated area, and in plan to the east of the excavated area. Total observed length c 40m.	None	Trackway; although north and south edges were indistinct and it was fragmentary to west the unity of this structure seems certain.
AU 4014 Disposal area: rubbish: secondary pit fills (CG 4004, 4014, & 4146)	Secondary fills of three quarry pits (cf AU Pottery (CG 4004: 321, av wt 28g, 4011). 4146).	Pottery (35 sherd, av wt 9g, very high abrasion) and bone fragments (2).	Three dumps of domestic refuse in quarry pits (AU 4012), suggesting domestic occupation in the vicinity, although no buildings were identified within the excavated area.
AU 4015 Movement zone: ground surface (CG 4002)	The surface of ploughsoil AU 4005 continued to form a ground surface in this phase.	Pottery (35 sherd, av wt 9g, very high abrasion) and bone fragments (2).	Interpreted as a ground surface with material trampled into it.

Table 35 (cont.) Sites 4 and 5 Period 3 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4016 Disposal area: pits: uncertain function (CG 4022, 4027, 4045, 4065, & 4084)	Group of five pits, varied c. 0.60m to c. 0.20m deep.	Pottery (11, av wt 8.3g, very high abrasion), slag (29 fragments)	Pits, uncertain function.
AU 4123 Boundary (CG 5004)	Gully	None	Boundary
Period 3 Phase 4			
AU 4017 Natural soil accumulation (CG 4024, 4083, 4089, 4094, 24091, & 5005).	Extensive deposit of soil c. 0.08m thick, horizontally truncated.	All materials intrusive.	Natural soil accumulation of uncertain origin.

Table 36 Sites 4 and 5 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 4: Roman, early 2nd century to mid-3rd century (c AD 120-AD 240)			
AU 4018 Movement zone: ground surface (CG 4089 & 4091).	Trampled soils, upper surface of AU 4017 in south part of the excavated area, limited to north and west by boundaries AU 4019 and 4020.	Pottery (13, av wt 15.4g, very high abrasion), Fe slag (5 fragments), bone fragments (9).	Ground surface, with trampled material, limited by boundaries AU 4019 and 4020
AU 4019 Boundary: indeterminate form: conjectural	Unknown form.	None	North to south boundary, inferred from variations in artefacts (see AU 4018), same alignment as AU 4040, which is assumed to have removed all structural evidence.
AU 4020 Boundary: indeterminate form: conjectural	Unknown form.	None	South-west to north-east boundary, inferred from variations in artefact density (see AU 4018), on same alignment as AU 4040, which is assumed to have removed all structural evidence.
AU 4021 Production area: furnace ironworking (CG 4017, 4034, 4035, 4036, & 4038)	Large spread of burnt clay (CG 4034, c 0.08m thick), overlain by concentrations of melted iron slag (CG 4036) and extensive spreads of loose slag, burnt clay, and charcoal, c 0.10m thick (CG 4017, 4035, 4036, 4038). There was one underlying area of burnt soil and charcoal (CG 4021).	Pottery (52, av wt 16g, high abrasion), <i>tegula</i> (1), Cu alloy object (1), Fe nail (5), Fe slag (750 fragments), bone fragments (18). Slag was in concentrations on the clay surface and loose in soil layers.	Base of iron smelting furnace, together with spreads of waste material. No evidence for the superstructure.
AU 4022 Production area: furnace: iron smelting (CG 4063, 4071, & 4096)	Area of intense burning of underlying ground surface (AU 4006), up to c 0.10m.	None	Site of iron smelting furnace on basis of intensity of burning, and association with AU 4025.

Table 36 (cont.) Sites 4 and 5 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4023 Production area: furnace: ?iron smelting (CG 4066, 4086, 4087, 4088, & 4098)	Truncated area of intensely burnt clay (CG 4066) with overlying spreads of charcoal (CG 4087) and burnt clay (CG 4088), associated with a shallow clay-filled pit (CG 4086) and further spreads of charcoal, burnt clay, and slag (CG 4098).	Pottery (14, av wt 4.4g, high abrasion), fired clay (3), Fe slag (121 fragments), bone fragments (7).	?Iron smelting furnace (cf AU 4021 and 4022).
AU 4024 Disposal area: pits: industrial waste (CG 4011, 4033, 4041, 4097, 4150, & 5007)	Group of five shallow pits, c 0.25m deep.	Pottery (2/15 (CG 4097: 193, 89%) av wt 12g, high abrasion), roof tile (4), fired clay (13), Fe objects (3), Fe slag (71,252 fragments), stone objects (4), bone fragments (6). Two pits (CG 4097, 4/150) had large quantities of tap slag, as well as charcoal and limestone. The other pits (CG 4011, 4033, 4041) had smaller quantities of slag. The majority (65%) of slag from Period 4 was in large dumps, in contrast to Period 5 where it occurred more in spreads (McDonnell and Swiss, Section 7.9).	Waste pits for slags from smelting furnaces (AU 4021, 4022).
AU 4025 Disposal area: pits and dumps: industrial waste (CG 4075, 4111, 4115, 4121, 4123, 4141, & 4147)	Group of six pits, c 0.15–0.40m deep, with spread of mixed slag (CG 4115) that overlay an area of burnt ground surface (CG 4090).	Pottery (79, av wt 13.6g, very high abrasion, much residual), roof tile (2), fired clay (4), Fe objects (3: 2 nails, 1 frag), Fe slag (>543 fragments), bone fragments (23), glass slag (6 fragments). Slag included a large quantity of mixed tap and massive slag as well as small but significant quantities of glass waste and slag (see Section 7.16).	Waste pits related to the iron smelting (cf AU 4025), but with no spreads of tap slag.
AU 4026 Extraction area: quarry (CG 4049)	Circular pit, c 0.65m deep, to north of area.	Pottery (4, av wt 22g, moderate abrasion), <i>tegula</i> (2), fired clay (3), bone fragments (45), articulated dog skeleton.	Quarry pit.
AU 4027 Disposal areas: pits: indeterminate (CC 4010, 4112, 4114, 4116, 4117, 4122, 4133, & 4136)	Group of seven pits, c 0.15–0.25m deep, and one pit (CG 4122), c 0.60m deep (CG 4122).	Pottery (22, av wt 16.6g, average abrasion), fired clay (3), Fe slag (29 fragments), charcoal and plaster.	Pits function uncertain but associated with iron smelting
AU 4028 Structure/s: indeterminate: post-built (CG 4032, 4064, 4107, 4113, 4125, 4129, 4132, & 4135)	Group of 30 postholes.	Pottery (62, av wt 9g, very high abrasion), <i>tegula</i> (2), Fe slag (>1175 fragments), smithing waste (>500 fragments), glass (1), bone fragments (52).	Post-built structures, but no evidence for buildings; probably light structures associated with production processes.

Table 36 (cont.) Sites 4 and 5 Period 4 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4117 Movement zone: road (CG 5006)	Surface of very compact iron slag and pebbles, thins to edge at south but truncated to north. Max width 4.20m. Linear gully feature parallel to south edge, but not rutting.	Pottery (32), tile frags (4), brick frags (4), Cu slag (15), Fe slag (6), bone frag (1).	Road. Much more substantial than Period 3 pebble surface to south (CG 4016, AU 4013). Substantial construction, hence identification as road, rather than track. Similar to Site 2 street, especially the edge gully.
AU 4118 Landscaping: dumping (CG 5008)	Layer of sand and gravel in limited and obscured area (Trench A).	None	Possibly dump from quarry pit for sand and gravel.

Table 37 Sites 4 and 5 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 5: Roman, mid-3rd century to late 4th century (c AD 240–AD 400)			
Period 5 Phase 1			
AU 4029 Boundary: gully (CG 4128)	Linear north to south gully, terminating to north (c 0.50m deep) and extending beyond south limit of excavation (c 0.25m deep); truncated by three graves along length (AU 4037).	Pottery (121, av wt 11g, very high abrasion, including residual Period 3 and 4 pottery), <i>regula</i> (3), Fe slag (545 fragments), Cu alloy pin (1), glass slag (18 fragments), bone fragments (55).	Boundary ditch, related to AU 4030.
AU 4030 Boundary: gully (CG 4151).	Linear south-west to north-east gully, terminating to west and extending beyond the northern limit of excavation.	South part had quantity of iron slag, furnace lining, and charcoal, together with the glass slag.	Boundary ditch, related to AU 4029.
AU 4031 Boundary: fence: post-built (CG 4108 & 4165)	Linear alignment of four ovoid postholes and a slot, c 0.10–0.15m deep.	Pottery (2, av wt 2.5g, high abrasion), <i>regula</i> (4), fired clay (2), Fe slag (18 fragments), bone fragments (2).	Boundary fence.
AU 4032 Movement zone: yard: pebbles (CG 4039)	Limited area of pebble surface, truncated and extending beyond north limit of excavated area.	Pottery (2, av wt 7.5g, very high abrasion), fired clay (4), bone fragment (1).	Probable yard.
AU 4033 Extraction area: quarry pits (CG 4105)	Large pit, c 1.40m deep and c 5.5m ³ , lower fills of loamy very fine sand.	Pottery (5, av wt 20g, average abrasion), bone fragments (50) and 18 goat horncores.	Quarry pit for extracting gravel (see AU 4034).
AU 4034 Disposal area: dumping (CG 4134, 4137, & 4140)	Superimposed layers of fine sandy loam, c 0.10m thick in a limited area.	Pottery (56, av wt 10.3g, very high abrasion, Fe slag (9 fragments), bone fragments (51).	Dump of waste from gravel extraction (cf. AU 4033).
AU 4035 Disposal area: dump: industrial waste (CG 4106)	Massive dump of iron slag, secondary fill of AU 4033.	Pottery (24, av wt 27g, low abrasion), <i>regula</i> (1), Fe slag (133 retained), bone fragments (14). Most of fill consisted of iron slag, including tap slag and massive slag, as well as large pieces of furnace lining.	Dump of waste from iron smelting.

Table 37 (cont.) Sites 4 and 5 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4036 Disposal area: pits (CG 4162, 4163, & 4164)	Group of pits in south-west area, c. 0.25–0.70m deep.	Pottery (38, av wt 8g, very high abrasion), Fe nails (2), Fe objects (?) , Fe slag (>20g fragments), Fe smithing waste (>200 fragments), bone fragments (55).	Pits of uncertain function, containing iron slag either residual or associated with AU 4035.
AU 4084 Structure: indeterminate (CG 4138 & 4139)	Posthole and post pipe.	Pottery (6, av wt 7.7g).	A single posthole; purpose unclear.
AU 4085 Disposal (CG 4244)	Small truncated pit, probably oblong in shape, measuring 0.75m × >0.70m × 0.58m deep.	Pottery (22, av wt 17.5g), fired clay (4), Fe obj (1), bone frags (57).	Pit of uncertain function.
AU 4119 Movement zone: ground surface (CG 5009)	Layer of dark grey-brown pebbly soil, a soil build-up over slag surface CG 5006 and to south in Site 5 Trench B (CG 5009). Ground surface on Site 4 not described.	None	Ground surface.
AU 4120 Movement zone: yard surface (CG 5011)	Roughly laid surface of cobbles, only observed in section (plan reconstructed).	None	Yard area.
Period 5 Phase 2			
AU 4037 Disposal area: cemetery: graves (CG 4025, 4026, 4028, 4029, 4030, 4082, 4109, 4119, 4120, 4142, 4143, 4144, 4152, & 4153).	Fourteen inhumation graves (see Table 33).	Grave fills: pottery (173, av wt 11g, very high abrasion), roof tile (1), fired clay (8), Cu alloy nail cleaner (Crummy, Section 7.13), Fe slag (359 fragments), glass slag (1 fragment), stone objects (5), bone fragments (335). Finds directly associated with burials: Cu alloy finger-rings (2, Crummy, Section 7.13), Cu alloy boot studs (Crummy, Section 7.13), Fe hobnails (Crummy, Section 7.13).	Late Roman cemetery.
AU 4087 Boundary: ditch (CG 4280)	East to west aligned gully, part excavated at north-east corner of site.	Pottery (5, av wt 5g), Fe obj (1), Fe slag (6), bone frags (9).	Ditch, possibly marking the northern extent of the cemetery.
AU 4119 Movement zone: ground surface (CG 5009)	Layer of dark grey-brown pebbly soil, a soil build-up over slag surface CG 5006 and to south in Site 5 Trench B (CG 5009). Ground surface on Site 4 not described.	None	Soil build up after disuse of the area of Trench B, also ground surface on Site 4.
AU 4120 Movement zone: yard surface (CG 5011)	Roughly laid surface of cobbles, only observed in section (plan reconstructed).	None	Yard area.
AU 4121 Movement zone: trackway or yard (CG 5012)	Rough, uncompactated layer of coarse sandy pebbles.	None	Roughly surfaced trackway or yard.
Period 5 Phase 3			
AU 4038 Movement zone: ground surface (CG 4155)	Limited area of dark earth.	Pottery (39, av wt 15g, very high abrasion), Fe slag (74 fragments).	Ground surface associated with the cemetery.

Table 37 (cont.) Sites 4 and 5 Period 5 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4039 Boundary: ditch (CG 4158)	Linear U-shaped north to south ditch, terminated to north and extending south beyond limit of excavation, c 0.70m deep.	Pottery (256, av wt 17.5g, high abrasion), tile (1), Fe slag (25 fragments), bone fragments (274).	Boundary ditch, associated with cemetery AU 4037 and with AU 4040, although it post-dated one grave (CG 4082); parallel to AU 4029 and on same alignment as AU 4019.
AU 4040 Boundary: ditch (CG 4040 & 5010)	Linear U-shaped east to west gully, c 0.50–0.10m deep (east to west), terminated at east and west, on the same alignment as AU 4020.	Pottery (91, av wt 10g, average abrasion, all residual), bone fragments (12).	Boundary ditch associated with cemetery AU 4037 and with AU 4039, although it post-dated one grave (CG 4025).
AU 4086 Structure: indeterminate (CG 4154)	Single posthole 0.35m diameter.	Pottery (6, av wt 3.2g).	Structure, function uncertain.

Table 38 Sites 4 and 5 Period 6 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 6: post-Roman and early to middle Anglo-Saxon (5th to late 9th centuries)			
AU 4041 Movement zone: ground surface (CG 4043, 4099, 4156, 4181, & 5013)	Dark earth, much truncated to south of area and extending north of it, c 0.30m thick, with level surface at 20.30m OD.	Pottery (563, av wt 10.9g, high abrasion), tegula (12), coins (5), Cu alloy buckle loop (Crummy, Section 7.13), Cu alloy objects (4, Crummy, Section 7.13), Fe nails (5), Fe objects (7, Crummy, Section 7.13), Fe slag (>889 fragments), bone fragments (35).	Dark earth, broadly analogous to the dark earth on other three sites (AU 1058, AU 2055 AU 3032).
AU 4088 Movement zone: ground surface (CG 4206)	Final backfill and disuse of Period 5 Phase 3 feature forming part of ground surface.	Pottery (26, av wt 10.1g), tile (2), Fe slag (20), bone (26).	Part of ground surface.

Table 39 Sites 4 and 5 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 7: late Anglo-Saxon (late 9th to late 11th centuries)			
AU 4042 Disposal: pits (CG 4159, 4194, 4248, & 4306)	Large sub-circular pit 1.50m diam, 1.40m deep (CG 4159); the edge of a pit most of which lay outside exc area (CG 4194); circular pit 1.00m diam, 0.35m deep (CG 4248); two shallow, parallel, elongated pits (CG 4306).	Pottery (47, av wt 15.8g, all Roman), tile (7), fired clay (4), stone (4), Fe slag (43 fragments), bone (32). CG 4248 contained lime, probably mixed in place.	Pits, function uncertain, but burnt limestone also recorded on Sites 1 and 2 during this period. CG 4248 lay within the area of the projected bank of AU 4045, so may have been connected with the construction of the burh defences. Unclear whether CG 4306 shallow pits had in fact been truncated horizontally.
AU 4043 Structure: indeterminate structure (CG 4161)	Single posthole with limestone packing, 0.50m wide; length truncated.	Fe slag (7 fragments).	Structure of indeterminate function. This feature lay in an area of considerable later truncation, so it was impossible to reconstruct meaningfully.
AU 4044 Boundary: defence (CG 5014, 5015, & 5016)	Shallow linear feature (CG 5016), butt-ending at west end, aligned approx east to west, cutting dumping layers (CG 5014 and 5015).	Pottery (7, av wt 3.9g, all Roman), mortar (1 fragment), plaster (1 fragment), Fe slag (9 fragments), bone fragment (1).	Possible marking-out ditch for main defences and associated ground surface formed by dumped layers.

Table 39 (cont.) Sites 4 and 5 Period 7 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4045 Boundary: defence (CG 4320, 5017, 5018, 5019, 5020, 5021, & 5026)	Remnant of robbed wall, aligned east to west, un-mortared, built of limestone and loose mortar, with laid slabs. Survived to height of 0.40m. To rear construction was bone fragments (36). Massive dump of soil, with lenses of clay and turf, forming gentle slope to south (CG 5018). Massive dump of soil and clay, with distinct clay capping which sloped steeply to south (CG 5026). CG 5018 and 5026 were separated during initial post-excavation by HD as representing two distinct phases of defences. RE later combined both within single AU, as there was insufficient evidence to support either hypothesis.	Pottery (14, av wt 8.6g, 13 Roman, 1 Fabric 55, probably intrusive), tile (5), stone (7 fragments), Fe slag (1 fragment), with postholes representing timber lacing and palisade. Whilst recorded mainly in the northern trench, the clay layers of the bank were seen during watching brief along the full width (east to west) of Site 4, outside its northern limits. See discussion in main text (pp. 219–20).	As reconstructed the defences consisted of ditch, berm, revetment wall, and bank, with postholes representing timber lacing and palisade. Whilst recorded mainly in the northern trench, the clay layers of the bank were seen during watching brief along the full width (east to west) of Site 4, outside its northern limits. See discussion in main text (pp. 219–20).
AU 4101 Movement zone: ground surface (conjectural)	Layers of clay, recorded in section drawing at the NE corner of Site 4, but no context numbers were assigned, as their significance was only recognised after the two additional trenches had been excavated (CG 4320).	South edge of linear east to west feature, not bottomed, and north edge beyond limit of excavation. Fill angled sharply to north. Tipping lines of later deposits over the edge of this suggested that a major landscape feature lay to the north of the trench (CG 5019).	Two postholes recorded cutting the bank and wall defences, one at crest, just behind/within the revetment wall, the other at the foot of the bank (CG 5020).
AU 4101 Movement zone: ground surface (conjectural)	Layers of soil with sand and lumps of mortar (CG 5021). Reconstructed in this phase.	Layers of soil with sand and lumps of mortar (CG 5021). None	The ground surface was not recorded in this phase, but has been reconstructed in plan to indicate the extent of later truncation and its effect on reconstruction.

Table 40 Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8: medieval, late 11th to mid-13th centuries			
Period 8 Phase 1			
AU 4046 Boundary: demolition (CG 5022, Layers infilling and tipping into burh defences ditch (CG 5022, 5023; robbing of stone revetment and bank (CG 5024); layers of mixed soil and clay overlying tail of rampart bank (CG 5025, 5027).	Pottery (1, wt 34g), Fe slag (1 fragment), bone fragments (4).	Pottery (1, wt 34g), Fe slag (1 fragment), bone fragments (4). Deliberate demolition of burh defences.	
AU 4049 Disposal: pits (CG 4207, 4209, 4227, & 4230)	Four pits, poorly recorded and located. Not planned.	Pottery (54, av wt 14.4g), roof tile (12), fired clay (14 fragments), Cu alloy twisted loop and other pieces (4), Cu slag (1 fragment), Fe nails (5), Fe slag (93 fragments), bone (81).	Pits. The poor records make further interpretation difficult.
AU 4050 Structure: indeterminate (CG 4131)	Single posthole at south edge of middle of trench, not obviously associated with any other features.	Pottery (5, av wt 6.6g), fired clay (1), Fe slag (8), bone (2).	A single posthole, probably part of a structure extending outside the excavated area to the east and south. Not believed to relate to the two cess pits to the west of the posthole (AU 4106), because there are no other structural elements in the vicinity.
AU 4051 Movement zone: ground surface (CG 4176)	Truncated layer recorded at west edge of trench. No layers recorded anywhere else across the site, so single AU assigned to all ground surface for this phase. The remainder of the ground surface was reconstructed in plan.	Pottery (9, av wt 10.6g, <i>tpq</i> 12th to 13th centuries), Cu alloy (1), Fe slag (6 fragments), bone fragments (5).	The majority of the ground surface was not recorded in this phase, but has been reconstructed in plan to indicate the extent of later truncation and its effect on reconstruction.
AU 4052 Structure: indeterminate (CG 5030)	Clay and burnt daub recorded in section of Site 5 Trench B provided the evidence for a collapsed structure, interpreted as in use during this phase. (See AU 4124 for disuse).	None	A wall in Site 5 Trench B for which the evidence is its collapse (AU 4124), seen in section. Most likely to have been the wall of a building. Examination of the section to the south appears to rule out the possibility that a building extended in that direction. It is therefore assumed that it extended to the north of the projected wall line.
AU 4053 Landscaping: levelling (CG 5029)	Series of layers, recorded in the section of Site 5 Trench B. These overlie the infilling of the ditch, and would be contemporary with the structure proposed above (AU 4052).	Bone fragments (2).	Landscaping activity to level the infilled burh defences ditch, forming a ground surface contemporary with the structure (AU 4052).

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4060 Boundary: fence (conjectural)	North to south boundary inferred from alignment of west wall of building AU 4056 with edges of pits to east and west. No physical evidence, but the ground surface in this and subsequent periods was truncated by machining down to Roman deposits, so the evidence for light structures would not have survived.	None	This property boundary was inferred during post-excavation from the evidence of the edges of pits, and the western wall of the Period 8 Phase 2 building (AU 4056). The boundary had a long life, and continued in use into and beyond Period 10. Whilst the other inferred boundaries (AU 4092, 4093, 4094, and 4095) are less certain, AU 4060 was a clear boundary line between cut features and structures. It is assumed that the boundary would have been formed by a fence, eg a wattle fence. The lack of physical evidence is assumed to be due to the machining of this part of the site (since Roman deposits were the initial focus of excavations on Site 4).
AU 4092 Boundary: fence (conjectural)	Inferred line of north to south boundary. No physical evidence, but the ground surface in this and subsequent periods was truncated by machining down to Roman deposits, so the evidence for light structures would not have survived.	None	No physical evidence, such as postholes, so likely to have been stake-built, eg a wattle fence.
AU 4093 Boundary: fence (conjectural)	Inferred line of north to south boundary. No physical evidence, but the ground surface in this and subsequent periods was truncated by machining down to Roman deposits, so the evidence for light structures would not have survived.	None	No physical evidence, such as postholes, so likely to have been stake-built, eg a wattle fence.
AU 4094 Boundary: fence (conjectural)	Inferred line of east to west boundary. No physical evidence, but the ground surface in this and subsequent periods was truncated by machining down to Roman deposits, so the evidence for light structures would not have survived.	None	No physical evidence, such as postholes, so likely to have been stake-built, eg a wattle fence.
AU 4096 Boundary: disuse	Slope down from north to south in ground surface AU 4114 at north-eastern corner of Site 4 (Plot 6).	None	Remnant of burl defences bank surviving at north-east corner of Site 4.

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4102 Disposal: pits (CG 4042, 4044, & 4252)	Three poorly recorded pits in Plot 4. Sub-circular pit diameter 1.3m (CG 4042); large sub-rectangular pit, >2.4m × 1.50m × >0.90m deep (CG 4044); rectangular pit 4.2m × 1.5m (CG 4252).	Pottery (65, av wt 14.2g), tile (13), fired clay (1), architectural limestone (3), Cu alloy brooch (1), Fe nails (4), Fe slag (50), bone frags (103), worked bone (1), charcoal (1).	Poorly excavated and recorded sequence of pits. CG 4044 pottery provides a 12th- to 13th-century <i>terminus post quem</i> for the Period 8 Phase 2 medieval building (AU 4056), but the quality of excavation/recording means that this <i>tpq</i> is not considered to be completely reliable.
AU 4103 Disposal: pit (CG 4023)	Pit in Plot 6. Sub-rectangular with steep/vertical sides and regular plan form. Not fully excavated, >0.80m deep.	Pottery (13, av wt 22.5g), Fe slag (2), bone (23), worked bone skate (1).	One pit (CG 4252) crosses the boundary AU 4092, but as the boundaries were first established during this phase, it is assumed that there was some initial uncertainty about their lines.
AU 4104 Disposal: pits (CG 4160, 4204, & 4205)	Two pits in Plot 3. Sub-square, truncated horizontally, 1.20m × 1.50m × 0.10m deep (CG 4160); irregular but basically sub-rectangular pit extending outside excavated area, measuring 1.80m across and 1.25m deep (CG 4204; 4205 is secondary fill).	Pottery (136, av wt 21.3g), tile (2), architectural limestone (2), plaster (1), Fe nail (1), Fe objs (4), Fe slag (12), bone (214).	Pit. Fill not described as cessy, so may have been refuse disposal rather than cess pit.
AU 4105 Production: mortar-mixing pit (CG 4100 & 4101)	Very truncated pit in Plot 2. Sub-circular, much truncated, 0.70m × 0.40m × 0.16m deep max (CG 4100). Base clay-lined; primary fill grey/white mortar and charcoal (0.05m thick). Secondary fill of soil mixed with ash and charcoal (CG 4101).	Pottery (3, av wt 14.7g), Fe nail (1), Fe slag (1), bone (9).	Primary purpose of mortar mixing appeared to be related to construction. There were no obvious requirements for mortar within the plot as defined, but construction on the Broad Street frontage would be expected during this phase.
AU 4106 Disposal: pits (CG 4233, 4234, 4235, & 4296)	Pits in Plot 6. Sub-rectangular pit with steep sides and flat base; 1.90m × 2.20m × 1.80m deep (CG 4233). Primary fill 1.04m of concentrated cessy material, few finds. Secondary fill (CG 4234) mostly domestic refuse, with some architectural limestone. Sub-rectangular pit 1.90m × 1.40m × 1.90m deep, steep sides and flat base; fill with high cess content and fairly high density of domestic debris (CG 4235).	Pottery (175, av wt 15.5g), tile frags (2), fired clay (1), architectural limestone (2), Fe objs (7), Fe slag (>154), bone fragments (946), worked bone needle (1).	Two phases of cess pits. CG 4233 was used, then infilled with domestic refuse. CG 4235 was then excavated to the south-east, but partially overlapping the earlier pit. The fill of the latter was mixed, rather than two distinct fills of cess followed by domestic refuse.

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 8 Phase 2			
AU 4047 Structure: indeterminate (CG 4297)	Three postholes forming a right angle, aligned with the plot boundaries. All 0.63–0.75m diameter/width and 0.30–0.50m deep.	Pottery (17, av wt 9.5g; <i>tpq</i> 12–14th century), roof tile (5), Cu slag (1 fragment), Fe slag (33 fragments), bone fragments (67).	The north-west corner of a post-built structure. If four posts, the fourth posthole would have lain outside the excavated area, forming a building measuring just under 2m × 3m. On same alignment as plot boundaries. May have been a building or an outhouse, or some other form of structure relating to industrial processes.
AU 4048 Disposal: latrine (CG 4148, 4149, &4239)	Three postholes 0.20–0.30m across, aligned along a short trench 1.50m × 0.50m × 0.10m deep, abutting a sub-rectangular pit. Pit measured 2.50m × 1.20m × 1.05m deep, but plan indicates it was not fully excavated. Excavated fill included domestic refuse and building rubble.	Pottery (46, av wt 18g, <i>tpq</i> 12th to 13th centuries), tile (2), Fe nail (1), Fe slag (12 fragments), vessel glass (2 sherds), window glass (2 fragments), bone fragments (180).	The postholes and trench abutted the pit, and were on the same alignment as the plot layout and stone building. Interpreted as a cess pit with structure over, with the roof perhaps forming some sort of a lean-to to the medieval building wall. No cess was noted in the fill, but the pit was not fully excavated. The excavated fill is consistent with disuse of the feature.
AU 4054 Disposal: pits (CG 4167 & 4221)	Two pits in plot 2. Truncated remnant of possibly circular pit, 1.00m diam, 0.45m deep (CG 4167); truncated sub-rectangular pit, >1.50m × >2.60m × 0.65m deep, fill included layers of burnt clay (CG 4221).	Fe slag (1 fragment), bone fragments (2).	Two badly truncated pits, neither recorded in great detail. Presumed to be rubbish pits.

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4056 Structure: domestic building (CG 4168, 4169, 4173, 4246, & 4253). Illustrated in Section 4.4, Figure 34.	Medieval stone building consisting of: 'Piles' (CG 4168 and 4169). These consisted of a linear trench with irregular stepped profile, 3.30m × 0.90m × 0.50m deep, filled with unmortared green sandstone rubble (CG 4168); three pits filled with unmortared green sandstone rubble, measuring 1.00m × 0.30m × 0.40m, 1.40m × 0.80m × 0.60m, 1.00m × 0.70m × 0.30m (CG 4169). These features were all very similar, with similar fills, and conformed to the plan of the foundation trench for the building.	CG 4169: pottery (9, av wt 12.6g, <i>tpq</i> 12th century), tile (1), bone frags (2).	These features were interpreted as 'piles' supporting the foundations of the medieval stone building. There were no clear signs that these corresponded with 'soft' areas beneath the foundations, but it is possible that they represent the complete excavation and infilling of pits which would otherwise have caused 'soft' spots beneath the foundations.
	Foundation and wall (CG 4173) Steep to vertically-sided linear cut, of uniform width and depth, forming a rectilinear plan. Cut width was 0.90–1.20m and depth 0.15–0.20m. Overall size of plan was 10.60m north to south, and 6.60m east to west. The cut contained foundations consisting of dry stone walling, using green sandstone, but had been much robbed (robbing = AU 4067).	CG 4173: pottery (26, av wt 18.9g, <i>tpq</i> late 12th to 14th centuries), tile (7), fired clay (2), mortar (6), Fe obj (1), Fe slag (10), glass slag (2), bone fragments (41).	Traces of the foundation survived better than the wall itself, although both had been extensively robbed.
	The wall itself survived only in the southern part of the western side of the building, and only the external face and part of the core, as it had been robbed out elsewhere.		There was no evidence for doorways in the wall/foundation, either because there were none at ground floor level, or because the foundations beneath a doorstep were not distinguished from those beneath the rest of the walls.
	Floor (CG 4246). The floor as excavated in the western two thirds of the building consisted of compacted greenish sand, mixed with soil. It was heavily trampled, with some worn areas (not planned). Most areas were heavily trampled, and overlain by burnt material.	CG 4246: pottery (82, av wt 5.9g, <i>tpq</i> 12th to 14th centuries), tile (2), fired clay (2), architectural limestone (1), Fe objs (3), Fe slag (>421), bone fragments (150).	Floor of medieval building. It was not recorded in sufficient detail for the more worn areas to be identified. There was a difference in the floor in the western part of the building and the eastern part, which seems unlikely to be merely a difference in recording, as the floor in the eastern part was described as clay, but on the west was sand and loam.
	The eastern part of the building was excavated at a later date (see Section 6.4.1, p. 207), and here the floor was recorded as clay, with a sandy clay make-up layer.	CG 4253: pottery (77, av wt 10.8g, <i>tpq</i> late 12th to 14th centuries), tile (18), fired clay (1), stone roof tile (1 frag), Fe objs (5), Fe slag (>180), bone frags (16).	

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Internal structures (CG 4253 and 4254).	Two areas of ground surface, not planned. AU 4058 also used to refer to reconstructed ground surface for this phase.	Pottery (69 av wt 10g), tile (8), mortar (2 fragments), Fe nail – dome-headed (1), Fe slag (19 fragments), bone fragments (7).	The internal features were interpreted as evidence for a sequence of internal partitions and structures. The slight indications of a north to south partition, together with the evidence for a clay floor along the eastern side of the building suggest that there may have been a north to south corridor.
AU 4058 Movement zone: ground surface (CG 4251)	An unplanned layer described as greenish grey cessy material, at the north edge of the site (site grid ref 118/305)	Pottery (5, av wt 27.2g, <i>tpq</i> 12th to 13th century).	The presence of a cess pit within the building was surprising, but it did appear to be sealed by the demolition rubble, so must have been contemporary with the building's use, and is described in more detail in Period 9 Phase 1 below.
AU 4059 Disposal: midden (CG 4259)	See Period 8 Phase 1	None	Inferred boundary.
AU 4060 Boundary: fence (conjectural)	See Period 8 Phase 1	None	Inferred boundary.
AU 4092 Boundary: fence (conjectural)	See Period 8 Phase 1	None	Inferred boundary.
AU 4093 Boundary: fence (conjectural)	See Period 8 Phase 1	None	Inferred boundary.
AU 4094 Boundary: fence (conjectural)	See Period 8 Phase 1	None	Inferred boundary.
AU 4095 Boundary: fence (conjectural)	See Period 8 Phase 1	None	Inferred boundary.
AU 4096 Boundary: disuse	See Period 8 Phase 1	None	Inferred boundary.
AU 4107 Disposal: pit (CG 4019)	Pit in Plot 6, rectangular in shape (1.60m × 1.40m × >0.70m deep), with vertical sides, not fully excavated. Cess-type fill.	Pottery (11, av wt 13.6g, <i>tpq</i> late 12th to 14th centuries).	Form and fill type indicate this was a cess pit.
AU 4108 Disposal: pit (CG 4231)	Pit in Plot 5, sub-rectangular, extending outside excavated area. Not fully excavated to base; dimensions: 2.40m × >1.50m × >1.20m deep. Fill contained some domestic refuse and ash, and some building rubble.	Pottery (14, av wt 23.1g, <i>tpq</i> late 12th to 14th centuries), bone frags (75).	Pit, probably cess pit with backfill of domestic debris and demolition rubble.
AU 4109 Disposal: pit (CG 4182)	Very truncated pit in Plot 3, measuring >1.15m across, >1.15m deep. Contained mixed fills in soil and backfilled sandy material.	Pottery (13, av wt 21.5g, <i>tpq</i> 13th century), Fe slag (2), bone fragments (26).	Pit, possibly cess pit, but lowest deposits truncated.
AU 4110 Movement zone: alleyway (conjectural)	Inferred alleyway alongside building (AU 4056).		Inferred alleyway.

Table 40 (cont.) Sites 4 and 5 Period 8 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4124 Structure: indeterminate disuse (CG 5028)	Layers recorded in section consisting of clay and daub, and clay and burnt daub.	None	Collapse of a wattle and daub wall.

Table 41 Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 9: medieval, mid-13th to mid-15th centuries			
Period 9 Phase 1			
AU 4055 Disposal: pit (CG 4170)	Small, sub-square pit, 0.90m across; 0.15m deep, adjacent to building and fitting into the corner formed by the protruding foundation. No indications of cess in fill.	Pottery (34 av wt 23g, <i>tpq</i> 13th to early 14th centuries), ceramic roof tile (11), stone tile (1 fragment), Fe slag (11 fragments), bone fragments (21).	Pit with backfill containing domestic refuse.
AU 4056 Structure: domestic building (CG 4168, 4169, 4173, 4246, & 4253)	Medieval stone building, described in detail in Period 8 Phase 2 above.	See Period 8 Phase 2 above.	See Period 8 Phase 2 above.
AU 4060 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4061 Movement zone: ground surface (CG 5031)	Layer recorded in section of Trench B, Site 5.	None	Levelling to form ground surface.
AU 4062 Disposal: pits (CG 5034, 5035, & 5036)	Pits in Trenches A and B, Site 5. CG 5034 only seen in section; CG 5035 truncated pit. Fill indicated that this was a cess pit. CG 5036 pit with dark charcoal fill; no indications of cess.	Pottery (11, av wt 12.4g, <i>tpq</i> 12th to 14th centuries).	One cess pit and one other pit in Trench A; a rubbish pit in Trench B.
AU 4072 Movement zone: ground surface (CG 4171)	Layer at north edge of site, adjacent to medieval building foundations. Originally recorded as a very shallow cut feature, but reinterpreted during post-excavation as a layer forming part of the ground surface.	Pottery (18, av wt 32.3g, <i>tpq</i> 14th century), tile frags (1), Fe slag (1) bone fragments (28).	Ground surface.
AU 4073 Disposal: pits (CG 4250)	Pit in Plot 5. Circular, diameter 1.30m; >0.85m deep as not fully excavated to base.	Pottery (14, av wt 19.9g, <i>tpq</i> 12th to 14th centuries), bone fragments (26), worked bone (1).	Pit not fully excavated, lower fills could indicate cess pit.
AU 4074 Boundary: fence (CG 4130)	Single posthole on line of fence AU 4095. 0.50m diameter, 0.20m deep, with off-centre post impression 0.30m diameter and 0.13m deeper.	Pottery (8, av wt 4.4g, <i>tpq</i> 12th to 14th centuries), mortar (3), Fe slag (11), bone fragments (10).	Interpreted as post added to support the fence during this phase.
AU 4075 Structure: indeterminate (CG 4075)	Single posthole, 0.20m diameter, 0.15m deep.	Pottery (1, wt 12g, <i>tpq</i> 12th to 14th centuries), Fe obj (1), Fe slag (75), bone fragments (5).	Single posthole with no obvious purpose or associations.

Table 41 (cont.) Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4076 Disposal: cess pit (CG 4254)	Circular cess pit within stone building (AU 4056). Cess pit was vertical-sided, and 1.70m in diameter. 1.0m depth of fill was excavated; it was not excavated to its base. Upper fill contained sandstone and mortar; lower fill contained lenses of cess and soil. Pottery <i>tpq</i> of lower fill 13th to 14th centuries.	Pottery (148, av wt 12.2g, <i>tpq</i> 13th to early 14th centuries), tile frags (10), stone (1), Fe objs (6), Cu alloy coin (1), Fe slag (168), bone frags (>553).	Cess pit. Its location within the building is perhaps surprising, since such features were normally located outside. It was sealed by demolition rubble of the building, however, so must have been contemporary with its use.
AU 4077 Disposal: pits (CG 4177, 4178, 4179, 4180, 4210, 4222, & 4264)	Pits in Plot 1–2. Rectangular pit, 1.60m × 1.70m × >1.70m deep, secondary fill of sand (CG 4177 and 4178). Sub-rectangular pit, 2.20m across, 0.80m deep, fill of redeposited refuse (CG 4179). Truncated remnant of pit, 2.90m across, 0.53m deep (CG 4180). Small pit, 1.00m diameter, 0.30m deep, fill contained small quantity of domestic debris (CG 4210). Sub-circular pit, 1.70m diameter, 0.40m deep, cone-shaped, fill contained large quantity of domestic debris (CG 4222). Truncated remnant of sub-rectangular pit, >1.20m × >0.80m × 0.20m deep. Fill cessy with small quantity of building debris (CG 4264).	Pottery (278, av wt 22.8g, <i>tpq</i> 14th century), tile frags (38), brick frags (1), Fe objs (4), Fe slag (14), bone frags (254).	Series of pits of which only one (CG 4264) showed evidence of having been used as a cess pit.
AU 4092 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4093 Boundary: disuse (conjectural)	Disuse of inferred boundary (see Period 8 Phase 1), gone out of use in this phase.	None	Disuse of inferred boundary. Pits belonging to this phase cross the line of this boundary.
AU 4094 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4095 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4096 Boundary: disuse	See Period 8 Phase 1.	None	Inferred boundary.
AU 4097 Extraction: quarry pits (CG 4031 & 4243)	Two large pits in Plot 6. Large circular pit, 3.00m diameter, >0.50m deep as not fully excavated to base. Fill included dressed sandstone and mortar (CG 4031). Pit, very large in plan, 3.40m × 2.70m × >0.60m deep. Fill contained little domestic debris (CG 4243).	Pottery (14, av wt 18.9g, <i>tpq</i> 13th to 15th centuries), tile (10).	Size of these features led to their interpretation as extraction pits rather than primarily for disposal. However, neither was fully excavated to base, which makes it difficult to confirm an interpretation.

Table 41 (cont.) Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4098 Boundary: fence (CG 4237)	Single posthole on line of AU 4060. Circular cut, sloping sides, 0.80m diameter, 0.10m deep (excavated from below contemporary ground surface, so original depth would have been greater). Fill contained moderate quantity of building debris and domestic refuse.	Pottery (4, av wt 14.5g, <i>tpq</i> 12th to 14th centuries) Fe slag (6), bone fragments (9).	Interpreted as post added to support the fence during this phase.
AU 4099 Disposal: pits (CG 4183, 4224, & 4225)	Pits in Plot 3. Sub-square pit, 1.60m across and 0.58m deep, with stakehole in base. Fill not cessy (CG 4183). Pit, extending outside excavated area, 1.90m × >1.00m × >0.55m deep. Fill included abundant roof tile and some domestic refuse (CG 4224). Sub-rectangular pit, 1.80m × 1.50m × 1.40m deep. Fill contained fairly large assemblage of domestic refuse, with some building material (CG 4225).	Pottery (203, av wt 18.5g, <i>tpq</i> 14th century), tile frags (9), fired clay (4), burnt limestone (2), limestone (4), Fe objs (5), Cu alloy objs (3), Fe slag (77), furnace material (1), vessel glass (1), glass slag (1), bone fragments (177), charcoal (6).	Three pits containing domestic rubbish, Not cess pits, since the fills included no cessy material.
AU 4100 Structure: indeterminate (CG 4249 (part; contexts 21054 and 21055))	Single posthole, diameter 1.40m, 0.15m deep.	Pottery (1, wt 3g, residual Roman), bone fragments (3).	Single posthole with no obvious purpose or associations.
AU 4116 Movement zone: ground surface	Reconstructed.	None	The majority of the ground surface was not recorded in this phase, but has been reconstructed in plan to indicate the extent of later truncation and its potential effect on reconstruction.
Period 9 Phase 2			
AU 4056 Structure: domestic building (CG 4168, 4169, 4173, 4246, & 4253)	Medieval stone building, described in detail in Period 8 Phase 2 above.	See Period 8 Phase 2 above.	
AU 4057 Disposal: latrine (CG 4284)	Stone and tile garderobe, at south-west corner of medieval building (AU 4056). Square pit, measuring 1.46m × 1.50m × 0.90m deep, with a stone and tile lining. The lining was laid in alternate horizontal bands of multiple courses of tile then rubble stone coursing. No tiles were retained. The fill was not described. The final backfill (CG 4285) contained pottery with a 16th to 18th centuries <i>tpq</i> .	None	See Period 8 Phase 2 above.
AU 4060 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4063 Disposal: cess pit (CG 5037)	Corner of a feature extending outside the excavated area of Site 5 Trench B. Consisted of a cut with a fill or lining of stone associated with heavily mineralised material.	Pottery (3, av wt 20.3g, <i>tpq</i> 14th to 16th centuries), Fe slag (1 fragment), bone fragments (6).	Corner of a stone-lined cess pit, within inferred structure AU 4091.

Table 41 (cont.) Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4078 Disposal: pit (CG 4299)	Pit in Plot 5. Sub-rectangular pit with almost vertical sides, measuring 1.84m × 1.44m × 0.90m deep. Fill not adequately described to determine if cessy or not. Finds indicate domestic disposal with some building materials.	Pottery (141, av wt 22.4g, <i>tpq</i> 13th to 14th centuries), tile frags (8), brick frag (1), stone roof tile frags (2), architectural limestone (12), Fe slag (46), furnace material (2), window glass (1), bone fragments (130).	Rubbish pit or possibly cesspit.
AU 4079 Production area: tanning (CG 4236)	Clay-lined pit containing horncores in Plot 5. Long rectangular cut measuring 1.50m × 0.80m × 0.30m deep. Base flat but sloping by 0.60m to one end. Lined with pinkish clay, 10–12mm thick. Fill contained many horncores, also small quantity of mixed building rubble and domestic debris.	Pottery (3, av wt 25.3g, <i>tpq</i> 14th to 15th centuries), roof tile frags (13), architectural stone (1), bone fragments (35).	Clay-lined pit associated with tanning or horn production. Nicholson and Scott (Section 7.28) suggested waste from tanning, which is compatible with the evidence from an extensive tannery in Northampton (Shaw 1996).
AU 4080 Production: indeterminate (CG 4226)	Clay-lined pit in Plot 3. Rectangular pit, shallow sloping sided, measuring 1.50m × 1.10m × ?0.20m, with clay lining. Fill contained much charcoal deposited in lenses, and slate whetstone fragments.	Pottery (28, av wt 17g, <i>tpq</i> 13th to 14th centuries), tile frags (3), fired clay (1), architectural stone (2), worked stone (1), hone (1), whetstone fragments (9), Fe slag (32), bone fragments (30).	Pit with clay lining, of uncertain function. Possibly a dump from industrial or craft process.
AU 4081 Structure: indeterminate (CG 4298)	Posthole, 0.30m diameter, 0.30m deep.	None	Isolated posthole possibly associated with activity represented by clay-lined pit AU 4079.

Table 41 (cont.) Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4082 Disposal: pits (CG 4184, 4185, 4186, 4189, 4190, 4191, 4193, 4195, 4196, 4197, 4198, 4212, 4214, 4217, & 4265)	<p>Pits in Plot 1–2. Intercutting.</p> <p>Rectangular pit (CG 4184), 2.40m × 2.50m × >1.50m deep, not fully excavated to base, containing primary cessy fill, and secondary fill with high quantity of building rubble (limestone, sandstone, other stone, mortar) mixed with domestic refuse (CG 4185).</p> <p>Ovoid pit, 2.20m × 1.40m × >0.90m deep, not fully excavated to base; primary fill very cessy (CG 4186).</p> <p>Pit, not recorded fully, so form and extent uncertain. Fill contained domestic refuse (CG 4189).</p> <p>Pit, sub-circular but much truncated, >1.50m across, max depth 0.35m. Fill soil mixed with small amount of domestic debris (CG 4190).</p> <p>Small oblong shallow pit, 0.70m × 0.50m × 0.13m deep, containing fill of mixed refuse (CG 4191).</p> <p>Sub-rectangular pit, truncated and part outside excavated area. >1.70m × >1.20m × >0.22m deep (truncated by machining). Fill contained domestic refuse and building rubble (CG 4193).</p> <p>Sub-rectangular pit, 1.75m × >1.20m × >0.35m deep (truncated by machining). Fill very organic and cessy, with some domestic refuse (CG 4195).</p> <p>Sub-rectangular pit, 1.60m × 1.80m × >1.60m deep, not fully excavated to base.</p> <p>Primary fill very organic and cess, with no artefacts (CG 4196). Secondary fill (CG 4197) a mixture of cess and domestic refuse with 13th to 14th centuries <i>tpq</i>.</p>	<p>Pottery (228, av wt 29.3g, <i>tpq</i> various, 14th/15th centuries), tile frags (78), brick frags (2), stone roof tile (3), stone (1), Fe objs (17), Cu slag (1), Fe slag (10), bone fragments (663).</p> <p>Three pits had building rubble in their fills.</p> <p>These pits were distinguished from those in Period 9 Phase 1 by their later <i>tpq</i> dates and on stratigraphic grounds.</p>	<p>Thirteen pits (not all shown on plan as some not drawn on site), of which five were definitely cess pits, on the basis of their fills. The functions of three could not be determined due to inadequate recording.</p>

Table 41 (cont.) Sites 4 and 5 Period 9 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4083 Disposal: industrial/butchery (CG 5033)	Circular vertical-sided/undercut pit or well, 1.90m diameter, >1.50m deep, not fully excavated to base. Fill contained little material (CG 4198). Sub-square pit, 2.40m × 2.60m × >1.00m deep, not fully excavated to base. Row of nails along edge. Fill of lenses of cess and sandy soil (CG 4212). Sub-rectangular pit, 1.30m × >1.30m, depth not known. Fill contained low quantity of domestic debris (CG 4214). Pit measuring 1.10m × 0.80m, depth not recorded. Base irregular due to slumping into slumped fills of CG 4212. Fill mixture of demolition rubble and domestic refuse (CG 4217). Remnant of rectilinear pit, north edge aligned with other pits. 1.90m × >0.40m × 0.35m deep. Fill not separately recorded. No finds (CG 4265).	Pottery (7, av wt 15.4g), tile frags (3), containing horncores and foot bones.	Very truncated remnant of pit. Presence of horncores and foot bones in fill indicate tanning (Shaw 1996).
AU 4091 Structure: indeterminate/latrine? (no CG)	Heavily truncated pit in Site 5 Trench A, containing horncores and foot bones.	Pottery (7, av wt 15.4g), tile frags (3), bone frags (5).	Inferred stone structure extending to the north of Site 5 Trench B. Possibly stone latrine containing stone-lined cess pit (AU 4063).
AU 4092 Boundary: fence (conjectural)	Stone structure inferred from cut feature described as a 'trench-like cut' (AU 4065) on Site 5, Trench B. The cut is interpreted as a robber trench, which implies the presence of a stone structure in an earlier phase to be robbed later on (see Period 10).	None	Inferred boundary.
AU 4094 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4095 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4096 Boundary: disuse: conjectural	See Period 8 Phase 1.	None	Inferred boundary.
AU 4115 Movement zone: ground surface (conjectural)	Reconstructed.	None	The majority of the ground surface was not recorded in this phase, but has been reconstructed in plan to indicate the extent of later truncation and its potential effect on reconstruction.

Table 42 Sites 4 and 5 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 10: late medieval/post-medieval: later 15th to late 16th centuries			
AU 4060 Boundary: fence (no CG)	See Period 8 Phase 1	None	Inferred boundary.
AU 4064 Disposal: pits (CG 5039, 5040, 5041, 5042, 5043, 5044, 5045, 5046, 5047, 5049, 5051, 5052, & 5053)	Pits in Site 5, recorded in section, recorded as having cessy material in their fills. None had many inclusions mentioned in the fills (CG 5040, 5047, 5049). Seven pits with no mention of cessy material. Most had some inclusions in their fills, including bone, and small amounts of building materials, such as ceramic tile and fragments of sandstone or limestone (CG 5039, 5041, 5042, 5043, 5044, 5045, 5046).	Pottery (4, av wt 51g, <i>tpq</i> 16th to 17th centuries), glass bead (1).	Three cess pits and ten rubbish pits.
AU 4065 Structure: indeterminate: robbing (CG 5048)	Feature described as a 'trench-like cut' recorded in Site 5 Trench B. Measured 0.45m wide at base, 1m wide at top; aligned perpendicular to the main plot divisions.	None	Interpreted as a robber trench for a stone structure, identified as a possible latrine (AU 4091) containing the stone-lined cess pit (AU 4063).
AU 4066 Structure: domestic building: demolition (CG 4255 & 4285)	Layer, recorded as lying within the area bounded by the robber trench along the walls of the medieval building, and sealing the features cut into the floor, including the cess pit (AU 4076). Composed of sandstone rubble, mortar and roof tile. Layer was 0.16–0.40m thick, and had a 15th century <i>tpq</i> (CG 4255). Fill of stone-lined cess pit (AU 4057), not described in any detail. 16th-to-18th-century <i>tpq</i> .	Pottery (47, av wt 19.2g, CG 4255 <i>tpq</i> 15th century, CG 4085 <i>tpq</i> 16th to 18th centuries), roof tile (30), other tile (3 fragments), fired clay (2 fragments), Fe nail (1), Fe slag (2 fragments), bone fragments (32), whetstone (1).	Demolition layer from stone building (AU 4056). Composed of discarded building debris not suitable for reuse.
AU 4067 Structure: domestic building: robbing (CG 4247)	Vertical-sided trenches along lines of walls of medieval building (AU 4056). Truncated by machining along south wall. Filled with much mortar, angular sandstone rubble, some tile, with animal bone in upper part of fill. Part of wall survived unrobbed in southern part of western wall.	Pottery (63, av wt 17.7g, <i>tpq</i> 14th to 17th centuries), roof tile (14), stone (10 fragments), Fe object (1), Fe slag (2 fragments), bone fragments (>511).	Robbing of foundation/basal courses for stone building (AU 4056).

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4068 Disposal: pits (CG 4258, 4260, 4288, 4289, 4290, 4291, & 4293)	Pits in Plot 4 cutting demolition and/or robber trench of building. Small sub-rectangular pit, truncated by machining and partly outside excavation area. Fill contained occasional stone fragments. <i>Tpq</i> 11th to 14th centuries (CG 4258). Shallow pit, 0.80m × >0.60m × >0.25m deep (machine truncated). Recorded in section (CG 4260). Truncated sub-oval pit, 1.0m × 0.90m × 0.25m deep. Fill not recorded (CG 4288). Truncated pit, sub-rhomboid in shape. 1.50m × 1.70m × 0.50m deep. Neither cut nor fill described. <i>Tpq</i> 14th to 15th centuries (CG 4289). Truncated pit, poorly recorded, 2.10m × 0.90m × 0.40m deep (CG 4290). Truncated pit, 3.10m × 1.00m × 0.50m deep, poorly recorded. <i>Tpq</i> 16th to 17th centuries (CG 4291). Truncated oval pit, 1.80m × 1.33m × 0.25m deep. <i>Tpq</i> 14th to 15th centuries (CG 4293).	Pottery (96, av wt 45.4g, <i>tpq</i> various), roof tile (1), floor tile (3), Fe slag (1) fragments, vessel glass (2 sherds).	Pits
AU 4069 Disposal: pits (CG 4172, 4261, 4282, & 4294)	Pits in Plot 4, not cutting building demolition and robber trench. Sub-rectangular shallow pit, with gently sloping sides, >1.40m × 1.20m × 0.25m deep. Fill contained moderate quantity of domestic debris (CG 4172). Sub-rectangular pit, 1.80m × >0.60m × 0.40m deep (truncated by machining). Fill not fully described (CG 4261). Sub-square pit, fill not recorded (CG 4282). Truncated remnant of pit, 2.65m × 1.87m × 1.30m deep. Fill contained few inclusions (CG 4294). Pits in Plot 1–2.	Pottery (20, av wt 18.5g, <i>tpq</i> various), roof tile (8), tile (1 fragment), stone (5), Fe shafts and nails (5), Fe slag (41) fragments, bone fragments (22).	Pits
AU 4070 Disposal: pits (CG 4201, 4202, 4203, 4213, 4215, 4216, 4218, 4220, 4263, 4266, 4267, 4268, 4269, 4270, 4271, 4272, 4301, 4307, 4318, & 4319)	Oblong pit, 2.20m × 0.90m, depth not recorded, fill contained little domestic refuse (CG 4201).	Pottery (413, av wt 28.7g, <i>tpq</i> various), tile (145 fragments), brick (3 fragments), fired clay (1), slate (1 fragment), mortar (1 fragment), plaster (3 fragments), Fe objects (38), Cu alloy objects (12), Fe slag (51), window glass (5), bone fragments (901).	Nineteen pits, of which ten were cess pits (CG 4213, 4216, 4218, 4220, 4263, 4266, 4267, 4268, 4272, 4307).

Table 42 (cont.) Sites 4 and 5 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
	Pit, 1.40m × 1.20m × 0.20m deep. Fill contained domestic refuse (CG 4202). Portion of sub-square pit, extended outside excavated area, 2.00m across, 0.50m deep (CG 4203).		
	Sub-square pit, 2.70m × >1.80m × 0.50m deep. Fill contained mixture of cess and domestic refuse (CG 4213).		
	Small sub-circular pit, diameter 0.60m. Fill contained burnt material, both charcoal and burnt clay, and domestic debris (CG 4215).		
	Truncated remnant of pit, with fill containing cess and domestic refuse. Stratigraphy uncertain (CG 4216).		
	Pit 2.20m × 1.60m, depth not recorded.		
	Fill contained mixed demolition debris and domestic refuse, also cess (CG 4218). Unclear whether separate pit or upper fills of CG 4218. 2.00m × >1.40m. Fill contained some building materials and domestic refuse, also cess noted (CG 4220).		
	Sub-rectangular pit, much truncated, 3.20m × 2.50m × 0.70m deep. Flat base. Fill contained moderate quantity of domestic debris, also cess (CG 4263).		
	Oblong pit with rounded ends, 3.00m × 1.60m × >0.50m deep, not fully excavated to base (CG 4266). Fill contained lenses of cessy material, plus domestic debris (CG 4301).		
	Oblong pit with rounded end, >1.00m × 0.80m × 0.72m deep, flat base. Fill contained cessy lenses plus domestic debris and building rubble (CG 4267).		
	Large sub-rectangular pit, 4.00m × 2.50m × 0.45m deep. Fill described as cessy, very little other material (CG 4268).		

Table 42 (cont.) Sites 4 and 5 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4071 Structure: indeterminate (CG 4199)	Sub-square pit, relatively shallow, 0.60m × >0.70m × 0.28m deep. Fill contained some building rubble (CG 4269). Sub-rectangular, relatively shallow cut, >2.60m × >1.00m × 0.30m deep. Fill homogenous with low quantity of domestic refuse and building rubble. Poss truncated base of deeper pit (CG 4270). Rectilinear pit, 1.20m × 0.50m × 0.25m deep, truncated by machining. Fill contained small quantity of domestic debris and building rubble (CG 4271). Rectilinear pit, 2.90m × 1.20m, depth uncertain. Fill contained lenses of cess and soil, moderate quantity of domestic debris (CG 4272). Truncated pit, cut by machining. Fill mixed, including some cessy material at base (CG 4307). Oval pit, possibly two intercutting pits. Fill includes domestic refuse and some building materials (CG 4318).	None	Structure related to pit (CG 4201). The structure appeared to have been disused and removed before the final infilling of the pit.
AU 4090 Structure: demolition (CG 5054)	Rectangular steep-sided pit, not fully excavated to base, 1.85m × 1.00m × >1.00m deep. Fill had few inclusions, but lenses of different material were recorded (CG 4319).	Part of layer of demolition rubble and soil, recorded in section in Trench B, Site 5.	Demolition debris from stone structure of which AU 4065 is the robber trench.
	Two small post-holes either side of pit CG 4201 (AU 4070). One was sealed by the secondary fill of the pit.	None	

Table 42 (cont.) Sites 4 and 5 Period 10 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
AU 4092 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary not likely to have been very much used during this period, since its line is crossed by other features. May even have gone out of use temporarily, although this line seems to have continued in use, and survived to show in later maps.
AU 4094 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4095 Boundary: fence (conjectural)	See Period 8 Phase 1.	None	Inferred boundary.
AU 4096 Boundary: disuse	See Period 8 Phase 1.	Pottery (50, av wt 15.4g, <i>tpq</i> 16th to 17th centuries), tile (3 frags), brick (1 frag), fired daub (3), Fe obj (2) Fe slag (20) vessel glass (2), bone frags (202).	Inferred boundary.
AU 4111 Disposal: pit (CG 4232)	Single pit in Plot 5. Sub-circular pit, 1.50m in diameter, 1.30m deep, cone shaped. Fill had organic/cess content, some domestic refuse in backfill.	Pits, not fully recorded.	Cess pit with some refuse in backfill.
AU 4112 Disposal: pits (CG 4018, 4020, 4283, & 4295)	Pits in Plot 6, Site 4. Small part of large pit excavated. Pit extended outside excavated area. Not fully recorded (CG 4018). Several pits excavated as one, total area 5.40m × 3.40m × >0.55m deep, not fully excavated to base. Fill contained green sandstone rubble (CG 4020). Truncated oval pit, poorly recorded (CG 4283).	Pits, not fully recorded.	
AU 4113 Disposal: pit (CG 4223)	Small sub-rectangular pit, 1.00m × >0.80m × 0.25m deep. Fill not fully recorded (CG 4295).	Pottery (4, av wt 10g, <i>tpq</i> 16th to 17th centuries), tile (4 frags), fired clay (1), Fe obj (1), Fe slag (4), bone frags (11).	Pit of uncertain function, of a strange shape.
AU 4114 Movement zone: ground surface (CG 4187, rest reconstructed)	CG 4187 is the secondary fill of pit CG 4186. The rest of the ground surface for this period has been reconstructed.	Pottery (38, av wt 28.1g, <i>tpq</i> 16th century), tile (13 frags), Fe objs (3), Cu slag (2), bone frags (134).	Ground surface, most reconstructed in plan to indicate the extent of later truncation and its potential effect on reconstruction.

Table 43 Sites 4 and 5 Period 11 activity unit table

Activity unit number and type	Description	Material assemblage	Interpretation
Period 11: post-medieval, early 17th to 19th centuries			
AU 4089 Disposal pit (CG 4286)	17th-century pit which provides absolute <i>terminus ante quem</i> for the demolition of the stone building, because the pottery it contained represents primary deposition.	Pottery (43, av wt 105.7g), tile (2 frags), bone frags (1).	Refuse pit.

Table 45 Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
153	1	5.1	11259	1050	4	176
153	2	5.1	11657	1050	4	163
153	3	5.1	11259	1048	4	191
153	4	1	11493	1003	2	193
153	5	2	17009	2035	4	193
153	6	3	16869	2015	3	31
153	7	3	16867	2021	3	32
153	8	3	17039	2023	3	28
153	9	3	17089	2221	3	28
153	10	3	17035	2022	3	32
153	11	3	17407	2033	4	167
153	12	7	11475	1005	3	162
153	13	7	17303	2239	7	1324
153	14	8	11293	1044	4	178
153	15	8	17479	2014	3	1337
153	16	8	18084	3029	5	1331
154	1	12	11660	1056	4	64
154	2	12	18140	3019	4	64
154	3	12	18103	3029	4	64
154	4	12	20279	4041	4	64
154	5	12	20357	4056	4	64
154	6	12	18340	3026	3	59
154	7	12	12003	1307	3	51
154	8	12	17727	2038	4	58
154	9	12	18140	3019	4	45
154	10	12	17047	2031	3	40
154	11	12	11450	1021	4	15
155	1	12	11472	1011	3	78
155	2	12	11494	1013	3	79
155	12	12	11496	1002	4	96
155	13	12	20341	4038	5	96.4
155	14	12	17327	2052	5	96.2
155	15	12	11230	1059	7	118.1
155	16	12	17424	2027	4	128
155	17	12	17755	2036	4	118
155	18	12	17098	2033	4	114
155	19	12	16547	2105	5	99
155	20	12	22350	Unstratified	7	159
155	21	12	17692	2038	4	1342
155	22	12	11401	1043	3	179
155	23	12	18092	3029	5	1362
155	24	12	18305	3007	3	1422
155	25	12	12003	1037	4	1302
156	5	12.2	11475	1005	3	45
156	6	12.2	18151	3019	3	44
156	7	12.2	18103	3029	5	1392
156	8	12.2	18103	3029	3	64
156	9	12.2	18180	3019	4	1325
157	1	12.2	21164	4021	3	78
157	2	12.2	18178	3019	3	79
157	3	12.2	20428	4014	3	83.1

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
157	4	12.2	11472	1011	3	22
157	5	12.2	11428	1028	3	22
157	6	12.2	11829	1019	3	22
157	7	12.2	17300	2053	5	98
157	8	12.2	18076	3033	5	98
157	9	12.2	21078	4037	4	1389
157	10	12.2	18247	3027	4	96
157	11	12.2	11094	1067	8	1476
157	12	12.2	18091	3029	5	186
157	13	12.2	17038	2221	3	154
157	14	12.2	20535	4029	5	114
157	15	12.2	11472	1011	3	192
157	16	12.2	17427	2027	4	1336
157	17	12.2	11847	1017	3	1
157	18	12.2	21164	4021	4	6
157	19	12.2	21078	4037	3	166
157	20	12.2	17008	2223	3	45
157	21	12.2	21129	4014	NA	NA
158	1	12.1	16869	2015	3	1308
158	2	12.1	12003	1037	4	37
158	3	12.1	11450	1021	4	15
158	4	12.1	11475	1005	7	40
158	5	12.1	17008	2223	5	14.1
158	6	12.1	18139/17098	3019/2033	4	1394
158	7	12.1	12000	1037	4	65
158	8	12.1	11472	1011	4	78
158	9	12.1	11494	1013	5	79
158	10	12.1	11494	1013	5	83.1
158	11	12.1	11829	1019	3	22
158	12	12.1	17007	2223	4	69
158	13	12.1	17303	2239	7	16.1
159	1	12.3	16869	2015	3	177
159	2	12.3	16867	2021	4	1013
159	3	12.3	16869	2015	3	11
159	4	12.3	11979	1037	3	11
159	5	12.3	16867	2021	3	11
159	6	12.3	18283	3027	3	11
159	7	12.3	11997	1037	3	37
159	8	12.3	12000	1037	3	40
159	9	12.3	16867	2021	4	159
159	10	12.3	17038	2221	3	154
159	11	12.3	18113	3021	4	1469
159	12	12.3	16867	2021	4	16
159	13	12.3	11494	1013	3	46
159	14	12.3	11816	1046	3	69
160	1	12.6	17011	2031	3	44
160	2	12.6	12003	1037	5	79
160	3	12.6	17011	2031	5	118
160	4	12.6	17035	2022	4	189
160	5	12.6	17039	2023	4	45
160	6	12.6	17042	2021	3	40

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
160	7	12.6	16869	2015	3	51
160	8	12.6	21129	4014	3	78
160	9	12.6	16867	2021	4	22
160	10	12.6	17692	2038	4	1344
160	11	12.6	17340	2048	5	159
160	12	12.6	20410	4039	5	117
160	13	12.6	17007	2223	5	118
160	14	12.6	12003	1037	4	114
160	15	12.6	21129	4014	NA	NA
161	1	13	21049	4040	3	1
161	2	13	16742	2154	9	2
161	3	13	20394	4037	5	37
161	4	13	18243	3030	5	1415
161	5	13	18091	3029	5	1341
161	6	13	18139	3019	7	1466
161	7	13	17328	2044	5	84
161	8	13	16867	2021	4	1339
162	1	14	18091	3029	3	11
162	2	14	12024	1011	3	1306
162	3	14	12000	1037	3	37
162	4	14	17039	2023	4	51
162	5	14	22052	NA	3	1015
162	6	14	11403	1034	3	11
162	7	14	18103	3029	4	51
162	8	14	18103	3029	3	67
162	9	14	18103	3029	5	86
162	10	14	Unstratified	NA	4	159
162	11	14	11494	1013	3	162
162	12	14	11450	1021	4	187
162	13	14	11418	1029	4	94
162	14	14	17485	2032	4	166
162	15	14	17008	2223	3	40
163	1	15	21078	4037	4	11
163	2	15	11843	1048	4	1306
163	3	15	20391	4024	4	12
163	4	15	18305	3007	3	1468
163	5	15	20425	4014	3	1311
163	6	15	21129	4014	3	1385
163	7	15	21165	4014	3	1388
163	8	15	20721	4036	5	133
163	9	15	20391	4024	4	1378
163	10	15	11475	1005	3	94
163	11	15	11494	1013	3	94
163	12	15	21164	4021	4	1387
163	13	15	20420	4039	5	1376
163	14	15	21129	4014	3	166
164	1	19	18212	3020	4	42
164	2	19	18122	3021	4	42
164	3	19	21035	4041	4	42
164	4	19	20420	4039	4	1010
164	5	19	18114	3021	4	1016

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
164	6	19	18139	3019	4	42
164	7	19	18151	3019	4	161
164	8	19	17085	2027	4	1313
164	9	19	20428	4014	3	1377
165	1	20	11986	1037	4	1303
165	2	20	20786	4028	4	1383
165	3	20	17479	2014	3	1338
165	4	20	12003	1037	4	1301
165	5	31	18098	3029	5	1409
165	6	31	17029	2031	4	40
165	7	31	17098	2033	4	109
165	8	34	12000	1037	4	135
165	9	34	20652	4028	4	135
165	10	37	21129	4014	3	186
165	11	103	12036	1057	5	1304
165	12	114	16867	2021	4	1310
165	13	114	18701	NA	> 10	1440
165	14	17	17035	2022	4	188
166	1	22	18139	3019	4	1393
166	2	22	17011	2031	4	42
166	3	22	12003	1037	4	42
166	4	22	18098	3029	4	62
166	5	22	18140	3019	4	90
166	6	22	17085	2027	4	102
166	7	22	20305	4039	4	103
166	8	22	17039	2023	4	154
167	1	28	18113	3021	4	1396
167	2	28	20318	4041	5	1369
167	3	29	17328	2044	5	84
167	4	29	17001	2052	5	1467
167	5	30	18091	3029	5	1347
167	6	30	11986	1025	4	1303
168	1	32	18098	3029	5	1371
168	2	32	17328	2044	5	145
168	3	32	18074	3043	9	1315
168	4	32	20555	4042	5	145
168	5	33	22203	NA	> 10	137
168	6	33	18103	3029	5	139
169	1	38	11459	1013	3	190
169	2	38	17293	2057	6	1318
169	3	38	17343	2048	5	200
169	4	40.1	17098	2033	4	1010
169	5	41	11231	1052	4	185
169	6	41	17031	2221	4	183
169	7	41.1	12003	1037	4	1428
169	8	109	21129	4014	3	1386
169	9	109	18304	3007	3	1421
169	10	115	11660	1056	5	1012
170	1	26	21129	4014	3	1398
170	2	36	17765	2221	4	150
170	3	43	11494	1003	NA	NA

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
170	4	43	12003	1037	NA	NA
170	5	43	12003	1037	NA	NA
170	6	43	18099 and 18140	3025/3019	NA	NA
170	7	43	20353	4015	NA	NA
170	8	43	21164	4021	NA	NA
170	9	45	11808	1045	4	1013
177	1	55	11094	1067	7	307
177	2	55	16402	2158	7	306
177	3	55	16259	2144	8	530
177	4	55	16279	2144	8	523
177	5	55	20484	4021	8	273
177	6	55	20368	4078	8	232
177	7	55	11330	NA	8	412
177	8	55	16259	2144	8	404
177	9	55	16334	2179	7	229
177	10	55	17246	2115	8	301
177	11	55	15987	2189	8	404
177	12	55	11328	1101	8	403
177	13	55	16334	2179	8	477
178	1	55	16703	2119	8	413
178	2	55	11215	1121	8	413
178	3	55	16279	2144	8	523
178	4	55	16026	2207	8	333
178	5	55	16417	2158	9	321
178	6	55	16678	2139	8	355
178	7	55	16417	2158	8	355
178	8	55	10894	1101	9	622
178	9	55	16402	2158	9	486
179	1	64.1	16259	2144	8	522
179	2	64.1	16259	2144	8	527
179	3	64.1	16259	2144	8	521
180	1	64.1	16259	2144	8	528
180	2	64.1	16259	2144	8	361
180	3	64.1	16259	2144	8	529
180	4	64.1	16742	2154	8	383
180	5	64.1	11306	1097	9	594
180	6	64.1	16259	2144	8	520
180	7	64.1	21036	4055	9	NA
180	8	64.1	16328	2182	9	NA
180	9	64.1	16608	2206	8	NA
180	10	64.1	10376/10509	NA/1119	9	NA
180	11	64.1	16356	2172	9	NA
181	1	64.1	16145	2228	9	682
181	2	64.1	10536	1131	9	1044
181	3	64.1	16610	2179	9	470
181	4	64.1	10606	1115	9	591
181	5	64.1	20521	4099	9	NA
181	6	64.1	10889	1101	9	NA
181	7	64.1	16108	2165	9	654
181	8	64.1	10533	1131	9	590
181	9	64.1	16605	2147	9	471

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
181	10	64.1	10967	1101	9	625
181	11	64.1	16101	2214	9	NA
181	12	64.1	10889	1101	9	NA
181	13	64.1	16720	2148	9	NA
182	1	64.1	10829	1095	9	652
182	2	64.1	10874	NA	9	573
182	3	64.1	15496	2179	9	661
182	4	64.1	10854	1124	9	653
182	5	64.1	11353	1081	8	394
182	6	64.1	16295	2179	9	500
182	7	64.1	16145	2228	9	681
182	8	64.1	16251	2179	9	446
182	9	64.1	16145	2228	9	683
182	10	64.1	16145	2228	9	684
182	11	64.1	16251	2179	9	592
183	1	53	16148	2150	8	365
183	2	53	11300	1108	9	1203
183	3	53	16162	2102	8	380
183	4	53	11316	1071	8	569
184	1	56	11301	1108	9	575
184	2	56	16356	2172	9	489
184	3	56	16276	2154	9	597
184	4	56	11210	1121	8	204
184	5	56	10533	1131	9	205
184	6	56	20636	4082	9	204
184	7	56	15906	2196	8	1027
185	1	69	20617	4077	9	416
185	2	69	16145	2228	9	584
185	3	69	11208	1121	9	584
185	4	69	10967	1101	9	626
185	5	69	18014	3048	9	1033
185	6	69	16307	2188	9	1033
185	7	69	15447	2216	10	370
185	8	69	20452	NA	9	417
185	9	69	20627	4082	9	444
185	10	69	11922	1114	10	1032
185	11	69	15706	2213	10	NA
185	12	69	15875	2196	9	NA
186	1	69	10746	1147	9	582
186	2	69	10519	1141	9	1039
186	3	69	10585	1147	10	1027
186	4	69	16224	2206	10	1043
186	5	69	15555	2219	10	516
186	6	69	15551	2219	10	516
186	7	69	10603	1124	9	583
186	8	69	16844	2145	9	474
186	9	69	15493	2189	9	658
186	10	69	11362	1096	9	666
186	11	69	16263	2214	10	430
186	12	69	10356	1139	10	632
187	1	69	15566	NA	10	532

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
187	2	69	15474	2216	10	657
187	3	69	20285	NA	10	458
187	4	69	15551	2219	9	427
187	5	69	15555	2219	9	418
187	6	69	10376	NA	10	514
187	7	69	20073	NA	10	420
187	8	69	15578	2214	9	536
187	9	69	20623	4082	10	433
187	10	69	16099	2207	10	NA
187	11	69	21059	NA	10	435
187	12	69	16097	2207	10	649
187	13	69	20082	4070	10	422
187	14	69	10252	1144	10	638
188	1	69	15797	2202	10	671
188	2	69	15752	2210	10	666
188	3	69	20164	NA	10	421
188	4	69	15570	NA	11	551
188	5	69	15506	2206	10	429
188	6	69	10252	1144	10	637
188	7	69	15551	2219	10	1040
188	8	69	10376	NA	10	634
188	9	69	15271	N	10	NA
188	10	69	15555	2219	10	511
188	11	69	15888	2202	10	586
188	12	69	10227	1144	10	687
188	13	69	18034	3048	10	562
188	14	69	11145	1136	9	369
188	15	69	15551	2219	10	NA
188	16	69	10585	1147	10	579
188	17	69	20094	4070	10	1038
188	18	69	18010	3048	10	561
188	19	69	15566	NA	10	531
189	1	57	16691	2081	7	212
189	2	57	16393	2082	7	303
189	3	57	16620	2101	8	293
189	4	57	16670	2111	7	235
189	5	57	16147	2216	8	234
189	6	57	16467	2095	8	296
189	7	57	18249	3040	8	558
189	8	57	18210	NA	8	557
189	9	57	16487	2110	8	257
189	10	57	18062	3043	9	1034
189	11	57	15271	NA	11	656
189	12	57.1	17327	2052	7	324
189	13	57.1	11094	1067	7	228
189	14	57.1	16471	2084	7	322
189	15	57.1	17280	2239	7	254
189	16	57.1	22191	NA	7	235
189	17	57.1	16681	2111	8	238
190	1	58	17108	2084	7	259
190	2	58	16617	2126	8	400

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
190	3	58	16453	2116	8	482
190	4	58	16380	2227	8	275
190	5	58	20251	NA	8	237
191	1	143.1	10352	1147	9	466
191	2	143.1	17116	2147	9	467
191	3	143.1	16097	2207	10	678
191	4	143.1	10854	1124	9	1001
191	5	143.2	10898	NA	9	371
191	6	143.2	15508	NA	11	NA
191	7	143.2	11210	1121	9	371
191	8	143.2	15557	2214	10	544
192	1	78	10252	1144	10	509
192	2	78	15563	NA	11	509
192	3	78	15571	2219	10	1048
192	4	78	15447	2216	10	1040
192	5	78	15563	NA	10	1048
192	6	78	10376	NA	10	1043
192	7	78	15555	2219	10	509/1048
192	8	78	15547	NA	11	1047
192	9	78	15474	2216	10	28.4
192	10	71	20164	NA	10	456
193	1	46.1	16692	2239	7	207
193	2	46.1	17289	2239	7	245
193	3	46.1	17125	2088	7	245
193	4	46.1	17280	2239	7	253
193	5	46.1	16641	2129	7	269
193	6	46.2	16620	2101	8	290
193	7	46.2	16453	2116	8	325
193	8	46.1	17104	2091	7	328
193	9	46.2	11217	1076	8	329
193	10	46.2	16355	2172	9	483
193	11	46.1	15456	2230	8	485
193	12	46.2	18012	3048	10	555
193	13	46.1	16626	2085	7	676
193	14	46.1	16617	2126	8	1001
194	1	49	17280	2239	7	252
194	2	49	17280	2239	7	250
194	3	49	16589	2078	7	378
194	4	49	16848	2081	7	373
194	5	49	17126	2088	7	218
194	6	49	11094	1067	8	380
194	7	48	16901	2081	7	324
194	8	48	16471	2084	7	268
194	9	48	17274	2080	7	1001
194	10	48	11153	1127	9	570
195	1	64.2	16145	2228	9	679
195	2	64.2	16222	2206	9	549
195	3	64.2	20627	4082	9	1033
195	4	64.2	10536	1131	10	627
195	5	64.2	18014	1116	10	559
195	6	64.4	10869	1108	9	576

Table 45 (cont.) Catalogue of illustrated sherds

Figure no	Illustration no	Fabric no	Context	Activity unit	Earliest occurrence of form (Period)	Archive form no
195	7	64.4	11944	3043	9	567
195	8	62	10814	2179	9	578
195	9	119	10165	1144	10	1001
196	1	63	10533	1131	9	646
196	2	63	16145	2228	9	673
196	3	63	20451	4070	10	1043
197	1	145	16331	2179	9	703
197	2	65	20478/10854	4106/1124	8	437/645
197	3	65	16368	2172	9	1218
197	4	65	10801	1124	8	1034
197	5	141	20617	4077	9	688
198	1	70.1	10212	1144	10	510
198	2	70.1	10501	1138	10	1046
198	3	70.1	20452	NA	10	552
198	4	70.1	10133	1144	10	636
198	5	70.2	16075	2216	10	1053
198	6	64.3	18050	3043	9	1032
198	7	64.3	16251	2179	9	502
199	1	120	10212, 10252	1144	10	655
199	2	120	16095	2207	10	674
199	3	120	10123	NA	11	1047
199	4	82.2	10134	1144	10	713
199	5	82.2	18035	3048	10	714
199	6	82.2	20156	4070	10	715
199	7	79	10099	1142	10	706
199	8	79	18034	3048	10	1017
199	9	79	10252	1144	10	1001
199	10	82.4	15571	2219	10	685
199	11	145	15555	2219	10	1558
200	1	118.1	15447	2216	10	367
200	2	118.1	10002	NA	12	NA
200	3	118.1	15578	2214	10	NA
200	4	118.1	10416	1145	10	NA
200	5	118.1	10123	NA	11	NA
200	6	118.1	15635	NA	11	NA
200	7	118.1	15560	NA	11	NA
200	8	118.2	10211	1144	10	NA
200	9	118.2	10252	1144	10	NA
200	10	118.2	10252	1144	10	NA
201	-	118.1	15447	2216	10	367
202	1	82.3	15771	2229	10	1053
202	2	81.8	10133	1144	10	710
202	3	81.8	10133	1144	10	1057
202	4	81.9	10211	1144	10	635

7 Specialist reports: artefacts, ecofacts, soils, and dating

7.9 Ironworking residues

Gerry McDonnell and Anthony Swiss

7.9.3 Compositional and statistical analysis of Roman ironworking slag

Introduction

This section will present the results from the compositional analysis undertaken on a selection of Roman slags and ore samples found at Deansway. The data from the slag are statistically analysed to see if there is a significant compositional difference within the Deansway material and slag from other local sites of a similar date. The chemical compositions of the ores are compared with three ores from the Forest of Dean, and one from the Worcester Graben. It was hoped that this would help determine whether ores from the Forest of Dean, or a source more local to Worcester had been utilised.

Methodology

The morphology of the samples was initially recorded, before thick sections were removed using a diamond wafering saw. They were mounted in either a fast setting resin or hot setting bakelite, then ground and polished using abrasive papers and diamond pastes. Microstructural analysis involved the use of the optical reflected light and scanning electron microscopes (20kV, 2.6mA, beam at saturation) with quantitative compositional analysis by Energy Dispersive X-ray Analysis (EDX).

The statistical analysis of the compositional data initially involved them being normalised to 100%. Using the t-Test method of analysis, the Deansway smelting and tap slags were compared for major oxide differences. They were then collated and compared with the published results from slags from Romano-British sites from the wetlands of the Severn Estuary. The results of the analysis undertaken upon the iron ores were compared against three different ore sources within the Forest of Dean area, and another ore from the low-lying basin of Permo-Triassic rock, known as the Worcester Graben.

Samples

Nine slag samples were selected for analysis using both the optical and electron microscopes. For the

purpose of this report it was decided to limit the selection to samples from the Roman period (Periods 4–5, AD 120–400). The chosen samples represented Sites 2 and 4, and consisted of smelting, tap, and a tube slag, and two iron ores. Smithing slag was not available from these periods. Details of the samples are presented in Table 83.

Table 83 Slag and ore samples

Sample	Site	Period	Slag type
17002	2	4	Iron ore
17601	2	5	Tap slag
17608	2	4	Smelting slag
20501	4	5	Tap slag
20519	4	4	Smelting slag
20616	4	5	Tube slag
20729A	4	4	Smelting slag
20729B	4	4	Smelting slag
20178	4	5	Iron ore

Morphology / Compositional Analysis

Sample 17002

See Figure 212. This iron ore is very dense. The outside surface is primarily pinky-grey in colour, although there are small areas of powdery orange and yellow. Internally it is the same pinky-grey colour, and has a crystalline fracture.

Under the optical microscope the sample is



Figure 212 Ore sample 17002

Table 84 Sample 17002 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	Fe ₂ O ₃	Total
Bulk analysis 1	0.6	0.1	0.2	1.7	nd	0.1	0.2	nd	nd	84.6	87.5
Bulk analysis 2	nd	0.5	0.5	1.9	0.1	0.1	0.5	0.1	0.1	85.6	89.4
Spot analysis	nd	1.0	0.2	1.9	nd	nd	0.1	nd	0.1	91.7	95.0
Bulk analysis 3	0.5	0.7	0.2	1.6	0.1	nd	0.2	nd	0.1	87.9	91.3

nd – non detected.

primarily featureless, apart from small areas of white crystalline material. There is some vesicularity, which is crystalline in nature.

Table 84 presents the results of four compositional analyses undertaken using the EDX.

Sample 17601

This tap slag is blue-grey in colour, with a crystalline fracture. The internal structure is split by several cracks and faint lines, and it is hypothesised that the lines or veins represent where different slag flows have fused together. The individual flows are various shades of grey, and have varying amounts of vesicularity. The slag is very dense. See Figure 213.

The optical analysis determined that the microstructure is primarily iron silicate (massive in places) and glassy material. Wustite (FeO) is present, although it is somewhat disseminated and mostly in a globular form. The faint lines are clearly visible as veins of small fragmentary wustite. Vesicularity is present in both massive and fine morphology. There is one small area (8µm) of differentially reflecting material, probably iron corrosion or massive iron oxide.

The results of the compositional analysis are presented in Table 85.

Sample 17608

Sample 17608 is a heavy and dense smelting slag, the exterior of which has a greyish-red stippled/frothy appearance. Internally, the slag is grey, with a cracked, vesicular microstructure.

Optical analysis indicated that the microstructure is primarily iron silicate and glassy phases, with the

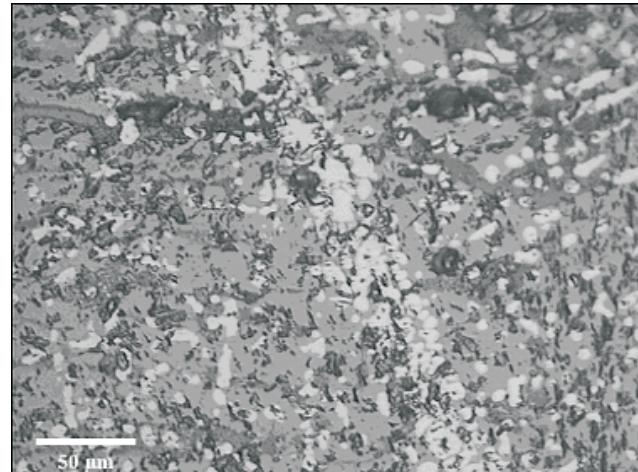


Figure 213 Iron silicate (mid grey), glass (dark grey), disseminated FeO (light grey), and FeO vein. Black areas are vesicularity. Sample 17601

silicate present in both lath and block form. There is little wustite present except for dispersed fragmentary blobs, and a small patch near the edge. There are no obvious metallic or oxide/corrosion areas.

Table 86 presents the results of the compositional analysis.

Sample 20501

The morphology of sample 20501 has the ‘classic’ tap slag appearance of a frozen syrupy liquid. The surface is pinkish-grey in colour, with areas displaying a frothy/vesicular nature. There are several large voids which display wood graining, and it is proposed that these would have once contained pieces of the charcoal used during the smelting

Table 85 Sample 17601 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	1.0	1.8	5.4	26.2	nd	2.3	2.0	0.2	0.2	59.3	98.4
Bulk analysis 2	0.4	1.9	4.0	25.7	nd	1.5	1.8	0.2	nd	64.8	100.4
Glass/eutectic	1.2	1.5	16.1	40.3	nd	9.4	5.0	0.3	0.2	16.0	90.0
Wustite	nd	0.1	0.5	1.5	nd	0.1	0.1	0.7	nd	87.7	90.7
Silicate	nd	1.3	1.2	34.0	nd	nd	0.6	nd	0.6	67.7	105.4
Bulk analysis 3	0.2	2.2	5.3	29.1	nd	2.1	2.1	0.3	0.2	65.5	107.0
Strange spot	1.7	1.5	5.6	15.0	0.4	1.6	44.7	0.2	nd	4.5	75.1

nd – non detected.

Table 86 Sample 17608 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	1.3	1.6	12.0	35.0	nd	1.0	4.6	0.6	0.2	42.6	98.8
Bulk analysis 2	2.5	2.5	18.0	36.0	nd	1.0	4.4	0.7	0.1	44.2	109.3
Silicate lath	0.5	1.7	1.2	34.4	nd	nd	0.5	nd	0.2	66.4	105.0
Glass/eutectic	2.3	1.5	15.4	43.6	nd	1.8	9.3	1.0	nd	32.4	107.3
Strange crack	0.2	1.4	9.7	36.9	nd	1.0	4.3	0.5	nd	46.3	100.1
Bulk analysis 3	0.6	1.3	11.1	27.6	nd	1.0	3.3	0.6	nd	47.9	93.4

nd – non detected.

Table 87 Sample 20501 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	2.3	1.5	4.7	33.9	nd	2.0	2.1	0.2	0.3	59.1	106.0
Bulk analysis 2	2.0	1.4	5.3	35.4	nd	2.1	2.1	0.2	0.1	59.7	108.5
Dendrite arm	nd	0.2	2.1	4.6	nd	0.1	0.4	1.3	0.2	91.2	100.1
Glass	2.7	0.8	14.5	38.5	0.5	8.3	8.6	0.5	nd	21.0	95.6
Glass	3.5	1.7	15.2	39.6	nd	6.5	6.9	0.3	0.5	30.3	104.5
Bulk analysis 3	1.5	1.4	5.0	36.1	0.1	2.3	2.2	0.2	nd	66.0	114.5
Silicate	nd	1.0	nd	26.8	nd	nd	nd	0.2	0.4	1.9	30.4

nd – non detected.

process. The grey internal microstructure has several large vesicles, as well as the faint lines that indicate where different slag flows have fused. The slag is both heavy and dense. See Figures 214 and 215.

When examined under the optical microscope the microstructure can be seen to consist primarily of iron silicate laths, with an infill of glassy material. Wustite is abundant, and is often found in a classic dendritic form. The lines indicative of fused slag flows are demarcated by delicate veins of wustite. There are several possible small ($<\mu 2.5\text{m}$) metallic inclusions, as well as a large ($\mu 330\text{m}$) globule of what is considered to be a differentially reflecting oxide, or corrosion product.

Table 87 presents the results of the compositional analysis.

Sample 20519

Smelting slag 20519 has a twofold appearance, it being a mixture of finger-like flows reminiscent of a tap slag, and other areas which are made up of a conglomerate of slag and stones/clay. The surface is a pinkish-grey in colour with small patches of orange (iron corrosion) and yellow. Embedded in the surface are also the remains of small pieces of charcoal. After cutting the internal matrix can be seen to have a graphitic grey colour, scattered with small cracks,

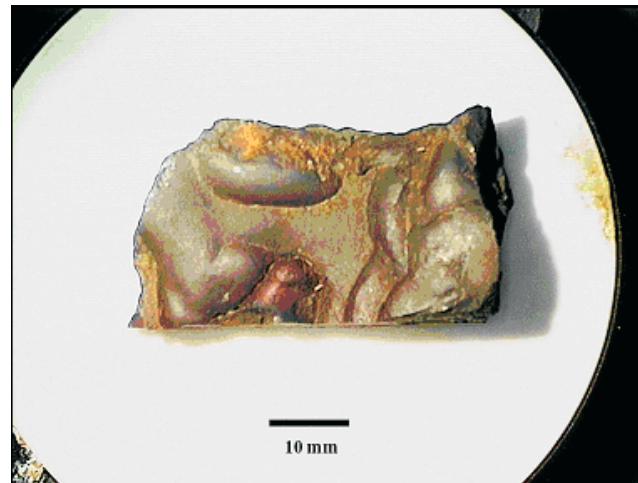


Figure 214 Tap slag 20501

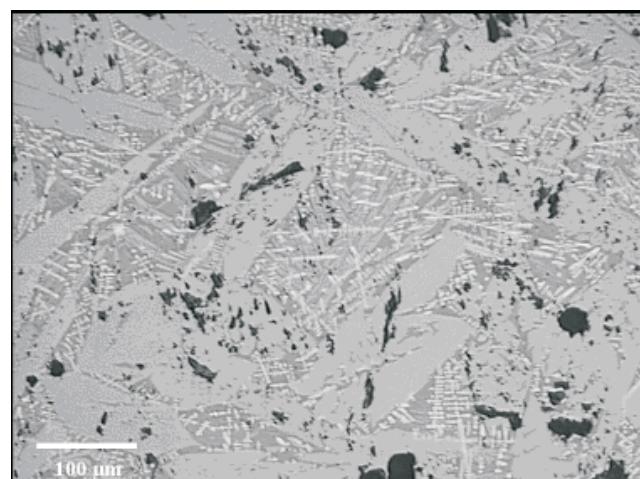


Figure 215 Iron silicate (mid grey), glass (dark grey), and dendritic FeO (light grey). Black areas are vesicularity. Sample 20501

Table 88 Sample 20519 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	1.7	2.2	5.0	36.8	nd	0.6	2.1	0.3	0.3	63.6	112.5
Bulk analysis 2	0.9	1.7	5.7	36.5	nd	1.8	2.4	0.1	0.2	61.7	111.0
Silicate lath	0.4	1.4	1.1	35.3	nd	nd	0.8	nd	0.1	74.3	113.4
Glass/eutectic	2.6	1.4	13.7	47.8	nd	6.2	7.5	0.5	0.1	31.0	110.7
Bulk analysis 3	nd	1.7	4.0	31.7	nd	0.5	1.5	nd	0.4	58.3	98.2
Massive wustite	0.3	1.5	1.8	15.2	nd	0.3	1.0	nd	nd	70.3	90.4
Wustite	1.0	nd	2.8	1.4	nd	nd	0.2	0.4	nd	92.8	98.5

nd – non detected.

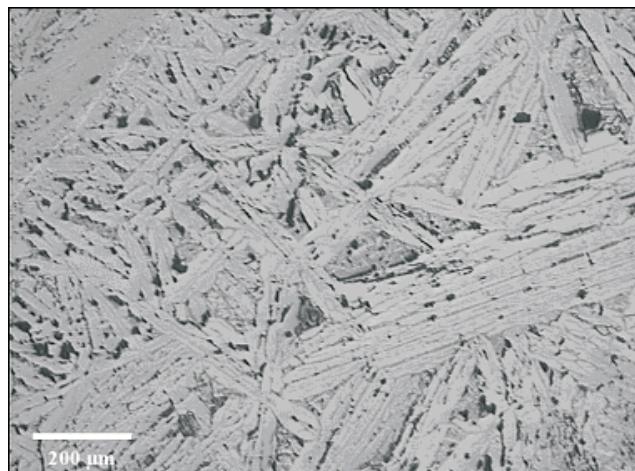


Figure 216 Massive iron silicate laths, with a little glass (dark grey) and vesicularity (black)

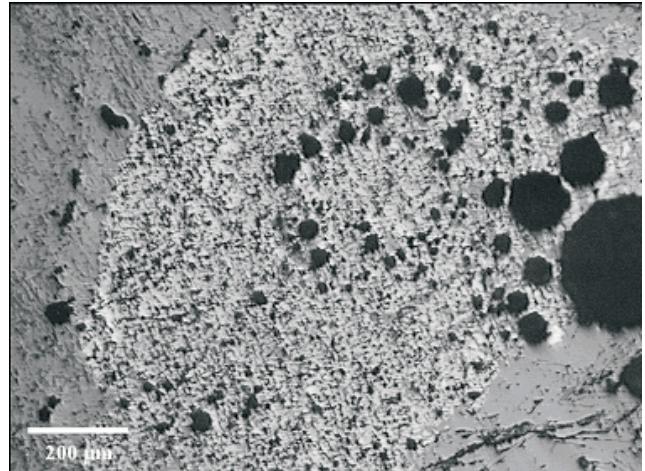


Figure 217 Area of massive iron oxide (light grey), surrounded by iron silicate. Black areas are vesicularity. Sample 20519

flow lines, and areas of varying vesicularity. Overall the slag is very heavy and dense. See Figures 216 and 217.

Optical microscopy revealed this slag to consist primarily of massive iron silicate laths in a matrix of glassy material. Wustite is primarily present within the glass only as very fine dendrites, although there is a small area where it is present in a massive form. A vein of wustite can also be seen to run across the sample, and this is concomitant with a fuse line between different slag layers. There would appear to be no obvious metallic inclusions within this sample.

Compositional analysis is presented in Table 88.

Sample 20616

The morphology of this slag is characteristic of having been a viscous liquid. The finger-like rippled surface has areas of a frothy/stippled appearance, and is a reddish-grey in colour, with patches of yellowish vitrification. The sample of slag chosen from this context was tubular in shape. The tube was approximately 125mm in length, with a diameter of 65mm at its widest point. At its uppermost end, the tube could be seen to have a central void, and this was confirmed after the sample had been cut. The

void ran for approximately 50mm through the tube, and was 12mm at its widest point. Externally the tube has a stippled appearance and is a greyish-blue in colour. When cut, the internal matrix is grey and highly vesicular. See Figure 218.

Optical analysis revealed the matrix to primarily consist of iron silicate (block and lath), with an infill of glassy material. Dendritic wustite is present

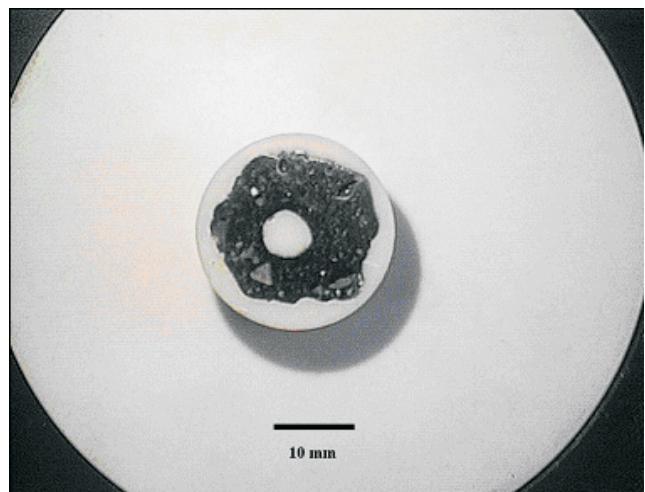


Figure 218 Mounted sample of tube slag

Table 89 Sample 20616 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	0.8	1.2	4.4	26.0	nd	2.1	2.1	0.2	0.1	67.7	104.4
Bulk analysis 2	0.4	1.7	4.4	26.6	nd	2.0	2.4	0.2	0.1	67.6	105.4
Silicate	1.6	0.9	0.7	24.4	nd	0.3	0.8	nd	nd	54.1	82.8
Glass/eutectic	0.6	1.2	10.7	32.9	nd	15.0	0.3	0.4	nd	35.1	96.1
Wustite	nd	nd	1.0	1.3	nd	nd	nd	0.6	0.1	94.0	97.0
Bulk analysis 3	1.5	1.5	7.2	25.5	0.1	4.3	3.0	0.2	0.2	55.0	98.4
Massive wustite	0.5	1.4	2.0	5.6	nd	0.3	0.3	0.1	nd	95.2	105.5

nd – non detected.

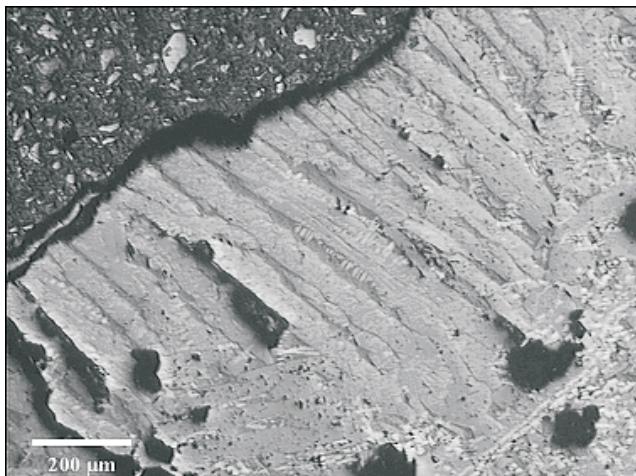


Figure 219 Columnar laths of iron silicate (mid grey), with infill of glass (dark grey). Some FeO (light grey). Black areas represent vesicularity

throughout the sample, although in smaller quantities when associated with the lath silicate. There is also an area where the wustite can be found in a massive form. Across the sample there are several areas that are differentially reflective. These range in size (up to 17 µm) and are probably iron corrosion or massive iron oxide.

The results of the compositional analysis undertaken on the tube sample are presented in Table 89.

Sample 20729 A

The smelting slag from context 20729 was found to have two differing morphologies, and thus it was decided to analyse a sample from each. The exterior colour of sample 20729 A is a greyish-red, with the surface being quite frothy and vesicular in places. After cutting, the internal matrix can be seen to be grey in colour, with some vesicularity. There is also some internal cracking, which could be the result of rapid cooling. Overall, the slag is very dense. See Figures 219 and 220.

Optical analysis revealed the matrix to consist primarily of iron silicate laths, with an infill of glassy material. Wustite is present throughout the sample, although its size and presence varies. Wustite

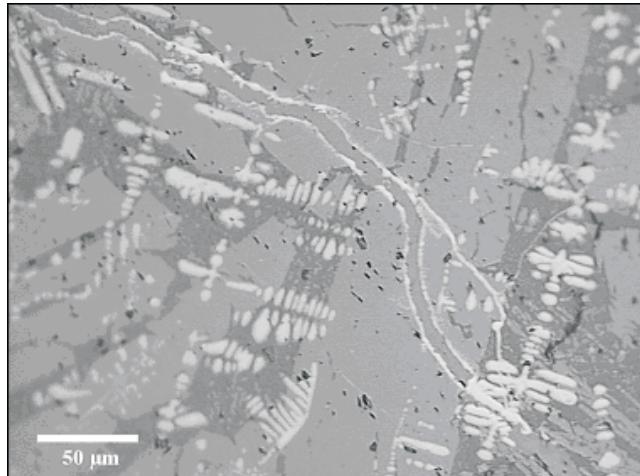


Figure 220 Iron silicate (mid grey), glass (dark grey), with dendritic FeO and FeO veining (light grey). Sample 20729A

veining is also present, demarcating the different slag areas. These different areas can also be seen to display dissimilar sized microstructures, and it is hypothesised that this is due to differential cooling rates. The outside edge of the sample displays what would appear to be columnar laths of iron silicate, which would signify the direction in which the slag cooled. There are no obvious metallic or oxide inclusions.

Table 90 presents the results of the compositional analysis.

Sample 20729 B

The exterior morphology of sample 20729 B is very different to that of 20729 A. This slag has a very ‘wooden’ appearance, as there are many large charcoal impressions in the surface. It is brown-grey in colour, with a frothy and vesicular appearance. It is not as heavy as the previously described slags, although it is still fairly dense. After cutting, the internal matrix can be seen to be heavily vesicular, and is brown in colour. See Figures 221 and 222.

Optical analysis determined that the iron silicate, glass, and wustite matrix was in no definable form. The wustite is not present as dendrites; however, it

Table 90 Sample 20729A SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	2.0	2.4	5.4	28.9	nd	1.7	1.8	0.2	0.3	56.8	99.4
Bulk analysis 2	1.1	1.6	5.4	30.3	nd	2.1	2.0	0.2	0.2	57.9	100.8
Silicate	nd	3.4	1.0	29.8	nd	nd	0.6	0.2	0.3	61.1	96.3
Glass/eutectic	0.5	0.7	6.8	11.7	10.0	0.5	1.5	nd	nd	41.7	73.3
Wustite spot	nd	nd	0.4	1.2	nd	nd	0.1	0.3	nd	93.1	95.2
Bulk analysis 3	1.0	1.6	5.0	32.5	nd	2.0	1.1	0.4	0.2	59.2	102.8

nd – non detected

Table 91 Sample 20729B SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO	Total
Bulk analysis 1	0.5	2.5	3.8	29.7	nd	1.0	1.5	0.2	0.2	54.4	93.8
Silicate	0.7	3.9	2.4	27.6	nd	0.5	1.4	0.1	0.2	51.7	89.2
Bulk analysis 2	0.1	2.0	4.1	32.7	nd	1.2	1.8	0.3	0.2	60.6	103.0
Inclusion 1	2.0	4.4	9.4	24.5	5.8	1.4	1.0	0.5	nd	8.6	57.7
Inclusion 2	2.8	1.8	14.2	36.2	4.5	0.4	2.3	0.1	nd	32.7	95.0
Wustite	1.3	4.4	0.4	32.4	nd	nd	0.3	nd	0.3	41.0	80.0
Bulk analysis 3	0.1	3.4	1.1	31.6	nd	0.2	0.6	nd	0.2	63.2	100.5

nd – non detected



Figure 221 Charcoal voids has given slag 20729 B a 'wooden' appearance

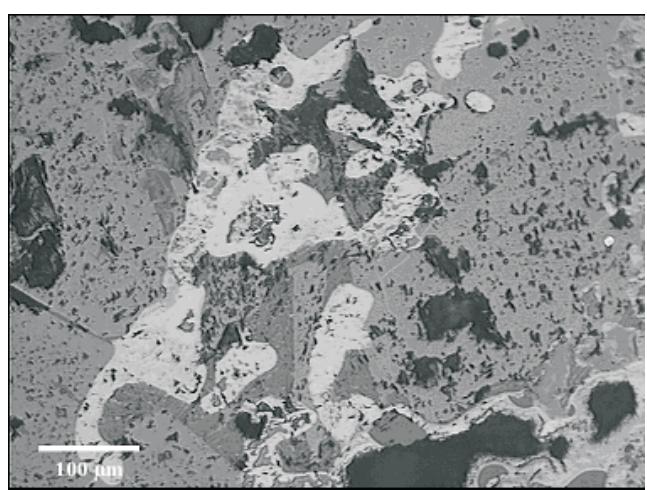


Figure 222 Massive FeO (light grey), iron silicate (mid grey), and glass (dark grey). Black areas are vesicularity. Sample 20729B

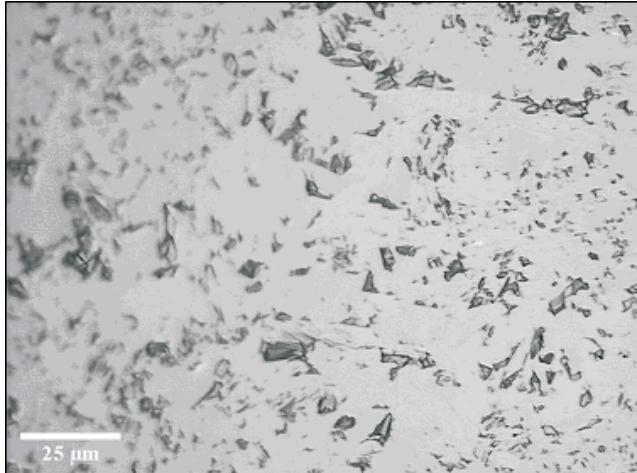


Figure 223 Uniform grey matrix, with crystalline vesicularity. Sample 21078

can be found as large pools and bands, and as veins running across the sample. The sample is highly vesicular. There are several small reflective inclusions, probably iron corrosion or oxides.

Table 91 presents the results of the compositional analysis.

Sample 21078

The exterior surface of sample 21078 is stippled, and is a reddish-grey in colour. Upon cutting, the internal matrix can be seen to be grey, with dispersed cracking and patches of vesicularity. See Figure 223.

The optical analysis revealed that the matrix is uniform. Unlike the previously described iron ore

Table 92 Sample 21078 SEM – EDX data

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	Fe ₂ O ₃	Total
Bulk Analysis 1	nd	0.1	0.3	1.0	0.2	nd	0.1	0.1	0.2	90.6	92.6
Bulk Analysis 2	0.7	0.5	0.2	0.4	nd	nd	0.2	0.1	0.2	83.3	85.6
Spot Analysis	0.6	0.3	0.3	1.0	nd	nd	0.2	0.1	nd	91.0	93.5
Bulk Analysis 3	nd	0.4	0.1	0.4	nd	nd	0.2	nd	nd	91.5	92.6

nd – non detected

Table 93 Average composition of individual phases

Description	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO
Silicate	0.4	2.4	1.4	31.7	nd	0.2	0.8	0.2	0.3	63.0
Glass/eutectic	1.9	1.2	13.8	37.0	7.4	5.4	6.4	0.4	0.1	31.0
Wustite (FeO)	1.3	1.5	1.2	8.5	nd	0.1	0.3	0.6	0.2	88.0

nd – non detected. Normalised Data

Table 94 Average composition for each sample's three bulk analyses

Sample	Type	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	FeO
17601	Tap	0.6	1.9	4.8	26.5	nd	1.9	1.9	0.2	0.2	62.0
20501	Tap	1.8	1.3	4.5	32.0	0.1	1.9	2.0	0.2	0.1	56.1
17608	Smelt	1.4	1.8	13.5	32.6	nd	1.0	4.1	0.6	0.1	45.0
20519	Smelt	1.2	1.8	4.6	32.6	nd	0.9	1.9	0.1	0.3	57.2
20729A	Smelt	1.3	1.9	5.2	30.2	nd	1.9	1.6	0.3	0.2	57.4
20729B	Smelt	0.3	2.7	3.1	31.8	nd	0.8	1.3	0.2	0.2	59.7
20616	Tube	0.9	1.4	5.2	25.3	0.1	2.7	2.5	0.2	0.1	61.6

nd – non detected. Normalised Data

Table 95 Average composition for the ore samples' three bulk analyses

Sample	Type	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO
Fe ₂ O ₃										
17002	Ore	0.6	0.6	0.3	2.0	0.1	0.1	0.3	0.1	0.1

nd – non detected. Normalised Data

(17002), this sample has no visible white crystalline inclusions.

Table 92 presents the results of the compositional analyses using the EDX.

Data Analysis

The initial task of the data analysis was to normalise all results to 100%. The individual phase and bulk analyses were then collated and the averages calculated (Tables 93, 94, and 95).

Using a series of Student's t-Tests, the normalised data from the Deansway tap slag was statistically compared with the data from the smelting slag. This exercise was designed to test whether there was any significant compositional difference between the two slag types. The sample of tube slag (20616) was left out of the statistical analysis between the two different Deansway slags for reasons that will be expanded upon later. Table 96 presents the results. The tests only rejected two of the elemental oxides

(SiO₂ and K₂O), one of which is very close to the percentage point value. It was therefore concluded that there was no real significant difference, and it was therefore safe to collate the data, and proceed with the comparison with similar material from other sites.

The material chosen for the comparison was a selection of bloomery slags found at various Romano-British sites along the upper reaches of the Severn Estuary. The slags have been securely dated to the 2nd to 4th centuries AD (Allen 1988, 81), and previous analysis has shown the slags to be a 'chemically coherent group' (Allen 1988, 85). The ores used at these sites have been attributed to the Forest of Dean (Allen 1988: 84). The results of this analysis are presented in Table 97. From the table it is immediately clear that there are compositional differences between the two slags (highlighted), as the Null Hypothesis of no difference has been rejected for six of the nine oxides. It will be noticed however, that three of the t values are very close to the percentage point values, and therefore their rejection must be

Table 96 Statistical analysis of the Deansway tap and smelting slags

Sample	Type	Na₂O	MgO	Al₂O₃	SiO₂	P₂O₅	K₂O	CaO	TiO₂	MnO	FeO
17601: Bulk 1	Tap	1.0	1.9	5.5	26.6	nd	2.3	2.0	0.2	0.2	60.3
17601: Bulk 2	Tap	0.4	1.9	4.0	25.7	nd	1.5	1.8	0.2	nd	64.6
17601: Bulk 3	Tap	0.2	2.1	4.9	27.2	nd	2.0	2.0	0.3	0.2	61.2
20501: Bulk 1	Tap	2.2	1.4	4.4	32.0	nd	1.9	2.0	0.2	0.3	55.8
20501: Bulk 2	Tap	1.9	1.3	4.9	32.7	nd	1.9	2.0	0.2	0.1	55.0
20501: Bulk 3	Tap	1.3	1.2	4.3	31.5	0.1	2.1	1.9	0.2	nd	57.4
17608: Bulk 1	Smelt	1.3	1.6	12.1	35.3	nd	1.1	4.7	0.6	0.2	43.2
17608: Bulk 2	Smelt	2.3	2.3	16.3	33.0	nd	1.0	4.0	0.6	0.1	40.5
17608: Bulk 3	Smelt	0.6	1.4	11.9	29.5	nd	1.0	3.5	0.7	nd	51.3
20519: Bulk 1	Smelt	1.5	2.0	4.5	32.7	nd	0.5	1.9	0.3	0.3	56.5
20519: Bulk 2	Smelt	0.8	1.5	5.5	32.8	nd	1.6	2.2	0.1	0.2	55.6
20519: Bulk 3	Smelt	nd	1.8	4.1	32.3	nd	0.5	1.5	nd	0.4	59.4
20729A: Bulk 1	Smelt	1.9	2.4	5.4	29.1	nd	1.7	1.9	0.2	0.3	57.2
20729A: Bulk 2	Smelt	1.1	1.6	5.4	30.1	nd	2.1	2.0	0.2	0.2	57.4
20729A: Bulk 3	Smelt	0.9	1.5	4.9	31.6	nd	1.9	1.1	0.4	0.2	57.5
20729B: Bulk 1	Smelt	0.5	2.7	4.1	32.2	nd	1.1	1.6	0.2	0.2	57.4
20729B: Bulk 2	Smelt	0.1	2.0	4.0	31.8	nd	1.2	1.7	0.3	0.2	58.8
20729B: Bulk 3	Smelt	0.1	3.4	1.1	31.4	nd	0.2	0.6	nd	0.3	62.9
Result: t =		0.41	1.51	1.04	2.26		3.06	0.58	1.02	0.87	1.43
Degrees of freedom		15	16	16	16		16	16	15	15	16
Percentage point (0.05)		2.13	2.12	2.12	2.12		2.12	2.12	2.13	2.13	2.12
Hypothesis of no difference		accept	accept	accept	reject		reject	accept	accept	accept	accept

Normalised Data. nd – non detected

called into question. The two most noteworthy differences are those attributed to SiO₂ and FeO, and this is considered to be significant as FeO and SiO₂ levels can reflect the degree of technology used during the smelting process.

The final analysis involved the iron ores. In previous discussions it has been implied that the source of the ore used at Worcester would have been the Forest of Dean (Allen 1988, 84). It was decided to compare the compositional results attained from the ores found at Deansway, with published data regarding ores from three different areas of the Forest of Dean, and an ore from the Worcester Graben (Table 98; Thomas 2000, 61–4).

Data was taken from Thomas 2000, 60, 61, 62 and 63, Tables 3.5, 3.6, 3.7 and 3.8. It can be seen from Table 98 that there is little to choose between the different ores. All can be considered of a high grade, as their Fe₂O₃ contents are well in excess of 80 %.

Discussion

The bulk analysis of the Deansway material has determined that there is little compositional difference between the slags classed as ‘smelting’ and those deemed to be ‘tap’ slags. This hypothesis was vindicated by the results of simple statistical analysis (Table 96). It was decided to omit the data

from the example of slag tubing (20616) from this statistical analysis, because it is not exactly clear how these enigmatic objects are formed. Therefore, it was not known whether to class them as a tap or a smelting slag. Their morphology suggests that they were ‘tapped’ or poured whilst liquid, into some kind of mould, perhaps something as simple as a hole in the ground. It is clear however, that they do represent part of the corpus of Roman ironworking debris from Deansway, and consequently the data from 20616 were included in the following comparative analysis.

The statistical analysis did determine that there were significant differences between the slags from Deansway and those recovered from Romano-British sites along the Severn Estuary, the two most noteworthy being the levels of FeO and SiO₂. Table 99 presents the bulk results for these two oxides normalised to 100 %.

Table 99 shows that the slag from the Severn Estuary sites contain up to 16 % more FeO than the material from Deansway. Thus, it is concluded that the higher levels indicate a less efficient process being utilised at the estuary sites. It is also apparent from the comparative analysis that there is little to no phosphorus present in the slag assemblage from Deansway (Table 97), whereas it was detected in all the analysed samples from the Severn Estuary sites.

Table 97 Statistical analysis of the Deansway and Severn Estuary slags

Deansway	Type	Na₂O	MgO	Al₂O₃	SiO₂	P₂O₅	K₂O	CaO	TiO₂	MnO	FeO
17601: Bulk 1	Tap	1.0	1.9	5.5	26.6	nd	2.3	2.0	0.2	0.2	60.3
17601: Bulk 2	Tap	0.4	1.9	4.0	25.7	nd	1.5	1.8	0.2	nd	64.6
17601: Bulk 3	Tap	0.2	2.1	4.9	27.2	nd	2.0	2.0	0.3	0.2	61.2
20501: Bulk 1	Tap	2.2	1.4	4.4	32.0	nd	1.9	2.0	0.2	0.3	55.8
20501: Bulk 2	Tap	1.9	1.3	4.9	32.7	nd	1.9	2.0	0.2	0.1	55.0
20501: Bulk 3	Tap	1.3	1.2	4.3	31.5	0.1	2.1	1.9	0.2	nd	57.4
20616: Bulk 1	Tube	0.7	1.1	4.2	24.9	nd	2.0	2.0	0.2	0.1	64.8
20616: Bulk 2	Tube	0.4	1.6	4.2	25.2	nd	1.9	2.3	0.2	0.1	64.1
20616: Bulk 3	Tube	1.5	1.5	7.3	26.0	0.1	4.3	3.0	0.2	0.2	56.0
17608: Bulk 1	Smelt	1.3	1.6	12.1	35.3	nd	1.1	4.7	0.6	0.2	43.2
17608: Bulk 2	Smelt	2.3	2.3	16.3	33.0	nd	1.0	4.0	0.6	0.1	40.5
17608: Bulk 3	Smelt	0.6	1.4	11.9	29.5	nd	1.0	3.5	0.7	nd	51.3
20519: Bulk 1	Smelt	1.5	2.0	4.5	32.7	nd	0.5	1.9	0.3	0.3	56.5
20519: Bulk 2	Smelt	0.8	1.5	5.5	32.8	nd	1.6	2.2	0.1	0.2	55.6
20519: Bulk 3	Smelt	nd	1.8	4.1	32.3	nd	0.5	1.5	nd	0.4	59.4
20729A: Bulk 1	Smelt	1.9	2.4	5.4	29.1	nd	1.7	1.9	0.2	0.3	57.2
20729A: Bulk 2	Smelt	1.1	1.6	5.4	30.1	nd	2.1	2.0	0.2	0.2	57.4
20729A: Bulk 3	Smelt	0.9	1.5	4.9	31.6	nd	1.9	1.1	0.4	0.2	57.5
20729B: Bulk 1	Smelt	0.5	2.7	4.1	32.2	nd	1.1	1.6	0.2	0.2	57.4
20729B: Bulk 2	Smelt	0.1	2.0	4.0	31.8	nd	1.2	1.7	0.3	0.2	58.8
20729B: Bulk 3	Smelt	0.1	3.4	1.1	31.4	nd	0.2	0.6	nd	0.3	62.9
Severn Estuary											
PR39	Tap	0.10	1.69	4.11	23.11	0.28	1.89	2.58	0.18	0.20	65.86
PR37	Tap	0.21	2.91	5.48	33.87	0.52	2.29	4.10	0.19	0.31	50.12
HP6 / 18	Tap	0.19	1.41	2.74	18.24	0.53	0.81	1.45	0.14	0.19	74.30
HP120	Tap	0.05	0.71	0.97	13.97	0.40	0.23	0.74	0.08	0.14	82.71
W205	Tap	0.06	1.15	2.61	19.26	0.17	0.93	1.96	0.13	0.19	73.54
W43	Tap	0.08	1.80	3.45	22.75	0.41	1.60	2.49	0.11	0.25	67.06
A607	Tap	0.12	0.59	2.23	16.05	0.96	0.29	1.27	0.10	0.13	78.26
A238	Tap	0.12	0.85	3.33	20.54	0.64	0.84	1.35	0.12	0.17	72.04
SHF41 / 17	Tap	0.16	0.81	7.12	28.80	0.42	0.95	2.11	0.38	0.04	59.21
HF24	Tap	0.14	1.38	4.34	31.74	0.32	1.50	2.11	0.19	0.14	58.14
OF598	Tap	0.13	0.93	2.00	19.33	0.39	0.25	1.44	0.11	0.16	75.26
OP38	Tap	0.11	0.87	2.60	18.98	0.18	0.47	1.21	0.14	0.18	75.26
Result: t =		4.68	2.61	2.27	4.94		2.05	0.81	2.21	0.24	4.54
Percentage point (0.05)		2.04	2.04	2.04			2.04	2.04	2.04	2.04	2.04
Hypothesis of no difference	reject	reject	reject	reject	reject		accept	accept	reject	accept	reject

Nd. – non detected. Normalised Data

Table 98 The Deansway iron ore samples in comparison with ores from the Eastern, Central, and Western limbs of the Forest of Dean syncline, and from the Worcester Graben

Sample	Na₂O	MgO	Al₂O₃	SiO₂	P₂O₅	K₂O	CaO	TiO₂	MnO	Fe₂O₃	Total
WD – 17002	0.61	0.61	0.31	1.95	0.06	0.06	0.27	0.06	0.11	96.33	100.00
WD – 21078	0.72	0.39	0.21	0.74	0.11	0.02	0.19	0.07	0.18	97.91	100.00
F. of D. Eastern	nd	0.32	0.51	2.30	0.04	0.05	1.27	0.02	0.09	95.39	99.99
F. of D. Central	nd	0.32	0.53	3.31	0.03	0.11	0.06	0.03	0.04	95.58	100.01
F. of D. Western	nd	1.26	0.33	2.00	0.04	0.05	3.95	0.03	0.11	92.25	100.02
Worcester Graben	nd	0.33	0.30	2.32	0.08	0.04	0.10	0.01	0.04	96.77	99.99

nd – non detected. Normalised Data

Table 99 Bulk FeO and SiO₂ values normalised to 100%

Site	FeO	SiO ₂	Total
Deansway	65.4	34.6	100
Severn Estuary	75.72	24.28	100

Normalised data

The results of the analysis of the individual phases within the Deansway slag (Table 93) determined that their composition was as expected. The iron silicate is roughly two-thirds free iron oxide (FeO), one third silica (SiO₂), with a small amount of minor and trace elements. The glassy/eutectic phase is primarily SiO₂, with accompanying Al₂O₃ (alumina), with FeO, CaO (calcium oxide), phosphorus oxide (P₂O₅), and potassium oxide (K₂O) also present. Finally, the wustite can be seen to be primarily free iron oxide, with other oxides such as SiO₂ probably being intrusive due to the penetrating power of the electron beam.

The analysis and comparison of the iron ores has concluded that there is little to no compositional difference between the Forest of Dean ores, the sample from the Worcester Graben (the Permo-Triassic land surface), and the two Deansway ores of unknown origin (Table 99). *Ergo*, the question as to whether Forest of Dean ore was used at Worcester remains unanswered. It is not known exactly where the ore sample from the Worcester Graben originates, although this narrow extension of the Cheshire Basin is known to run from just south of Kidderminster, through Worcester, and on towards Gloucester (Naylor and Mounteney 1975, 103). It is hypothesised that the hematite deposits found in the Forest of Dean area are the result of leaching of iron rich solutions from the Permo-Triassic land surface down into the underlying limestone and coal measures (Jones 1931, 60, cited Trotter 1942, 76). It is therefore possible that other iron ore deposits were available within the region of the Worcester Graben. One such outcrop could have been in the vicinity of Worcester, and common sense would suggest that this was used as an alternative to carting or shipping ore up from the Forest of Dean. Also of interest is the fact that the analysis of the ores has revealed them to contain very small amounts of P₂O₅. The amounts are a little higher than found in the bulk analyses of the Deansway slag, but noticeably lower than the amounts found in the slags from the Estuary sites. This contradicts the assumption that Dean ore was used at the Estuary sites (Allen 1988, 84), and could point to another ore source having been used. It must however be stressed that three different analytical techniques have been used during the analysis of these slags and ores:

1. Deansway: SEM with EDX.
2. Severn Estuary: qualitative and quantitative XRF (X-ray fluorescence).
3. Iron ores: ICPMS (Inductively coupled plasma mass spectrometry).

and it is therefore possible that different techniques are more or less sensitive to different elements.

Conclusion

The analysis of the slags recovered from Deansway has determined that there is very little compositional difference within the group, and that the components of the individual phases are what would have been expected from slags of this date and nature. The slag tubing that has been found at this site is considered to be enigmatic, and the question of whether it is a tap or smelting slag was not answered by the compositional analysis of tube sample 20616. It is envisaged that more knowledge regarding this puzzling form of slag will result from research currently underway at Bradford.

Statistical analysis determined that there are significant differences between the quantities of FeO and SiO₂ in the slags from Deansway and the Severn Estuary sites, and it is hypothesised that these differences may reflect the level of technology being used at the respective sites.

7.10 Chemical analysis of the copper alloys Nigel Blades

7.10.1 Introduction

This section is presented in full, including data tables, in this, the digital section of this publication. The report text and figure are repeated in the printed volume. This report was completed in 1991.

Deansway Site 1 yielded much evidence of non-ferrous metalworking industries of the late medieval/early post-medieval period. This included casting pits, finds of mould and crucible fragments, slag, and sheet metal offcuts. It was decided to carry out quantitative analysis of a selection of the copper alloy finds to discover which alloys were in use on the site, and for what purposes. Additionally, a number of the mould and crucible fragments, together with metalwork too corroded to analyse quantitatively were analysed qualitatively.

Nomenclature

The alloy names used in this report follow the guidelines set out by Bayley (1991a):

Bronze – An alloy of copper and tin. Zinc, if present, is at a level of less than one-third the tin.

Brass – Copper with zinc. Tin, if present, is at a level of less than one-quarter the zinc.

Gunmetal – An alloy of copper with both tin and zinc as alloying components. (Note: some workers use the name latten for medieval copper/tin/zinc alloys, particularly those with more zinc than tin.)

Leaded – This term is applied to any of the above containing more than 4% lead.

7.10.2 Methods

Quantitative analysis was carried out at Royal Holloway and Bedford New College, University of London, using inductively-coupled plasma spectrometry (ICPS). The elements sought were: copper, zinc, lead, tin, iron, nickel, arsenic, bismuth, antimony, phosphorus, sulphur, cobalt, chromium, manganese, vanadium, cadmium, silver, and gold. The technique necessitates the removal of a small sample from the object, typically 5–10mg, which is dissolved in aqua regia (three parts hydrochloric acid: one part nitric acid). The resulting solution is pumped into the ICPS system. Sampling is carried out either by drilling, or, in the case of sheet metal, by cutting away a small piece. This must then be filed clean of corrosion products to expose unaltered metal. These methods ensure that a sample of the core metal is obtained. This can be reasonably assumed to represent the original composition of the artefact.

Qualitative analysis was carried out using X-ray fluorescence spectrometry (XRF), at the Ancient Monuments Laboratory, English Heritage. The elements sought were: copper, zinc, lead, tin, and antimony. Only the surface of uncleared artefacts was analysed, so the results obtained represent an average of whatever is present in the area analysed – in the case of mould and crucible fragments most of this will be ceramic with only a small proportion of corroded metal. Consequently, only a very rough indication of the amounts of the elements present can be obtained.

7.10.3 Analysis

Quantitative analyses

In total 119 copper alloy artefacts from Deansway were analysed quantitatively. The material, chosen to give a representative cross-section of finds mainly associated with the foundry, but also including other objects, such as pins and wire, came from medieval and later contexts. The finds selected from post-medieval contexts were believed, from their typology and association (eg with mould and slag), to have been redeposited from levels originally associated with the foundry.

The results of the quantitative analyses are given in Tables 100, 101, and 102. In order to depict the alloy compositions ternary diagrams were plotted. These are obtained by plotting the relative percentages of the major components zinc, tin, and lead, (or in one case lead and antimony) on a triangular graph, where each of the apices represents a maximum for that alloy component. Thus, a point plotted at the zinc apex indicates an alloy of copper with zinc,

containing no lead or tin, while a point in the centre of the triangle represents an alloy with equal amounts of zinc, tin, and lead (Fig 224:1).

It should be noted that this method plots relative compositions, not absolute ones, thus two coincident points do not necessarily contain the same amounts of each alloying metal, but they do have these present in the same ratio. However, by only plotting alloys with similar copper content on any particular graph, it can be ensured that coincident points are reasonably similar in composition. From the ternary diagrams it is possible to see that the alloys from Deansway fall into three compositional groups:

(a) Brasses (Table 100)

These comprise the bulk of the pins and wire, sheet metal, and two cast objects (the key, Context 10082 and scales, Context 10227). The finds come almost exclusively from 16th and 17th century contexts, apart from the key, Context 10082, which is dated to the 18th to 19th centuries. The ternary diagram for this group is given in Figure 224:2. The zinc content varies considerably: there is one group of objects with less than 17% zinc and a second having 17–28% zinc.

The high and low zinc groups appear to be quite distinct, chemically. The lower zinc group, including the cast key and scales, is fairly impure brass, with up to 2% lead, 3% tin; high levels of the minor elements nickel and arsenic; and significant amounts of the trace element cobalt (Fig 224:3 and 4). The high zinc group, mostly pins and wire, consists of almost pure brass, with less than 1% lead, negligible tin, and much lower levels of the minor and trace elements. This second group is very similar to pins of 16th- to 17th-century date from Chelmsford (Caple 1985), which were found to be exclusively high zinc brass, of 15–33% zinc, less than 5% lead, and negligible tin.

Also of note is that the pin/wire analyses 461, 464, 469, and 470 can be considered, within the limits of analytical precision, to have the same composition, and therefore to have come from the same piece of metal.

(b) Antimony-lead rich alloys (Table 101)

See Figure 224:5 for the ternary diagram of these alloys. These comprise the casting waste, cast strip and sheet, probable vessel wall fragments, and one vessel foot (it had originally been suggested that this last find was an ingot of some type, but from comparisons with similar objects found elsewhere, it is now certain that it is a cauldron or skillet foot). These finds cover a wider date range than the brasses. The earliest finds, of vessel wall fragments, come from 12th- to 14th-century levels (probably the latter part of this date range), and continue right up to the 16th century contexts, and as residual finds in the 17th-century ones. The composition of these

Table 100 Analysis of the brasses

Lab no	Artifact	Date	Context	CG	AU	Cu	Zn	Pb	Sn	Fe	Ni	As	Bi	Sb	P	S	Co	Cr	Mn	V	Cd	Ag	Au	Total	
560	Key	18-19	10082	-	72.6	19.99	2.04	0.96	0.46	0.13	0.14	0.00	0.16	0.00	0.07	0.004	0.001	0.000	0.002	0.000	0.071	0.005	96.7		
460	Wire	16-17	10227	1632	1144	83.4	15.11	0.98	2.31	0.39	0.02	0.00	0.05	0.00	0.14	0.041	0.000	0.001	0.000	0.090	0.005	0.005	102.5		
461	Wire	16-17	10227	1632	1144	75.7	23.15	0.87	0.16	0.17	0.36	0.19	0.00	0.07	0.00	0.02	0.003	0.000	0.000	0.001	0.052	0.001	0.001	100.7	
462	?Eyelet	16-17	10227	1632	1144	78.8	20.85	1.72	0.00	0.08	0.15	0.00	0.00	0.12	0.00	0.02	0.000	0.000	0.002	0.001	0.054	0.001	0.001	101.8	
463	'Wire, 1mm dia'	16-17	10227	1632	1144	76.1	26.51	0.50	0.31	0.24	0.04	0.04	0.00	0.06	0.00	0.04	0.006	0.000	0.001	0.000	0.087	0.002	0.002	103.9	
464	'Wire, 1.5mm dia'	16-17	10227	1632	1144	77.3	22.48	0.90	0.18	0.16	0.36	0.22	0.00	0.05	0.00	0.04	0.005	0.000	0.001	0.001	0.053	0.001	0.001	101.8	
465	'Lace-tag, type 1'	16-17	10227	1632	1144	76.5	19.86	1.34	0.00	0.39	0.26	0.00	0.13	0.00	0.00	0.000	0.000	0.000	0.000	0.006	0.000	0.032	0.003	98.6	
466	'Lace-tag, type 1'	16-17	10227	1632	1144	73.4	25.14	1.04	0.00	0.10	0.23	0.08	0.00	0.10	0.00	0.01	0.000	0.000	0.003	0.000	0.046	0.003	0.002	100.2	
467	'Lace-tag, type 1'	16-17	10227	1632	1144	73.8	22.44	0.52	0.00	0.03	0.22	0.00	0.00	0.11	0.03	0.00	0.00	0.000	0.000	0.006	0.000	0.055	0.003	0.003	97.2
468	Shaft fragment	16-17	10227	1632	1144	72.4	26.36	0.12	0.01	0.15	0.25	0.06	0.00	0.05	0.01	0.02	0.005	0.000	0.002	0.000	0.031	0.002	0.002	99.5	
469	'Wire, 1.5mm dia'	16-17	10227	1632	1144	78.8	22.85	0.82	0.17	0.17	0.36	0.21	0.00	0.07	0.00	0.04	0.004	0.000	0.001	0.001	0.052	0.001	0.001	103.5	
470	'Wire, 1.5mm dia'	16-17	10227	1632	1144	75.1	22.90	0.91	0.17	0.22	0.36	0.21	0.00	0.06	0.00	0.03	0.004	0.000	0.001	0.001	0.058	0.001	0.001	100.0	
471	'Lace-tag, type 1'	16-17	10227	1632	1144	85.6	14.25	0.00	0.15	0.22	0.00	0.05	0.00	0.06	0.031	0.000	0.001	0.000	0.063	0.001	0.001	102.8			
472	Pin shaft fragment	16-17	10227	1632	1144	77.4	24.48	0.34	0.01	0.12	0.02	0.00	0.06	0.00	0.05	0.002	0.000	0.000	0.000	0.043	0.005	0.005	102.3		
473	Shaft fragment	16-17	10227	1632	1144	80.1	22.88	0.32	0.01	0.16	0.02	0.00	0.05	0.02	0.03	0.004	0.000	0.000	0.002	0.001	0.032	0.005	103.6		
474	?Eyelet	16-17	10227	1632	1144	70.5	27.30	0.25	0.00	0.06	0.02	0.00	0.00	0.08	0.00	0.00	0.000	0.000	0.000	0.000	0.065	0.006	0.006	98.3	
475	'Pin, type 1'	16-17	10227	1632	1144	75.8	22.69	0.29	0.00	0.17	0.02	0.01	0.00	0.06	0.02	0.03	0.000	0.001	0.002	0.001	0.056	0.008	0.008	99.2	
476	'Pin, type 1'	16-17	10227	1632	1144	71.8	25.85	0.08	0.00	0.58	0.16	0.05	0.00	0.07	0.00	0.03	0.005	0.000	0.003	0.000	0.103	0.014	0.014	98.7	
477	'Pin, type 1'	16-17	10227	1632	1144	72.1	23.78	0.85	0.00	0.13	0.24	0.06	0.00	0.08	0.00	0.11	0.000	0.000	0.002	0.000	0.065	0.009	0.009	97.4	
478	'Pin, type 1'	16-17	10227	1632	1144	73.0	22.76	0.10	0.00	0.44	0.29	0.04	0.00	0.09	0.00	0.04	0.000	0.000	0.002	0.000	0.124	0.002	0.002	96.8	
479	'Pin, type 1'	16-17	10227	1632	1144	72.5	22.14	0.18	0.00	0.08	0.01	0.00	0.09	0.03	0.00	0.001	0.000	0.000	0.000	0.000	0.000	0.019	0.019	95.2	
480	'Pin, type 1'	16-17	10227	1632	1144	71.2	24.43	0.79	0.00	0.17	0.27	0.04	0.00	0.07	0.00	0.10	0.000	0.000	0.002	0.000	0.068	0.032	0.032	97.2	
482	'Pin, type 1'	16-17	10227	1632	1144	72.6	26.45	0.63	0.02	0.22	0.04	0.00	0.00	0.14	0.00	0.01	0.000	0.001	0.000	0.000	0.053	0.001	0.001	100.2	
483	'Pin, type 2'	16-17	10227	1632	1144	73.4	18.25	0.32	0.03	0.45	0.21	0.05	0.00	0.05	0.01	0.11	0.005	0.000	0.001	0.001	0.072	0.001	0.001	103.0	
484	'Pin, type 1'	16-17	10227	1632	1144	76.1	22.02	0.83	0.00	0.14	0.24	0.04	0.00	0.09	0.00	0.08	0.000	0.000	0.000	0.000	0.048	0.001	0.001	99.6	
485	'Pin, type 1'	16-17	10227	1632	1144	74.1	24.14	0.93	0.00	0.13	0.23	0.00	0.00	0.06	0.00	0.07	0.000	0.000	0.002	0.000	0.044	0.001	0.001	99.7	
486	'Pin, type 2'	16-17	10227	1632	1144	83.5	12.41	0.04	0.27	0.39	0.17	0.07	0.00	0.22	0.00	0.02	0.000	0.000	0.001	0.000	0.086	0.001	0.001	97.1	
487	'Pin, type 2'	16-17	10227	1632	1144	83.7	12.12	0.01	0.00	0.09	1.72	1.94	0.00	0.05	0.00	0.03	0.066	0.000	0.001	0.000	0.087	0.001	0.001	99.9	
488	Shaft fragment	16-17	10227	1632	1144	83.4	18.25	0.32	0.03	0.45	0.21	0.05	0.00	0.05	0.01	0.11	0.005	0.000	0.001	0.001	0.072	0.001	0.001	103.0	
489	Shaft fragment	16-17	10227	1632	1144	80.6	13.24	0.01	0.00	0.10	1.59	2.39	0.00	0.09	0.00	0.04	0.016	0.000	0.001	0.000	0.108	0.001	0.001	98.2	
490	Shaft fragment	16-17	10227	1632	1144	81.9	14.41	0.00	0.00	0.05	1.47	2.34	0.00	0.09	0.00	0.03	0.028	0.000	0.001	0.000	0.082	0.001	0.001	100.4	
491	Shaft fragment	16-17	10227	1632	1144	75.4	23.13	0.07	0.00	0.47	0.07	0.00	0.00	0.07	0.01	0.03	0.000	0.000	0.001	0.000	0.082	0.001	0.001	99.3	
492	Shaft fragment	16-17	10227	1632	1144	78.5	15.20	0.04	0.00	0.10	1.53	1.79	0.01	0.08	0.04	0.03	0.018	0.000	0.001	0.000	0.084	0.001	0.001	97.4	
493	Shaft fragment	16-17	10227	1632	1144	74.5	24.30	0.59	0.00	0.13	0.01	0.00	0.07	0.00	0.04	0.000	0.000	0.001	0.000	0.087	0.004	0.004	99.8		
494	Shaft fragment	16-17	10227	1632	1144	73.0	25.49	0.07	0.01	0.12	0.00	0.01	0.07	0.00	0.01	0.004	0.000	0.001	0.000	0.052	0.001	0.001	98.9		
495	Decorated book fitting	16-17	10227	1632	1144	74.7	22.21	0.16	0.00	0.37	0.40	0.00	0.14	0.00	0.00	0.003	0.000	0.003	0.000	0.143	0.000	0.003	98.2		
531	Stud	16-17	10227	1632	1144	74.6	13.51	0.18	0.05	0.32	0.72	0.00	0.09	0.00	0.00	0.000	0.000	0.009	0.000	0.099	0.005	0.005	89.6		
539	'Sheet, 1.5mm thick'	16-17	10227	1632	1144	79.6	13.80	0.19	2.96	0.27	0.03	0.06	0.00	0.10	0.02	0.03	0.007	0.000	0.002	0.001	0.059	0.003	0.003	97.1	
540	'Sheet, 1.5mm thick'	16-17	10227	1632	1144	79.5	16.51	0.54	1.53	0.20	0.01	0.00	0.02	0.01	0.09	0.034	0.000	0.002	0.000	0.080	0.006	0.006	98.5		
559	Equipoise balance arm	16-17	10227	1632	1144	77.3	14.01	1.41	1.72	0.49	0.03	0.10	0.02	0.15	0.04	0.08	0.005	0.001	0.002	0.001	0.073	0.005	0.005	95.5	
548	'Wire, 1.5mm thick'	16-17	10416	15446	1145	77.0	13.07	0.01	0.01	0.22	1.48	2.10	0.00	0.03	0.00	0.05	0.027	0.001	0.001	0.002	0.056	0.002	0.002	94.0	
552	'Pin, type 1'	16-17	10416	15446	1145	80.7	14.11	0.04	0.01	0.15	0.97	1.88	0.00	0.03	0.00	0.02	0.006	0.001	0.001	0.002	0.061	0.002	0.002	98.0	
508	'Pin, type 1'	17	10419	15447	1144	77.2	19.87	1.10	0.25	0.56	0.31	0.03	0.00	0.08	0.04	0.00	0.003	0.001	0.001	0.001	0.081	0.001	0.001	99.5	
509	'Pin, type 2'	17	10419	15447	1144	81.6	13.57	0.01	0.01	0.07	1.38	1.81	0.00	0.06	0.02	0.03	0.061	0.000	0.000	0.005	0.065	0.001	0.001	98.7	
510	'Pin, type 1'	16-17	10419	15447	1144	76.2	15.01	1.26	0.00	0.14	0.17	0.02	0.00	0.09	0.04	0.00</									

Table 101 Analysis of the antimony-lead rich alloys

Lab no	Artifact	Date	Context	CG	AU	Cu	Zn	Pb	Sn	Fe	Ni	As	Bi	Sb	P	S	Co	Cr	Mn	V	Cd	Ag	Au	Total
526	Fragment	14–15	10013	1438	1145	90.3	0.08	0.03	0.04	0.00	0.04	0.59	0.17	6.32	0.00	0.02	0.000	0.000	0.004	0.000	0.036	0.006	97.6	
2010	Strip	14–15	10013	1438	1145	62.9	0.01	11.60	2.07	0.20	0.23	0.65	0.10	7.85	0.21	0.13	0.000	0.001	0.002	0.000	0.162	0.001	86.1	
2012	Sheet	14–15	10013	1438	1145	58.9	0.01	20.68	1.17	0.12	0.13	0.55	0.05	7.89	0.27	0.23	0.002	0.001	0.000	0.003	0.000	0.143	0.002	90.1
527	Sheet	15–17	10022	1545	1143	63.8	0.02	19.88	0.11	0.07	0.02	0.89	0.17	7.68	0.04	0.27	0.000	0.000	0.002	0.000	0.056	0.004	93.0	
528	Sheet	15–17	10022	1545	1143	61.1	0.03	20.83	4.46	0.18	0.09	1.81	0.08	3.31	0.14	0.12	0.006	0.000	0.002	0.000	0.022	0.002	92.2	
501	Fragment	16–17	10227	1632	1144	78.0	0.04	5.62	0.25	0.07	0.08	0.38	0.01	4.17	0.09	0.28	0.001	0.001	0.002	0.000	0.073	0.033	89.1	
502	Sheet – rough surface	16–17	10227	1632	1144	61.2	0.29	18.29	5.12	0.17	0.09	0.00	0.07	4.75	0.03	0.19	0.007	0.000	0.001	0.002	0.000	0.062	0.006	90.2
535	Vessel rim sherd	16–17	10227	1632	1144	62.6	0.05	17.81	5.99	0.05	0.09	0.55	0.02	3.93	0.20	0.11	0.000	0.000	0.002	0.000	0.047	0.004	91.5	
514	Sheet	17	10419	1547	1144	65.3	0.03	21.93	4.99	0.14	0.08	0.12	0.01	1.29	0.22	0.07	0.000	0.000	0.002	0.000	0.050	0.003	94.3	
553	Cauldron foot	17	10419	1547	1144	66.3	0.07	10.71	1.04	0.05	0.08	0.80	0.02	2.74	0.11	0.15	0.000	0.001	0.000	0.002	0.000	0.085	0.003	82.1
554	–	–	–	–	66.7	0.05	17.59	0.92	0.05	0.09	0.82	0.04	3.02	0.08	0.19	0.001	0.001	0.002	0.002	0.000	0.064	0.003	89.6	
519	Sheet	17	10430	1545	1143	64.0	0.08	16.21	2.06	0.12	0.07	1.49	0.11	6.75	0.21	0.36	0.014	0.001	0.004	0.002	0.000	0.064	0.003	91.6
520	Fragment	17	10430	1545	1143	65.5	1.19	13.20	2.48	0.54	0.04	0.29	0.02	2.05	0.30	0.20	0.000	0.015	0.002	0.000	0.076	0.002	85.8	
521	Sheet	17	10430	1545	1143	53.0	0.19	27.32	1.27	0.33	0.08	0.37	0.08	4.50	0.35	0.13	0.006	0.000	0.002	0.001	0.015	0.003	0.000	87.6
522	Sheet	17	10430	1545	1143	56.7	0.34	29.59	1.43	0.08	0.06	0.37	0.06	4.17	0.06	0.12	0.001	0.001	0.002	0.000	0.057	0.002	93.0	
523	Fragment	17	10430	1545	1143	72.9	0.11	5.18	3.09	0.03	0.03	0.48	0.14	6.42	0.00	0.80	0.000	0.000	0.002	0.000	0.081	0.002	89.2	
543	Fragment	17	10430	1545	1143	63.1	0.35	19.36	1.65	0.03	0.07	0.42	0.06	5.14	0.00	0.14	0.002	0.000	0.000	0.002	0.060	0.002	90.3	
544	Sheet	17	10430	1545	1143	66.5	0.12	19.75	2.96	0.04	0.05	0.48	0.11	5.82	0.15	0.13	0.000	0.001	0.000	0.002	0.000	0.19	0.005	96.1
545	Vessel rim sherd	17	10430	1545	1143	74.8	0.66	15.86	3.80	0.38	0.05	0.63	0.04	1.92	0.02	0.15	0.000	0.000	0.002	0.000	0.017	0.002	98.4	
2002	Casting waste	17	10430	1545	1143	65.4	0.02	7.27	3.67	0.39	0.03	0.52	0.09	6.04	0.25	0.28	0.033	0.007	0.003	0.007	0.000	0.153	0.002	84.2
2002	Casting waste	17	10430	1545	1143	69.2	0.01	6.57	4.53	0.09	0.04	0.67	0.11	7.56	0.01	0.37	0.003	0.001	0.000	0.002	0.000	0.157	0.003	89.3
2004	Sheet/strip	17	10430	1545	1143	75.6	0.26	7.39	1.74	0.08	0.05	0.39	0.09	5.73	0.00	0.34	0.003	0.000	0.000	0.002	0.000	0.161	0.002	91.8
546	Fragment	15–16	10444	1530	1134	74.0	0.06	6.07	1.74	0.03	0.06	0.30	0.08	5.88	0.00	0.17	0.000	0.001	0.000	0.002	0.000	0.046	0.002	88.5
2033	Casting waste	15–16	10444	1530	1134	70.7	0.00	22.70	0.62	0.02	0.08	0.26	0.11	5.51	0.02	0.08	0.001	0.000	0.002	0.000	0.155	0.002	100.3	
555	Fragment	14–15	10602	1512	1125	74.6	0.02	0.12	0.01	0.13	0.04	2.93	0.16	13.42	0.01	0.26	0.012	0.001	0.000	0.002	0.000	0.071	0.009	91.8
556	Fragment	12–14	10845	1423	1116	60.6	0.04	18.34	0.00	0.04	0.60	1.52	0.06	9.97	0.01	0.19	0.003	0.000	0.000	0.002	0.000	0.060	0.006	91.5
557	Fragment	12–14	10845	1423	1116	65.7	0.03	18.30	2.02	0.08	0.27	1.76	0.09	6.45	0.07	0.35	0.000	0.001	0.000	0.002	0.000	0.060	0.005	95.2
2024	Sheet	14	10934	1520	1112	76.0	0.07	8.76	10.07	0.22	0.05	0.32	0.08	2.57	0.00	0.12	0.003	0.000	0.001	0.000	0.093	0.002	98.3	
2005	Strip	14	10951	1573	–	56.8	0.02	12.68	12.47	0.82	0.04	0.62	0.06	3.36	0.11	0.38	0.004	0.006	0.003	0.007	0.000	0.113	0.004	87.4
2006	Strip	14	10951	1573	–	75.9	0.00	17.69	4.98	0.01	0.04	0.89	0.12	4.36	0.01	0.09	0.004	0.000	0.000	0.001	0.101	0.001	104.2	
2007	Strip	14	10951	1573	–	65.2	0.01	15.49	4.77	0.09	0.03	1.01	0.20	7.22	0.33	0.19	0.001	0.000	0.001	0.001	0.191	0.006	94.8	
2008	Sheet	14	10951	1573	–	68.0	0.00	18.56	3.89	0.04	0.05	0.86	0.15	7.60	0.06	0.12	0.000	0.000	0.001	0.002	0.000	0.159	0.006	99.5

artefacts is typically copper with up to 30% lead, up to 13% antimony, a few percent of tin, negligible zinc, and higher than average arsenic (in this alloy group arsenic correlates with antimony, rather than nickel, as in the brasses).

This alloy type was commonly used in the late medieval and post-medieval periods to make household items such as cooking pots and drinking vessels. Brownsword *et al* (1983–4) reported on a number of such finds from Weoley Castle, Birmingham, which they believed to be of the late medieval period.

(c) Gunmetals and bronzes (Table 102)

See Figure 224:6 for the ternary diagram. This group consists of the remaining alloys from Deansway, mostly gunmetals and bronzes, with a few pieces of impure copper sheet. Almost all of the smaller cast objects are gunmetals. These finds range in date from the 14th to the 17th centuries, with the majority of the objects coming from 16th- to 17th-century levels. All of the sheet metal offcuts are of this date. The candlestick (analysis 562) and candelabra (563) have both been dated stylistically to the late 15th to early 16th centuries, and are likely to be residual in the 16th- to 17th-century contexts in which they were found.

These candlesticks resemble objects of about the same date found at Leicester (Brownsword *et al* 1981–2). The Leicester candlestick is made from a gunmetal containing approximately equal amounts of zinc, lead, and tin; while the candelabra is a zinc-rich gunmetal ('latten'). These results are similar to those obtained for the Deansway artefacts. Two pieces of sheet offcut, 496, and 498 are likely to have come from the same piece of metal. Although 498 gives a much lower analytical total, (probably due to corrosion), the minor and trace elements are sufficiently alike for the analyses to be considered identical. These offcuts are gunmetals, having slightly less tin than zinc, with small amounts of lead.

Qualitative analyses

In total 54 artefacts were qualitatively analysed. These included pieces of slag, mould, crucible, casting spillages, waste, and corroded sheet metal. The finds were chosen to cover the main metalworking contexts from Site 1. All the objects contained high levels of copper, with tin and lead present as a major component in most of the objects. Antimony was frequently detected, but in most finds at minor element level. However, it did occur at higher levels in the casting waste, often associated with large amounts of lead. This suggests that antimony may have been a major component of the casting alloys used on site.

Zinc appears at a high level in only a few finds, mostly sheet metal and slag. The crucibles contain

particularly high levels of this element, suggesting that zinc-containing alloys may have been melted in them, though zinc could be enriched in the crucible walls at the expense of other metals because of its greater volatility.

7.10.4 Interpretation

It has been shown that the alloys can be separated into three groups on the basis of composition, and that these groups correspond well with different artefact types at Deansway (eg brass for the pins; gunmetals for the small castings). There is evidence of a variety of metalworking practice from this site, and this too can be related to the different alloy compositions:

(a) Heavy casting

The casting pits, numerous mould fragments, casting waste, and spillages from the site are evidence of a 'heavy' casting industry, making large objects, such as cauldrons and skillets. The dominant alloy type was one containing large quantities of lead and antimony. However, a piece of casting waste and two cast sheet fragments (analyses 524, 2017, and 2023) were of high-tin bronze, with very little zinc and only 3–4% lead. While it is not possible to say what these objects are the remains of, it is worth noting that they are of a typical bell-metal composition, and represent the only such alloys among those analysed from Deansway. The small amount of bell-metal analysed at Deansway is not surprising. The mould evidence (Section 7.11) suggests that bell casting was an occasional activity on the site. Also, high-tin bronze was an expensive metal (chiefly because of the tin content) that was likely to be reused, rather than discarded.

The lead-antimony rich alloys would have been unsuitable for bell-founding because of segregation of lead at the grain boundaries within the alloy, preventing the effective propagation of sound. Furthermore, the grain boundaries are then weak areas within the metal, along which it is prone both to fracture and penetration by corrosion. Consequently an alloy of this type is very brittle. This, together with the hardening effect of the antimony, also makes it unsuitable for wrought working. None of the artefacts made of this alloy appear to have been wrought. However, while unsuitable for bell-founding, or wrought fabrication, this alloy is perfectly acceptable as a cheap, low performance casting metal.

How this alloy type was made is open to speculation, but it appears very crude. The analytical totals usually add up to considerably less than 100%, indicating the presence of non-metallic material, probably due to corrosion. This was observed on sampling; the drill would go through solid metal,

Table 102 Analysis of the gunmetals and bronzes

Lab no	Artifact	Date	Context	CG	AU	Cu	Zn	Pb	Sn	Fe	Ni	As	Bi	Sb	P	S	Co	Cr	Mn	V	Cd	Ag	Au	Total
529	Sheet fragment	15–17	10022	1545	1143	80.6	8.96	1.56	3.34	0.19	0.05	0.20	0.01	0.13	0.00	0.26	0.025	0.000	0.001	0.002	0.001	0.063	0.004	95.4
530	Sheet fragment	15–17	10022	1545	1143	77.0	10.19	0.17	3.47	0.48	0.10	0.00	0.02	0.03	0.05	0.013	0.001	0.002	0.001	0.034	0.002	0.001	91.6	
561	Double buckle	17–18	10202	–	80.8	5.96	0.87	3.16	0.23	0.09	0.29	0.00	0.15	0.01	0.03	0.008	0.001	0.001	0.002	0.000	0.079	0.003	91.7	
496	Offcut	16–17	10227	1632	1144	89.0	7.26	0.29	3.21	0.23	0.04	0.12	0.01	0.27	0.00	0.05	0.006	0.000	0.001	0.000	0.069	0.001	100.6	
497	Offcut	16–17	10227	1632	1144	93.0	0.92	0.13	3.67	0.09	0.24	0.37	0.01	0.07	0.00	0.07	0.016	0.000	0.001	0.000	0.037	0.003	98.6	
498	Offcut	16–17	10227	1632	1144	79.5	7.09	1.14	3.30	0.28	0.07	0.20	0.03	0.29	0.00	0.17	0.025	0.000	0.002	0.000	0.074	0.002	92.2	
500	Offcut	16–17	10227	1632	1144	88.5	4.67	0.66	3.57	0.15	0.02	0.00	0.11	0.00	0.08	0.009	0.000	0.002	0.000	0.069	0.010	97.8		
503	'Sheet - 3–4mm thick'	16–17	10227	1632	1144	66.9	0.20	11.40	12.42	0.05	0.03	0.21	0.01	0.34	0.07	0.19	0.000	0.000	0.002	0.000	0.066	0.004	91.9	
532	'Sheet, 1.5mm thick'	16–17	10227	1632	1144	90.5	1.21	0.11	3.07	0.05	0.24	1.39	0.01	0.05	0.00	0.04	0.002	0.000	0.001	0.000	0.015	0.002	96.7	
533	Candlestick moulding	16–17	10227	1632	1144	78.1	5.64	7.37	3.45	0.53	0.16	0.40	0.03	0.67	0.00	0.10	0.034	0.000	0.001	0.000	0.053	0.003	96.5	
534	Box/book fitting	16–17	10227	1632	1144	81.6	8.35	1.92	3.45	0.36	0.08	0.28	0.01	0.42	0.00	0.25	0.031	0.000	0.002	0.002	0.000	0.084	0.002	96.8
536	'Sheet, 1.5mm thick'	16–17	10227	1632	1144	81.1	10.40	0.03	2.75	0.70	0.12	0.35	0.00	0.02	0.00	0.05	0.012	0.000	0.000	0.001	0.054	0.002	95.5	
537	'Sheet, 2mm thick'	16–17	10227	1632	1144	90.9	2.54	0.12	4.05	0.06	0.16	0.38	0.01	0.75	0.00	0.04	0.003	0.000	0.002	0.000	0.065	0.004	98.8	
538	'Sheet, 1mm thick'	16–17	10227	1632	1144	94.9	0.98	0.32	3.53	0.15	0.15	0.32	0.01	0.12	0.13	0.11	0.014	0.000	0.002	0.001	0.046	0.003	100.7	
541	'Sheet, 1mm thick'	16–17	10227	1632	1144	92.1	3.12	0.60	3.59	0.30	0.16	0.49	0.01	0.17	0.02	0.06	0.009	0.000	0.002	0.002	0.039	0.003	100.7	
562	Candlestick	16–17	10376	1326	–	76.7	4.20	4.58	3.84	0.33	0.16	0.53	0.01	0.84	0.04	0.09	0.012	0.000	0.002	0.000	0.077	0.003	91.4	
547	Fragment	16–17	10416	1546	1145	93.4	0.00	1.85	0.37	0.01	0.05	0.07	0.01	0.70	0.00	0.19	0.002	0.001	0.002	0.001	0.054	0.002	96.7	
551	Shaft fragment	16–17	10416	1546	1145	77.9	12.07	0.32	3.58	0.30	0.04	0.08	0.00	0.12	0.04	0.06	0.006	0.001	0.002	0.000	0.063	0.004	94.6	
504	'Offcut, 1mm thick'	17	10419	1547	1144	90.9	3.83	0.08	4.37	0.16	0.03	0.18	0.01	0.58	0.05	0.03	0.007	0.000	0.001	0.001	0.057	0.004	100.3	
505	Strip	17	10419	1547	1144	95.3	0.00	0.55	0.00	0.08	0.04	0.44	0.08	0.33	0.10	0.00	0.000	0.001	0.002	0.002	0.045	0.003	97.0	
506	Buckle loop	17	10419	1547	1144	68.2	1.64	4.83	0.03	0.28	0.04	0.27	0.04	0.38	0.00	0.30	0.009	0.000	0.013	0.002	0.065	0.007	84.9	
507	Ring fragment	17	10419	1547	1144	67.8	8.40	0.58	2.70	0.73	0.02	0.07	0.02	0.30	0.00	0.94	0.04	0.007	0.000	0.004	0.000	0.127	0.004	81.7
513	'Strip, 1mm thick'	17	10419	1547	1144	91.6	4.73	0.67	3.53	0.14	0.03	0.00	0.10	0.01	0.05	0.011	0.000	0.003	0.001	0.000	0.069	0.005	100.9	
563	Branched double-socket candlestick	17	10419	1547	1144	76.8	10.81	2.79	2.34	0.52	0.18	0.54	0.02	0.28	0.11	0.05	0.000	0.001	0.002	0.000	0.069	0.003	94.5	
516	Brooch (13th century)	17	10430	1545	1143	78.6	9.08	4.43	3.12	0.88	0.05	0.29	0.03	0.32	0.02	0.12	0.008	0.000	0.001	0.002	0.063	0.004	97.1	
517	Sheet 1mm thick	17	10430	1545	1143	81.5	8.98	2.19	4.32	0.33	0.05	0.26	0.09	0.44	0.00	0.23	0.002	0.000	0.001	0.003	0.037	0.003	98.4	
524	Fragment	17	10430	1545	1143	68.7	0.30	3.97	19.27	0.14	0.04	0.17	0.02	0.92	0.16	0.06	0.002	0.000	0.006	0.002	0.064	0.003	93.8	
542	Sheet 1–3mm thick	17	10430	1545	1143	82.8	8.24	2.16	3.56	0.34	0.05	0.38	0.02	0.17	0.00	0.22	0.020	0.000	0.001	0.002	0.048	0.002	98.0	
2001	Sheet waste	17	10430	1545	1143	78.8	12.66	0.32	3.47	0.35	0.03	0.01	0.01	0.08	0.16	0.03	0.012	0.000	0.001	0.003	0.005	0.005	96.1	
2015	Sheet waste	16–17	10432	1557	1113	100.7	0.00	0.19	0.03	0.01	0.03	0.02	0.12	0.00	0.55	0.015	0.000	0.002	0.001	0.083	0.001	101.8		
2035	Sheet, 1mm thick	15–16	10444	1530	1134	88.9	6.49	2.05	4.10	0.21	0.06	0.32	0.04	0.21	0.03	0.05	0.011	0.000	0.002	0.003	0.112	0.002	102.6	
2017	?Casting waste	14–15	10470	1557	1113	73.3	0.24	3.35	24.44	0.13	0.04	0.16	0.04	0.65	0.00	0.03	0.002	0.000	0.001	0.003	0.065	0.003	102.4	
525	'Sheet, 2mm thick'	14–15	10615	1501	1112	60.3	0.04	12.85	6.74	0.18	0.03	0.10	0.01	0.50	0.48	0.20	0.007	0.001	0.004	0.002	0.064	0.002	81.5	
2022	'Sheet, offcuts from casting, 2–3mm thick'	14	10934	1520	1112	75.8	0.00	11.67	9.85	0.06	0.03	0.47	0.07	0.23	0.07	0.03	0.007	0.000	0.002	0.001	0.049	0.002	98.4	
2023	'Sheet offcuts from casting, 2–3mm thick'	14	10934	1520	1112	79.1	1.00	4.41	15.20	0.14	0.05	0.28	0.07	0.30	0.00	0.12	0.003	0.000	0.001	0.000	0.085	0.002	100.8	

strike a patch of mineral-like material, before finding metal again.

All of this points to the metal being made in a rough and ready manner, most probably by smelting a copper ore rich in antimony and arsenic, eg Fahlerz or 'grey' ores, containing the minerals tetrahedrite, Cu₃SbS₃, and tennantite, Cu₃AsS₃ (this possibility has been suggested by Blair *et al* 1985). With the addition of lead and a little tin, it is used for casting, without any purification steps. The overall impression is one of cheapness; an attempt being made to extract the maximum possible weight of metal from an ore, with little regard to the qualities of the resulting alloy. This impression is supported by the large lead additions; historically lead has always been a cheaper metal than copper, zinc or tin.

(b) Small scale casting and wrought metalworking

The smaller moulds (eg the candlestick mould), crucibles, and unfinished castings are evidence that melting, and possibly purification of copper alloy metal, together with small casting work, was also taking place at Deansway. (Note that this is a secondary process, involving metal, not to be confused with ore smelting.)

The many finds of sheet metal offcuts indicate that there was also some wrought metalworking on site. The small castings were mostly of gunmetal, while a similar alloy was used for the wrought metalworking, but generally with a higher copper content, in the region of 90%. Some of the wrought pieces are actually impure coppers, rather than alloys.

(c) Pins and wire

The large number of pins from the site fall into a third distinct alloy group. The only evidence for wire making from the site was an iron anvil, with two grooves across the top for the hammering of wire (Section 7.13). This find came from a Period 9 Phase 5 context (Context 10911, CG 1561, AU 1113).

It has been noted above that several of the pins came from the same piece of metal. The implications

of this are that the pins must have either been made on the site from the same stock of metal, or manufactured elsewhere, and then brought to Deansway en masse. The pins 487, 489, 490, 492, 509, 552; wire, 548; and lace-tag, 471 have similar compositions with arsenic and nickel levels distinctively high, at around 1% or more. They are not so alike as to have come from the same piece of metal, but may represent slight variations in a single source over time.

The high zinc group, described in section 3(a), is approaching the maximum zinc content (28–33%) that is possible using the cementation process of brass manufacture, and is probably fresh metal. It is unlikely that brass with 25% zinc has been melted down as scrap, as a significant amount of the zinc would be lost in the process. The negligible amounts of tin and lead present are consistent with this too, unless scrap was very carefully sorted. The first records of brass manufacture in England do not appear until the end of the 16th century. It is likely that most, if not all the brass in late medieval and early post-medieval times was imported from the Continent, probably from the vicinity of Aachen, near the present day Belgian-German border (Hamilton 1926); so it is quite likely that this applies to these alloys from 16th- to 17th-century contexts.

7.10.5 Conclusions

The copper alloy artefacts from Deansway Site 1 were the products of four different types of metalworking. There is strong evidence for three of these (the large- and small-scale casting, and wrought sheet metalworking) being carried out on site, and one piece of evidence for wire making (the anvil), but this is not associated with the large number of brass pins and wire found on the site.

7.13 Iron and copper alloy objects by Nina Crummy

See Tables 106 and 113 below.

Table 106 Iron objects listed by period, site, activity unit, context group, and context

Brief description (catalogue no)	Period	Activity unit	Context group	Context	Context group type
<i>Periods 3–5</i>					
<i>Site 2</i>					
Hinged belt-plate fragment (1*)	4	2031	2050	17017	(?) Primary fill of pit
Small ?handle (10)	5	2022	2046	17035	Secondary fill of pit
<i>Site 3</i>					
Five hobnails (4)	4	3019	3025	18180	Secondary fill of quarry pit
Joiner's dog (7)	4	3019	3025	18180	Secondary fill of quarry pit
Split-spike loop (8)	4	3021	3051	18122	Fill of indeterminate cut
Split-spike loop (9)	4	3021	3051	18122	Fill of indeterminate cut

Table 106 (cont.) Iron objects listed by period, site, activity unit, context group, and context

Brief description (catalogue no)	Period	Activity unit	Context group	Context	Context group type
<i>Site 4</i>					
Buckle and belt-plate (2*)	3	4009	4069	20466	Indeterminate structure
Fragment of sheet iron (11)	3	4009	4069	20466	Indeterminate structure
Twenty-four hobnails (6)	5	4037	4026	21093	Grave
Four (?seven) hobnails (5)	5	4037	4144	20434	Grave
Finger-ring* (3)	5	4037	4153	20419	Grave
<i>Periods 6–7</i>					
<i>Site 1</i>					
U-shaped strip fragment (144)	7	1064	1398	11608	Primary fill of pit
<i>Site 2</i>					
Hooked tag (26*)	(5)	2053	2141	17300	Dump (Period 5 but with intrusive material from Period 7)
Padlock with bolt (89*)	(5)	2053	2141	17300	Dump (Period 5 but with intrusive material from Period 7)
Hooked tag fragment (24*)	6	2055	2142	16692	Arbitrary layer (Period 6 but with intrusive material from Period 7)
Hooked tag (25*)	6	2055	2142	16692	Arbitrary layer (Period 6 but with intrusive material from Period 7)
Strip fragment (128*)	6	2055	2142	17289	Arbitrary layer (Period 6 but with intrusive material from Period 7)
Knife (53*)	6	2055	2142	17304	Arbitrary layer (Period 6 but with intrusive material from Period 7)
Hinged belt-plate fragment (20*)	7	2058	2144	17274	Trampled soil accumulation
Padlock key bit (99)	7	2058	2144	17274	Trampled soil accumulation
Tongue-ended strip (160*)	7	2058	2144	17274	Trampled soil accumulation
?Fitting (161)	7	2058	2144	17279	Trampled soil accumulation
Hooked tag (22*)	7	2059	2158	16691	Soil accumulation
Hooked tag (23*)	7	2059	2158	16691	Soil accumulation
Needle fragment (73*)	7	2059	2158	16691	Soil accumulation
Strap guide (28*)	7	2059	2158	16901	Soil accumulation
Padlock key handle (98)	7	2059	2158	16901	Soil accumulation
?Lift key bit fragment (105)	7	2072	2172	17165	Dump
Knife (52*)	7	2084	2270	17106	Secondary fill of pit
Knife (47*)	7	2073	2271	16485	Secondary fill of pit
Pick head (62*)	7	2073	2357	16758	Secondary fill of pit
<i>Periods 8–9</i>					
<i>Site 1</i>					
Spur fragment (129*)	8	1076	1126	11057	Soil accumulation
Padlock case fragment (83*)	8	1076	1126	11057	Soil accumulation
U-shaped strip fragment (118)	8	1076	1126	11540	Soil accumulation
Knife fragment (34*)	8	1076	1202	11217	Soil accumulation
Padlock key (91*)	8	1077	1218	10741	Metalled surface
Padlock key (94)	9	1098	1226	11009	Metalled surface
Buckle loop (13)	9	1095	1374	10829	Dump
Buckle (12*)	9	1098	1285	10734	Dump
Buckle fragments (14)	9	1099	1275	11058	Primary fill of pit
Arrowhead fragment (65*)	9	1099	1280	10738	Primary fill of pit
Decorated strip (148*)	9	1101	1405	10894	Primary fill of pit

Table 106 (cont.) Iron objects listed by period, site, activity unit, context group, and context

Brief description (catalogue no)	Period	Activity unit	Context group	Context	Context group type
Horseshoe fragment (133)	9	1101	1418	10888	Primary fill of pit
Rotary key (107*)	9	1101	1592	10967	Pit fill
Rotary key (108*)	9	1101	1592	10967	Pit fill
Padlock bolt fragment (82)	9	1113	1531	10953	Floor layer/surface
Tapering strip (147)	9	1113	1555	10476	Secondary fill of casting pit
Anvil (56*)	9	1113	1561	10911	Construction trench backfill
Padlock case fragments (81)	9	1113	1563	10908	Dump
Knife fragment (31)	9	1115	1508	10606	Hearth
Knife fragment (32)	9	1117	1286	10737	Soil accumulation
Horseshoe fragment (132)	9	1117	1286	10737	Soil accumulation
Padlock key (92*)	9	1117	1286	10773	Soil accumulation
Rotary key (106*)	9	1119	1296	10599	Indeterminate cut feature
8-shaped hasp (116*)	9	1121	1299	10722	Indeterminate cut feature
Padlock key (90*)	9	1121	1299	10722	Indeterminate cut feature
Knife (33*)	9	1125	1460	10850	Secondary fill of pit
Ring with split-pin (125)	9	1125	1627	11502	Construction trench backfill
?Collar fragments (150)	9	1125	1528	11537	Secondary fill of cess pit
Chain links (151)	9	1116	1629	11545	Pit fill
Needle or nail shaft (71)	9	0	1387	11320	Secondary fill of pit
8-shaped hasp fragment (117)	9	0	1387	11320	Secondary fill of pit
Padlock key (95*)	9	0	1387	11320	Secondary fill of pit
Arrowhead (66*)	9	0	1421	10874	Arbitrary layer
Padlock case (80*)	9	0	1480	10801	Floor layers and dumps
Loop-ended strip (93)	9	0	1480	10820	Arbitrary, sondage through 10801
Punch (57*)	9	0	1554	10491	Arbitrary, cleaning layer
<i>Site 2</i>					
8-shaped hasp (121*)	8	2095	2224	16467	Metalled surface
Arrowhead (70*)	8	2098	2282	17226	Secondary fill of pit
Fitting fragment (159*)	8	2101	2292	16620	Secondary fill of pit
Knife (48)	8	2110	2222	16497	Dump
Knife fragment (49)	8	2110	2222	16497	Dump
Stapled hasp (123*)	8	2110	2263	16487	Dump
Stapled hasp (124*)	8	2110	2263	16487	Dump
Knife (46*)	8	2116	2227	16453	Indeterminate layer
U-shaped strip (120)	8	2117	2533	16425	Indeterminate structure
Shears fragment (59)	8	2125	2240	15976	Dump
Knife (45)	8	2125	2534	16450	Indeterminate layer
Padlock bolt fragment (88)	8	2126	2290	16625	Dump
Knife (50*)	8	2126	2290	16656	Dump
Padlock bolt fragments (87)	8	2127	2242	16347	Floor surface
Needle fragment (72)	8	2134	2395	16587	Slot
Bent ?tapering strip (152)	8	2135	2565	15974	Indeterminate positive
Arrowhead (68*)	8	2136	2355	16114	Primary fill of pit
Knife (41)	8	2140	2492	16200	Primary fill of pit
Strip (156)	8	2140	2492	16200	Primary fill of pit
Knife fragment (43)	8	2144	2476	16279	Primary fill of pit
Carding comb fragments (78)	8	2227	2238	15977	Surface activity
Knife (51)	9	2147	2458	16751	Primary fill of pit
Horseshoe fragment (138)	9	2150	2317	16170	Primary fill of pit
Padlock case fragment (86*)	9	2154	2478	16276	Secondary fill of pit

Table 106 (cont.) Iron objects listed by period, site, activity unit, context group, and context

Brief description (catalogue no)	Period	Activity unit	Context group	Context	Context group type
?Padlock key (96)	9	2154	2478	16276	Secondary fill of pit
Lock springs (103*)	9	2157	2422	16064	Primary fill of pit
Padlock key (97)	9	2158	2538	16429	Dump
Horseshoe fragment (140)	9	2158	2538	16440	Dump
Strip fragment (127)	9	2158	2538	16440	Dump
Buckle loop fragment (16)	9	2158	2539	16417	Dump
Riveted hooked fitting (27*)	9	2158	2539	16417	Dump
8-shaped hasp (119*)	9	2158	2539	16417	Dump
Strip fragments (158)	9	2158	2539	16417	Dump
?Belt-plate fragment (19)	9	2158	2540	16416	Dump
Horseshoe (139)	9	2158	2541	16402	Dump
Strip (157)	9	2161	2553	16405	Metalled surface
Rotary key (115*)	9	2161	2553	16406	Metalled surface
Rotary key (113*)	9	2165	2454	16112	Secondary fill of pit
Hooked tag (21*)	9	2169	2519	16504	Secondary fill of pit
Knife fragment (38)	9	2172	2564	15938	Indeterminate layer
Arrowhead (69*)	9	2172	2572	16356	Dump
Knife fragment (44)	9	2173	2544	16319	Metalled surface
Hinged belt-plate (18*)	9	2178	2543	16372	Secondary fill of pit
?Hinge (126)	9	2179	2445	16272	Primary fill of pit
Nailed strip fragments (155)	9	2179	2456	16106	Primary fill of pit
Padlock case fragment (85*)	9	2181	2695	16058	Indeterminate cut feature
Arrowhead fragment (67*)	9	2182	2574	15993	Trampled dump
Knife fragment (37)	9	2182	2589	15915	Dump
Rotary key (110)	9	2189	2590	15929	Primary fill of pit
U-shaped strip (145)	9	2197	2603	15961	Indeterminate cut feature
Rotary key fragment (109*)	9	2200	2608	15886	Dump
?Punch (58)	9	2201	2622	15883	Primary fill of pit
Padlock case fragment (84*)	9	2201	2622	15883	Primary fill of pit
Rotary key fragment (114)	9	2228	2501	16145	Secondary fill of pit
<i>Site 3</i>					
8-shaped hasp (122*)	9	3043	3165	18057	Pit fill
<i>Site 4</i>					
Buckle (17*)	9	4082	4217	20092	
Periods 10–11 and unstratified					
<i>Site 1</i>					
Arrowhead (63*)	10	1129	1302	10545	Dump
Arrowhead fragment (64*)	10	1129	1302	10545	Dump
?Staple and ring fragment (143)	10	1129	1302	10545	Dump
Horseshoe fragment (131)	10	1129	1304	10556	Dump
Knife (30*)	10	1131	1291	10533	Secondary fill of pit
Horseshoe fragment (134)	10	1144	1582	11139	Secondary fill of quarry pit
Horseshoe fragment (135)	10	1144	1582	11139	Secondary fill of quarry pit
Sheet object (149*)	10	1144	1582	11139	Secondary fill of quarry pit
Carding comb fragments (76)	11	0	1310	10551	Primary fill of pit
Knife fragment (29)	11/12	0	0	10390	Soil layer
<i>Site 2</i>					
?Buckle fragment (15)	10	2202	2607	15888	Trampled dump
Carding comb fragments (79)	10	2206	2433	16216	Primary fill of pit
Wool comb tooth (74*)	10	2206	2481	16222	Tertiary fill of pit
?Metal-decorating tool (61)	10	2206	2483	16237	Primary fill of pit

Table 106 (cont.) Iron objects listed by period, site, activity unit, context group, and context

Brief description (catalogue no)	Period	Activity unit	Context group	Context	Context group type
Rotary key bit (111)	10	2207	2510	16093	Primary fill of pit
Rotary key bit (112)	10	2207	2510	16093	Primary fill of pit
Knife fragment (40)	10	2207	2510	16093	Primary fill of pit
?Structural fitting (146)	10	2207	2526	16026	Primary fill of pit
Hook (153)	10	2207	2526	16026	Primary fill of pit
?Strap distributor fragment (154*)	10	2207	2526	16026	Primary fill of pit
Horseshoe fragment (137)	10	2207	2513	16097	Secondary fill of pit
Knife fragment (35)	10	2214	2626	15783	Primary fill of pit
Horseshoe fragment (136)	10	2214	2626	15783	Primary fill of pit
Punch (60)	10	2216	2689	16024	Indeterminate cut feature
Knife (39*)	10	2216	2515	16074	Primary fill of pit
Fitting (104)	10	2216	2515	16074	Primary fill of pit
Carding comb fragments (77)	10	2229	2625	15771	Primary fill of pit
Lock-plate fragment (102)	10	2229	2625	15771	Primary fill of pit
Scale tang and handle (36)	11			15870	
Knife fragments (42)	—		ARB	16236	
<i>Site 3</i>					
Knife (55)	10	3048	3124	18038	Fill of cess pit
Ring with ?pin (163)	10	3048	3125	18034	Fill of cess pit
Knife (54*)	10	3048	3129	18010	Secondary fill of cess pit
Hook (162)	10	3048	3129	18010	Secondary fill of cess pit
<i>Site 4</i>					
?Scale tang (164)	10	4070	4267	20168	
Strip with nail (165)	10	4070	4267	20168	
Padlock key (101*)	10	4111	4232	20496	
Horseshoe fragment (142)	11	0	4245	21058	Pit fill
Shears (75*)	—	4037	4153	20448	Unstratified
Harness buckle (130*)	—	4037	4153	20448	Unstratified
Horseshoe (141*)	—			20446	Unstratified
Padlock key (100*)	—			20452	Arbitrary layer/unstratified

* illustrated.

Table 113 Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
<i>Periods 3–5 and residual Roman material</i>					
<i>Site 1</i>					
Cuirass hinge fragment (17*)	3	1006	1015	11476	Indeterminate structure
Cuirass hinge fragment (19*)	3	1006	1015	11476	Indeterminate structure
Shield binding (26*)	3	1013	1020	11494	Quarry
Moulded collar (7*)	3	1017	1023	11847	Metalled surface
Ring (36)	3	1017	1023	11847	Metalled surface
Hairpin (1*)	4	1046	1141	11812	Indeterminate cut feature
Hairpin (58*)	9	1096	1386	10855	Disposal area: cess pits
<i>Site 2</i>					
Ring (39)	3	2010	2060	17892	Trampled soil accumulation
Sheet *47)	3	2019	2007	17089	Soil accumulation
Strip (52)	4	2020	2061	17911	Indeterminate structure
Strip (51)	4	2020	2066	17884	Indeterminate structure
Stud/boss (31)	4	2022	2046	17035	Secondary fill of pit

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
Ring (37)	4	2022	2046	17035	Secondary fill of pit
Stud fragment (30)	4	2023	2013	17039	Primary fill of pit
Triangular sheet offcut (49)	4	2027	2032	17499	Primary fill of pit
Cuirass hinge (20*)	4	2031	2049	17015	Primary fill of pit (?)
Vessel fragments (15)	4	2036	2086	17692	Trampled soil accumulation
Buckle tongue (23)	4	2036	2086	17692	Trampled soil accumulation
Cuirass hinge fragment (21*)	4	2036	2086	17727	Trampled soil accumulation
Cavalry harness strap-loop (28*)	4	2036	2086	17727	Trampled soil accumulation
Ring fragment (38)	4	2036	2086	17727	Trampled soil accumulation
Sheet (?strip) (50)	4	2036	2086	17727	Trampled soil accumulation
Tongue-ended strip (46)	4 to 5	2037 & 2047	2145	16693	Metallic surface
Nail-cleaner (10)	4	2039	2148	17008	Dump
Terminal (41)	4	2039	2148	17008	Dump
Seal-box lid (16*)	5	2044	2119	17328	Trampled soil accumulation
Strip (48)	5	2044	2119	17328	Trampled soil accumulation
Toilet spoon (8*)	5	2044	2119	17357	Trampled soil accumulation
Nail-cleaner (118)	5	2044	2120	17648	Soil accumulation
Wire ?handle (14)	5	2044	2120	17648	Soil accumulation
Wire point (43)	5	2044	2120	17648	Soil accumulation
Hairpin fragment (2)	6	2055	2143	17297	Arbitrary layer
Lobate cuirass hinge (22)	9	2179	2430	16295	Pit with primary fill
Strip (45)	10	2206	2480	16608	Secondary fill of pit
Finger-ring + intaglio (4*)	6	0	0	17943	Arbitrary context
<i>Site 3</i>					
Cuirass hinge (18*)	3	3007	3013	18304	Disposal
Ring fragment (40)	4	3021	3051	18108	Disposal
Sheet (53)	4	3021	3051	18108	Disposal
Toilet spoon fragment (9)	4	3021	3051	18114	Disposal
Hairpin (3*)	5	3027	3080	18263	Structure
Strip (54)	5	3027	3100	18247	Structure
Probe fragment (13)	5	3029	3047	18098	Disposal
Fitting (34*)	5	3029	3109	18084	Disposal
Shaft with ?terminal (42)	5	3030	3096	18256	Disposal
Shaft fragment (44)	9	3047	3089	18288	Disposal
<i>Site 4</i>					
Buckle tongue fragment (24)	3	4014	4146	20425	Disposal
Harness pendant fragments (29*)	3	4014	4146	20425	Disposal
Sheet (55)	3	4014	4146	20425	Disposal
Finger-ring (5*)	5	4037	4153	20419	Grave
Nail-cleaner (12*)	5	4037	4028	21078	Grave
55 small rivets from shoe (33*)	5	4037	4030	21075	Grave
Thin tapering strip (56)	5	4039	4158	20420	Boundary
Thick curved fragment (57)	5	4039	4158	20420	Boundary
Stud (32)	5	4041	4043	20279	Cultivation
Double buckle fragment (6)	5	4041	4043	21035	Cultivation
Binding (35)	5	4041	4143	20318	Cultivation
Shield binding (27)	8	4076	4254	20227	Disposal
Chape (25)	11	0	0	20100	Arbitrary

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
<i>Periods 6–7 and residual Saxon objects</i>					
<i>Site 2</i>					
Penannular ring (338)	6	2055	2142	16692	Movement zone
Sheet (437–9)	6	2055	2142	16692	Movement zone
Balance fragments (290*)	6	2055	2143	17280	Movement zone
Coiled strip (435)	7	2059	2158	16691	Movement zone
Coiled strip (436*)	7	2059	2158	16691	Movement zone
?Buckle (248)	7	2069	2373	16853	Disposal
Strap-tag (269*)	9	2181	2695	16058	Disposal
Spiral-headed pin (164)	-	0	0	16702	–
<i>Site 3</i>					
Strip or penannular hoop (445)	6	3032	3105	18003	Cultivation – dark earth
<i>Periods 8–9</i>					
<i>Site 1</i>					
Ring or collar (335)	9	1084	1603	11598	Movement: ground surface
Wire loop (?eyelet) (222)	9	1096	1397	11360	Disposal area: cess pits
?Strap-tag fragment (265)	9	1112	1501	10615	Movement: ground surface
Sheet offcut (395)	9	1112	1501	10615	Movement: ground surface
Sheet fragments (404–5)	9	1112	1520	10934	Movement: ground surface
?Strip offcut (396)	9	1115	1451	10632	Production area: smithy
Strip offcuts (401–2)	9	1116	1422	10857	Disposal area: secondary
Strip offcut (403)	9	1116	1415	10864	Disposal area: secondary
Collar (340)	9	1118	1344	10717	Structure: indeterminate
Ring (334)	9	1120	1354	10590	Structure: indeterminate
Buckle and belt-plate (230*)	9	1124	1463	10802	Movement: ground surface
Sheet ?offcut (397)	9	1124	1463	10802	Movement: ground surface
Strip offcuts (399–400)	9	1124	1463	10832	Movement: ground surface
Buckle (231*)	9	1124	1457	10854	Movement: ground surface
Strap-tag plate (266*)	9	1124	1462	10859	Movement: ground surface
Riveted bar fragment (275)	9	1124	1509	10603	Movement: ground surface
Sheet (392)	9	1124	1509	10603	Movement: ground surface
Sheet offcut (393)	9	1124	1509	10603	Movement: ground surface
Vessel sherd/sheet offcut (286)	9	1124	1510	10607	Movement: ground surface
Bar (394)	9	1124	1510	10607	Movement: ground surface
Sheet fragment (398)	9	1125	1490	10804	Production area: furnace, bell casting etc
Wire loop (?eyelet) (221)	9	1125	1433	10814	Production area: furnace, bell casting etc
Fitting fragment (319)	9	0	1576	10937	–
<i>Site 2</i>					
Sheet (440–1)	8	2091	2215	17104	Movement zone
Hooked tag (173*)	8	2095	2224	16467	Structure
Folded strip (431)	8	2095	2224	16467	Structure
Folded sheet (442)	8	2097	2220	17208	Structure
Strip (443)	8	2097	2220	17208	Structure
Buckle (244*)	8	2110	2263	16487	Movement zone
Triangular sheet offcut (432)	8	2110	2263	16496	Movement zone
Sheet (433)	8	2110	2263	16496	Movement zone
?Buckle loop fragment (249)	8	2115	2221	17246	Disposal
Fitting (325*)	8	2115	2221	17246	Disposal
Hooked tag (172*)	8	2116	2227	16453	Production

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
Small pin (159)	8	2117	2259	16345	Structure
Belt-fitting (258)	8	2125	2534	16450	Movement zone
Strip (430)	8	2125	2535	16435	Movement zone
?Buckle loop fragment (233)	8	2135	2568	15900	Structure
Balance stirrup (292*)	8	2138	2340	16513	Movement zone: dumps: ground surface
Ring thimble (278)	8	2144	2476	16259	Disposal
Lace-end (215)	9	2147	2459	16287	Disposal
Penannular ring (337)	9	2147	2490	16606	Disposal
Buckle fragment (235*)	9	2154	2478	16254	Disposal
Nail (311)	9	2154	2478	16254	Disposal
Wire (364)	9	2158	2539	16417	Movement zone
Sheet offcut (427)	9	2158	2539	16417	Movement zone
Ring (336)	9	2158	2540	16416	Movement zone
Wire (363)	9	2158	2541	16402	Movement zone
Disc (328)	9	2164	2424	16734	Disposal
?Hinged belt-plate (256)	9	2165	2457	16108	Disposal
Small pin (158)	9	2166	2689	16023	Disposal
Binding strip (300*)	9	2166	2507	16031	Disposal
Hinged strap-tag (270)	9	2172	2556	16368	Movement zone
Balance fragment (291)	9	2172	2564	15938	Movement zone
Fitting (324)	9	2172	2572	16356	Movement zone
Strip (?collar) (429)	9	2172	2573	16351	Movement zone
Sheet (428)	9	2179	2571	16334	Disposal
Stud (306)	9	2182	2574	15993	Movement zone
Boss (302)	9	2182	2574	15993	Movement zone
Key (299)	9	2182	2574	15993	Movement zone
Small pin (154)	9	2182	2708	15872	Movement zone
Buckle (243*)	9	2191	2698	16046	Disposal
Strip (413)	9	2196	2596	15932	Disposal
Small pins (156, 163)	9	2196	2601	15875	Disposal
Lace-ends (203–4)	9	2196	2601	15875	Disposal
?Strap-tag fragment (268)	9	2196	2601	15875	Disposal
Stud head (or fitting) (305)	9	2196	2601	15875	Disposal
Fitting (320)	9	2196	2601	15875	Disposal
Stud head (309)	9	2197	2603	16411	Production
Fitting (313)	9	2200	2605	15925	Landscaping
Shield-shaped mount (295*)	9	2200	2608	15886	Landscaping
Buckle tongue (246)	9	2201	2622	15883	Disposal
?Earring (169)	9	2201	2622	15883	Disposal
Bell fragment (294)	9	2201	2622	15883	Disposal
Hooked tag (171*)	9	2228	2501	16145	Disposal
Stud (307)	9	2228	2501	16145	Disposal
Sheet disc fragment (422)	9	2228	2501	16145	Disposal
Flattened spheres (423–4)	9	2228	2501	16145	Disposal
<i>Site 4</i>					
Wire loop (?eyelet) (226)	8	4049	4207	20302	Disposal
Sheet (451)	8	4051	4176	20677	Movement zone
Folded strip (450)	9	4082	4212	20240	Disposal
Penannular ring (339)	9	4099	4225	20480	Disposal

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
<i>Periods 10–12</i>					
<i>Site 1</i>					
Wire loop (?eyelet) (220)	10	1129	1302	10545	Movement: ground surface
Sheet ?offcut (391)	10	1131	1291	10533	Boundary: ditch
Fleur-de-lys fitting (318)	10	1131	1292	10531	Boundary: ditch
Lace-end (189)	10	1132	1336	10372	Disposal area: secondary use
Terminal fragment (344)	10	1132	1336	10372	Disposal area: secondary use
Sheet fragments (388)	10	1134	1530	10444	Production area: demolition
Wire (356)	10	1138	1312	10503	Production area: quicklime
Riveted hooked tag (274)	10	1138	1312	10506	Production area: quicklime
Small pin (59)	10	1143	1545	10022	Movement: ground surface
Finger-ring (168*)	10	1143	1545	10022	Movement: ground surface
Small pin (140)	10	1143	1545	10430	Movement: ground surface
Ring buckle (166*)	10	1143	1545	10430	Movement: ground surface
Vessel rim sherd (284)	10	1143	1545	10430	Movement: ground surface
Sheet fragments (385–6)	10	1143	1545	10430	Movement: ground surface
Offcut strip (387)	10	1143	1545	10430	Movement: ground surface
Buckle (238*)	10	1144	1582	10133	Extraction/disposal: pits
Belt-plate (251*)	10	1144	1582	10133	Extraction/disposal: pits
?Brush (288*)	10	1144	1582	10133	Extraction/disposal: pits
Spoon handle fragment (287*)	10	1144	1582	10134	Extraction/disposal: pits
Strip offcut (366)	10	1144	1582	10134	Extraction/disposal: pits
Buckle fragment (239)	10	1144	1582	10157	Extraction/disposal: pits
Fitting (314)	10	1144	1582	10161	Extraction/disposal: pits
Small pin (160)	10	1144	1632	10211	Extraction/disposal: pits
Strap-tag (260*)	10	1144	1632	10211	Extraction/disposal: pits
Strap-tag fragment (261)	10	1144	1632	10211	Extraction/disposal: pits
Vessel rim sherd (285)	10	1144	1632	10211	Extraction/disposal: pits
Triangular ?fitting (315)	10	1144	1632	10211	Extraction/disposal: pits
Crushed tube fragments (343)	10	1144	1632	10211	Extraction/disposal: pits
Strip offcut (368)	10	1144	1632	10211	Extraction/disposal: pits
Buckle fragment (241)	10	1144	1632	10212	Extraction/disposal: pits
Small pins (61–84, 131–7)	10	1144	1632	10227	Extraction/disposal: pits
Lace-ends (174–85)	10	1144	1632	10227	Extraction/disposal: pits
Wire loops (?eyelets) (216–9)	10	1144	1632	10227	Extraction/disposal: pits
Belt-plate (252*)	10	1144	1632	10227	Extraction/disposal: pits
Hinged strap-tag (262*)	10	1144	1632	10227	Extraction/disposal: pits
Tag with boss (271)	10	1144	1632	10227	Extraction/disposal: pits
Stud with rivet (272)	10	1144	1632	10227	Extraction/disposal: pits
Candlestick fragment (279*)	10	1144	1632	10227	Extraction/disposal: pits
Vessel rim sherd (282*)	10	1144	1632	10227	Extraction/disposal: pits
Balance arm (289*)	10	1144	1632	10227	Extraction/disposal: pits
?Soss fragment (301)	10	1144	1632	10227	Extraction/disposal: pits
Stud (303)	10	1144	1632	10227	Extraction/disposal: pits
Fitting (316)	10	1144	1632	10227	Extraction/disposal: pits
Fitting (317)	10	1144	1632	10227	Extraction/disposal: pits
Wire (347–53)	10	1144	1632	10227	Extraction/disposal: pits
Sheet fragments (369–70)	10	1144	1632	10227	Extraction/disposal: pits
Sheet offcuts (371–2*)	10	1144	1632	10227	Extraction/disposal: pits
Sheet offcuts (373–8)	10	1144	1632	10227	Extraction/disposal: pits
Buckle (229*)	10	1144	1632	10252	Extraction/disposal: pits

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
Small pins (99–101, 139)	10	1144	1547	10419	Extraction/disposal: pits
Lace-end (190)	10	1144	1547	10419	Extraction/disposal: pits
Buckle loop fragment (245)	10	1144	1547	10419	Extraction/disposal: pits
Candlestick fragment (281*)	10	1144	1547	10419	Extraction/disposal: pits
Vessel rim sherd (283*)	10	1144	1547	10419	Extraction/disposal: pits
Discs (326–7)	10	1144	1547	10419	Extraction/disposal: pits
Floral plaque (329)	10	1144	1547	10419	Extraction/disposal: pits
Ring fragment (333)	10	1144	1547	10419	Extraction/disposal: pits
Wire (355)	10	1144	1547	10419	Extraction/disposal: pits
Sheet offcut (383)	10	1144	1547	10419	Extraction/disposal: pits
Sheet ?offcut (380)	10	1144	1547	10419	Extraction/disposal: pits
Strips (381–2, 384)	10	1144	1547	10419	Extraction/disposal: pits
Cauldron foot (408*)	10	1144	1547	10419	Extraction/disposal: pits
Small pins (94–8, 162)	10	1145	1546	10416	Disposal area: secondary use
?Belt-plate (254)	10	1145	1546	10416	Disposal area: secondary use
Perforated ?terminal (345)	10	1145	1546	10416	Disposal area: secondary use
Wire (354)	10	1145	1546	10416	Disposal area: secondary use
Lace-end (191)	10	1146	1539	10905	Structure: indeterminate
Wire (357)	10	1146	1539	10905	Structure: indeterminate
Sheet fragment (389)	10	0	1571	10482	Structure: indeterminate
Buckle (242)	11	0	1325	10383	–
?Tag (263)	11	0	1325	10383	–
Candlestick fragment (280*)	11	0	1326	10376	–
Sheet fragment (379)	11	0	1326	10376	–
Small pins (86–93, 138)	11	0	1328	10366	–
Lace-ends (186–8)	11	0	1328	10366	–
Thimble (277*)	11	0	1328	10366	–
Fitting (312)	11	0	1358	10550	–
Strap-tag (264)	11	0	1360	10397	–
Small pin (85)	11	0	1361	10342	–
Belt-plate fragment (253)	11	0	1361	10342	–
?Chape (273)	11	0	1361	10342	–
Buckle fragment (228)	–	0	0	10011	–
Lace-end (214)	–	0	0	10062	–
Strap-tag fragment (259)	–	0	0	10062	–
Ring (332)	–	0	0	10062	–
Key (298*)	–	0	0	10082	–
Small pin (60)	–	0	0	10111	–
Lace-end (206)	–	0	0	10111	–
Tapering tube (342)	–	0	0	10111	–
Small pin (127)	–	0	0	10112	–
Small pins (128–30)	–	0	0	10118	–
Sheet offcut (365)	–	0	0	10118	–
Button (170)	–	0	0	10123	–
?Ingot (406)	–	0	0	10123	–
?Casting waste (407)	–	0	0	10123	–
Thimble (276*)	–	0	0	10127	–
Buckle (240)	–	0	0	10202	–
Sheet offcut (367)	–	0	0	10202	–
Small pin (161)	–	0	0	10335	–
Sheet fragment (390)	–	0	0	10486	–

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
<i>Site 2</i>					
Ring brooch (167*)	10	2202	2620	15796	Movement zone
Sheet offcut (412)	10	2202	2620	15796	Movement zone
Lace-end (205)	10	2202	2607	15888	Movement zone
Strap-reinforcing plate (321)	10	2202	2607	15888	Movement zone
Riveted fitting (330)	10	2202	2607	15888	Movement zone
Wire (362)	10	2202	2455	16110	Movement zone
Small pins (120–2, 155)	10	2204	2633	15873	Disposal
Lace-ends (201–2)	10	2204	2633	15873	Disposal
Buckle (232)	10	2204	2633	15873	Disposal
Small pins (103–7)	10	2204	2636	15724	Disposal
Lace-ends (207–8)	10	2204	2636	15724	Disposal
Hinged plate (331)	10	2206	2654	16202	Disposal
Shield-shaped mount (296*)	10	2206	2428	16212	Disposal
Stud (308)	10	2206	2428	16212	Disposal
?Buckle loop fragment (247)	10	2206	2433	16216	Disposal
Strip (434)	10	2206	2480	16608	Disposal
Nail (310)	10	2206	2481	16253	Disposal
?Hinged fitting (322)	10	2207	2409	16012	Disposal
Small pin (157)	10	2207	2409	16012	Disposal
Fitting (323)	10	2207	2526	16026	Disposal
Triangular sheet (414)	10	2207	2526	16026	Disposal
Triangular sheet offcut (419)	10	2207	2526	16026	Disposal
Sheet (415–18, 421)	10	2207	2526	16026	Disposal
Strip (420)	10	2207	2526	16026	Disposal
Lace-end (192)	10	2210	2625	15723	Movement zone
Strip (409)	10	2210	2638	15704	Movement zone
Small pin (102)	10	2210	2638	15723	Movement zone
Triangular sheet offcut (410)	10	2210	2638	15723	Movement zone
Wire loop (?eyelet) (223)	10	2213	2635	15711	Structure
Buckle and belt-plate (234*)	10	2214	2450	16234	Disposal
Sheet (425)	10	2214	2451	16230	Disposal
Wire (361)	10	2214	2626	15783	Disposal
Small pin (153)	10	2214	2633	15783	Disposal
Small pins (117–19, 150–2)	10	2229	2625	15771	Disposal
Lace-ends (196–200)	10	2229	2625	15771	Disposal
Hook (227)	10	2229	2625	15771	Disposal
Strip (255)	10	2229	2625	15771	Disposal
Bell fragment (293)	10	2229	2625	15771	Disposal
Stud (304)	10	2229	2625	15771	Disposal
Binding (341)	10	2229	2625	15771	Disposal
Wire (360)	10	2229	2625	15771	Disposal
Sheet (426)	10	2214	2674	16232	Disposal
Lace-end (212)	11	0	2628	15764	–
Small pin (149)	11	0	2628	15764	–
Small pins (108–10, 141–4)	11	0	2631	15732	–
Lace-ends (193–5, 209–11)	11	0	2631	15732	–
Wire loop (?eyelet) (224)	11	0	2631	15732	–
Rowel spur fragment (297)	11	0	2631	15732	–
Small pins (145–7)	11	0	2631	15733	–
Small pin (148)	11	0	2631	15734	–

Table 113 (cont.) Copper alloy objects listed by period, site, activity unit, context group, and context

Brief description	Period	Activity unit	Context group	Context	Context group type
Strap-tag fragment (267*)	11	0	2632	15793	–
Small pins (111–13)	11	0	2634	15735	–
Wire (358)	11	0	2634	15735	–
Small pins (114–16)	11	0	2645	15750	–
Wire (359)	11	0	2645	15750	–
Wire loop (?eyelet) (225)	–	0	0	15742	–
Strip or sheet offcut (411)	–	0	0	15748	–
<i>Site 3</i>					
Sheet (446)	10	3048	3132	18015	Disposal
Sheet (444)	12	3058	3176	18000	Arbitrary
<i>Site 4</i>					
Small pin (123)	10	4070	4319	20094	Disposal
Buckle and belt-plate (236*)	10	4070	4319	20094	Disposal
Hinged fitting (257)	10	4070	4319	20094	Disposal
Folded strip (447)	10	4070	4319	20094	Disposal
?Buckle loop fragment (250)	10	4070	4267	20168	Disposal
Sheet (448–9)	10	4070	4267	20168	Disposal
Lace-end (213)	10	4070	4216	20229	Disposal
Small pin (125)	10	4070	4268	20244	Disposal
Small pin (126)	–	4037	4153	20448	Unstratified
–					
Buckle and belt-plate (237*)	–	0	4287	21000	Arbitrary
Small pin (165)	–	0	4303	20072	–
Small pin (124)	–	0	4308	20164	–
Moulded strip (346)	–	0	0	20452	–

7.16 Roman vessel glass and glass working waste

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Table 121 Undifferentiated Roman vessel glass

Context	Colour	Description	Context group	Activity unit	Period
17760	Yellow/brown	1 undecorated dark yellow/brown body fragment	2070	2017	4
17727	Yellow brown	1 undecorated light yellow/brown body fragment	2086	2036	4
17755	Light/pale green	1 undecorated body fragment	2094	2036	4
16692	Light/pale green	1 undecorated body fragment	2142	2055	6
17882	Light/pale green	1 melted fragment	2064	2016	3
16901	Colourless	1 undecorated body fragment	2158	2055	7
17373	Colourless	1 undecorated colourless body fragment	2134	2049	5
17297	Colourless	1 undecorated colourless body fragment	2143	2055	6
16692	Blue/green	1 frag from edge of angular ribbon handle with rounded side rib	2142	2055	6
17357	Blue/green	1 frag from edge of ribbon handle from jug or bottle	2119	2222	5
16902	Blue/green	1 frag from simple lower attachment of handle retaining part of body of jug	2158	2225	7

Table 121 (cont.) Undifferentiated Roman vessel glass

Context	Colour	Description	Context group	Activity unit	Period
17236	Blue/green	1 cylindrical neck fragment (with many bubbles from jug or flask)	2190	2088	7
15538	Blue green	1 other body fragment with 2 trails	-	-	11
17039	Blue/green	1 undecorated body fragment	2013	2023	4
17406	Blue/green	1 undecorated body fragment	2030	2033	4
16867	Blue/green	2 undecorated body fragments	2057	2021	4
17755	Blue/green	1 undecorated body fragment	2094	2036	4
17642	Blue/green	1 undecorated body fragment	2110	2224	4
17357	Blue/green	1 undecorated body fragment	2119	2222	5
16695	Blue/green	8 strain cracked undecorated body fragments	2146	2052	5
16692	Blue/green	1 undecorated body fragment	2142	2055	6
17274	Blue/green	1 undecorated body fragment	2144	2055	7
17303	Blue/green	1 undecorated body fragment	2142	2225	6
17303	Blue/green	1 undecorated body fragment	2142	2225	6
17342	Blue/green	1 undecorated body fragment	2142	2225	6
16691	Blue/green	1 undecorated body fragment	2158	2225	7
17282	Blue/green	1 undecorated body fragment	2217	2064	7
16453	Blue/green	1 undecorated body fragment	2227	2116	8
15415	Blue/green	1 undecorated body fragment	-	-	11
16416	Blue/green	1 undecorated body fragment	2450	2158	9
16437	Blue/green	1 undecorated body fragment	2545	2158	9
18089	Blue/green	1 fragment from a bottle shoulder	3111	3029	5
18103	Blue/green	1 undecorated body fragment	3047	3029	5
18108	Blue/green	1 undecorated body fragment	3051	3021	5
18209	Blue/green	1 undecorated body fragment	3106	3034	5
18101	Blue/green	1 undecorated body fragment	3107	3024	5
18048	Blue/green	1 undecorated body fragment	3131	3048	9
18057	Blue/green	1 undecorated body fragment	3165	3043	9
18066	Blue/green	1 undecorated body fragment	3166	3041	8/9
21152	Light green	1 undecorated body fragment	4009	4009	3
20609	Colourless	1 body fragment with 1 rib	4124	4025	4
20608	Colourless	24 undecorated body fragments	4124	4025	4
20609	Colourless	29 undecorated body fragments	4124	4025	4
20610	Colourless	2 undecorated body fragments	4123	4025	4
20535	Colourless	2 undecorated body fragments	4128	4029	5
20609	Blue/green	1 fragment from edge of lower handle attachment from jug or bottle	4124	4025	4
21152	Blue/green	1 undecorated body fragment (heat affected)	4009	4009	2
20353	Blue/green	1 undecorated body fragment	4002	4015	2
21164	Blue/green	2 undecorated body fragments	4015	4021	4

Table 140 Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
<i>Site 1</i>					
<i>Period 3</i>					
<i>Phase 4</i>	12055	–	1 fragment	Lias	1033 1018
<i>Period 4</i>					
<i>Phase 5</i>					
11401	–	1 fragment	Lias	1181	1043
<i>Period 7</i>					
<i>Phase 1</i>					
10782	–	1 fragment	Lias	1264	1064
<i>Period 8</i>					
<i>Phase 1</i>					
11094	–	1 fragment	Lias	1210	1067
11223	–	1 fragment	Lias	1213	1070
<i>Phase 2</i>					
11217	–	1 fragment	Lias	1202	1076
11397	–	6 fragments	Lias	1126	1076
<i>Period 9</i>					
<i>Phase 1</i>					
11910	4049	4 fragments	Lias	1602	1091
<i>Phase 2</i>					
11332	–	1 fragment	Lias	1386	1096
<i>Phase 4</i>					
10450	4029	1 fragment <i>building stone</i>	Lias	1548	1107
10930	–	1 fragment <i>building stone</i> , now 335mm × 163mm × 100mm	Lias	1568	1107
10930	–	1 shaped block <i>building stone</i> , 223mm × 172mm × 150mm	Lower Keuper sandstone	1568	1107
<i>Phase 6</i>					
10394	–	Large slab, one side and part of edge crudely pitted, the other side worn as if re-used for <i>paving</i> ; part of raised edge and 2 straight sides suggest this may once have been a stone <i>trough</i> ; now 470mm × 410mm × 85mm	Lower Old Red Sandstone, Sandstone	1286	1117
10497	–	1 fragment, wear suggests use as <i>paving</i>	Lower Old Red Sandstone, tilestone	1538	1125
10722	–	1 fragment, possible <i>paving</i>	Lias	1299	1121
<i>Period 10</i>					
<i>Phase 1</i>					
10358	–	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	1333	1129

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
10533	–	1 fragment, probably <i>building stone</i>	Oolitic limestone	1291	1131
<i>Phase 2</i>					
10211	–	1 fragment <i>roofing tile</i> with hole	Jurassic limestone	1632	1144
10212	–	1 fragment	Lias	1632	1144
10416	–	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	1546	1145
10501	–	2 fitting fragments <i>roofing tile</i>	Jurassic limestone	1313	1138
<i>Period 11</i>					
10366	–	1 fragment <i>roofing tile</i>	Jurassic limestone	1328	–
10552	–	1 fragment <i>building stone</i>	Oolitic limestone	1359	–
10552	–	1 fragment	Lias	1359	–
10552	–	1 fragment <i>roofing tile</i>	Welsh slate	1359	–
<i>Unstratified</i>					
10019	–	4 fragments <i>roofing tile</i>	Welsh slate	–	–
10021	–	1 fragment <i>roofing tile</i>	Welsh slate	–	–
10084	–	1 fragment <i>roofing tile</i>	Jurassic limestone	–	–
10301	–	1 carved fragment, part of <i>capital</i> with fluted decoration, fits 10335 (u/s)	Oolitic limestone	–	–
10327	–	1 fragment <i>roofing tile</i>	Jurassic limestone	–	–
10327	–	2 fragments <i>roofing tile</i>	Welsh slate	–	–
10331	–	1 fragment <i>moulding</i>	Oolitic limestone	–	–
10335	–	1 block <i>building stone</i> with one side crudely hollowed; 205mm × 182mm × 125mm	Lower Old Red Sandstone	–	–
10335	–	1 carved fragment, part of <i>capital</i> with fluted decoration, fits 10301 (u/s)	Oolitic limestone	–	–
10335	–	1 fragment <i>building stone</i>	Oolitic limestone	–	–
10350	–	1 fragment <i>building stone</i> , shaped and smoothed	Oolitic limestone	–	–
<i>Site 2</i>					
<i>Period 3</i>					
17897	–	7 worn fragments, probably from <i>paving</i>	Lias	2027	2018
<i>Period 4</i>					
17753	6683	1 fragment	Lias	2076	2029
<i>Phase 2</i>					
16694	5722	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2037
16694	5727	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2037

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16694	5749	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2037
16694	5758	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2037
16694	5758	1 fragment	Lias	2145	2037
16694	5769	3 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2037
16694	5776	1 fragment	Lias	2145	2037
16694	5785	7 fragments, possibly <i>paving</i>	Lias	2145	2037
<i>Periods 4/5</i>					
<i>Phases 4.4/5.2</i>					
17002	6145	1 fragment, possibly <i>building stone</i>	Lias	2145	2037/
17002	6154	1 fragment	Lias	2145	2047
17002	6155	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2047
17002	6157	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2047
17002	6157	1 fragment	Lias	2145	2047
17002	6158	2 fragments	Lias	2145	2047
17002	6160	2 fragments	Lias	2145	2047
17002	6161	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2145	2047
17002	6161	1 fragment, possible <i>building stone</i>	Lias	2145	2047
17002	6162	3 fragments	Lias	2145	2047
<i>Period 5</i>					
<i>Phases 2-3</i>					
17327	6541	1 fragment	Lias	2136/2138	2052/
17327	6543	1 fragment <i>building stone</i>	Lias	2136/2138	2047
17327	6543	35 fragments	Lias	2136/2138	2047
17327	6585	1 fragment	Lias	2136/2138	2047
17327	6590	1 fragment	Lias	2136/2138	2047
17604	6625	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2118/2138	2047/
17604	6662	1 small fragment	Lias	2118/2138	2052
<i>Phase 3</i>					
16695	5746	3 fragments	Lias	2146	2052
16695	5880	1 fragment	Lias	2146	2052

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16695	5935	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2146	2052
16695	5941	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2146	2052
17001	6120	2 fragments	Lias	2146	2052
17001	6132	2 fragments	Lias	2146	2052
17300	6304	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2141	2053
17300	6447	17 fragments	Lias	2141	2053
17300	6453	18 fragments	Lias	2141	2053
17300	'	2 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2141	2053
17300	6463	10 fragments	Lias	2141	2053
17300	6543	1 fragment I	Lower Old Red Sandstone, tilestone	2141	2053
17326	6507	8 fragments	Lias	2139	2053
17326	6509	1 fragment	Lias	2139	2053
<i>Periods 5–6</i>					
<i>Phases 5.4/6.1</i>					
16692	5605	2 fragments	Lias	2142	2225/2055
16692	5609	15 fragments	Lias	2142	2225/2055
16692	5609	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5610	1 fragment	Lias	2142	2225/2055
16692	5612	1 fragment	Lias	2142	2225/2055
16692	5613	1 fragment	Lias	2142	2225/2055
16692	5614	1 fragment	Lias	2142	2225/2055
16692	5620	6 fragments	Lias	2142	2225/2055
16692	5620	1 fragment	Tufa (?)	2142	2225/2055
16692	5621	8 fragments	Lias	2142	2225/2055
16692	5623	1 fragment	Lias	2142	2225/2055
16692	5623	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5624	3 fragments	Lias	2142	2225/2055
16692	5625	2 fragments	Lias	2142	2225/2055
16692	5626	2 fragments	Lias	2142	2225/2055
16692	5627	1 fragment	Lias	2142	2225/2055

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16692	5628	1 fragment	Lias	2142	2225/2055
16692	5632	1 fragment	Lias	2142	2225/2055
16692	5633	9 fragments	Lias	2142	2225/2055
16692	5635	3 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5637	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5637	22 fragments	Lias	2142	2225/2055
16692	5638	4 fragments	Lias	2142	2225/2055
16692	5639	1 fragment	Lias	2142	2225/2055
16692	5640	11 fragments	Lias	2142	2225/2055
16692	5640	1 worn fragment, probably edge of paving slab	Lias	2142	2225/2055
16692	5641	5 fragments	Lias	2142	2225/2055
16692	5641	1 fragment, probably <i>building stone</i>	Lower Old Red Sandstone	2142	2225/2055
16692	5643	2 fragments	Lias	2142	2225/2055
16692	5646	3 fragments	Lias	2142	2225/2055
16692	5653	3 fragments	Lias	2142	2225/2055
16692	5655	1 fragment	Lias	2142	2225/2055
16692	5657	3 fragments	Lias	2142	2225/2055
16692	5658	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5663	1 fragment	Lias	2142	2225/2055
16692	5665	8 fragments	Lias	2142	2225/2055
16692	5690	2 fragments	Lias	2142	2225/2055
16692	5693	1 worn fragment, possibly <i>paving</i>	Lias	2142	2225/2055
16692	5694	1 fragment	Lias	2142	2225/2055
16692	5695	1 fragment	Lias	2142	2225/2055
16692	5695	1 frag <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16692	5696	2 slabs, possibly <i>paving</i>	Lias	2142	2225/2055
16692	5697	1 fragment	Lias	2142	2225/2055
16692	5701	5 fragments, 1 possibly <i>paving</i>	Lias	2142	2225/2055
16692	5702	9 fragments, 2 possibly <i>paving</i>	Lias	2142	2225/2055
16692	5706	4 fragments	Lias	2142	2225/2055
16692	5709	1 fragment	Lias	2142	2225/2055
16911	5714	2 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16911	5715	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
16915	5718	1 fragment, probably <i>paving</i>	Lias	2142	2225/2055
16915	5719	1 fragment	Lias	2142	2225/2055
17280	6259	1 fragment, probably <i>paving</i>	Lias	2143	2225/2055
17280	6260	5 fragments, 2 probably <i>paving</i>	Lias	2142	2225/2055
17280	6261	1 fragment	Lias	2142	2225/2055
17289	6320	Part of shaped block, possible <i>building stone</i>	Lias	2142	2225/2055
17289	6336	1 fragment	Lias	2142	2225/2055
17290	6348	1 fragment	Lias	2143	2225/2055
17290	6358	1 fragment	Lias	2142	2225/2055
17290	6358	1 chip	Lower Old Red Sandstone, tilestone	2142	2225/2055
17296	6383	1 fragment	Lias	2142	2225/2055
17296	6392	1 fragment, possible <i>paving</i>	Lower Old Red Sandstone, tilestone	2142	2225/2055
17297	6397	1 fragment	Lias	2143	2225/2055
17303	6404	1 fragment	Lias	2142	2225/2055
<i>Period 6</i>					
<i>Phase 1</i>	–	1 fragment	Lias	2164	2057
<i>Periods 6–7</i>					
<i>Phases 6.1/7.1</i>					
16691	5551	30 fragments	Lias	2158	2055/2059
16691	5552	3 fragments, 1 possible <i>paving</i>	Lias	2158	2055/2059
16691	5552	1 shaped block, possible <i>building stone</i>	Lias	2158	2055/2059
16691	5557	2 fragments	Lias	2158	2055/2059
16691	5558	2 fragments	Lias	2158	2055/2059
16691	5558	2 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2158	2055/2059
16691	5564	10 fragments	Lias	2158	2055/2059
16691	5564	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2158	2055/2059
16691	5565	2 fragments	Lias	2158	2055/2059
16691	5568	5 fragments	Lias	2158	2055/2059
16691	5570	8 fragments	Lias	2158	2055/2059

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16691	5572	10 fragments	Lias	2158	2055/2059
16691	5573	1 fragment	Lias	2158	2055/2059
16691	5574	12 fragments	Lias	2158	2055/2059
16691	5577	10 fragments	Lias	2158	2055/2059
16691	5582	3 fragments	Lias	2158	2055/2059
16691	5583	3 fragments	Lias	2158	2055/2059
16691	5583	1 fragment	Oolite, shelly	2158	2055/2059
16691	5588	3 fragments	Lias	2158	2055/2059
16691	5589	4 fragments	Lias	2158	2055/2059
16691	5590	6 fragments	Lias	2158	2055/2059
16691	5591	1 fragment	Lias	2158	2055/2059
16691	5595	3 fragments	Lias	2158	2055/2059
16691	5596	4 fragments	Lias	2158	2055/2059
16691	5597	10 fragments	Lias	2158	2055/2059
16691	5598	8 fragments	Lias	2158	2055/2059
16691	5599	1 fragment	Lias	2158	2055/2059
16691	5601	12 fragments	Lias	2158	2055/2059
16691	5604	2 fragments	Lias	2158	2055/2059
16691	5607	2 fragments	Lias	2158	2055/2059
<i>Period 7 and multiperiod</i>					
Phases 7.1 / 7.2	–		Lias	2369	2060/2071
16848	–	1 fragment, possibly building stone			
<i>Phases 5.4 / 6.1 / 7.1 / 7.2 / 7.3</i>					
16901	5670	1 fragment	Lias	2158	2225/2055/2059/2071/2082
					Lower Old Red Sandstone, tilestone
16901	5670	1 fragment roofing tile			2158
					2225/2055/2059/2071/2082
16901	5671	1 fragment	Lias	2158	2225/2055/2059/2071/2082

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16901	5672	6 fragments	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5673	2 fragments	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5674	5 fragments 1 possibly <i>paving</i>	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5675	2 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5675	5 fragments	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5676	1 fragment	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5680	2 fragments	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5681	1 fragment	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16901	5683	5 fragments	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16901	5684	1 fragment	Lias	2158	2225/ 2055/ 2059/ 2071/ 2082
16902	5689	1 fragment	Lias	2158	2055/ 2059/ 2071/ 2082/ 2225
<i>Phases 6.1/7.1/7.2/7.3</i>			Lower Old Red Sandstone, tilestone	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6289	2 fragments <i>roofing tile</i>			
17274	6290	1 fragment	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6290	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6290	1 small fragment, probably <i>building stone</i>	Lower Keuper sandstone	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6291	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2144	2055/ 2058/ 2070/ 2080/ 2225

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
17274	6293	1 fragment	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6293	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6294	1 fragment	Shell fragmental limestone, Jurassic	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6294	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6295	6 fragments	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6300	1 fragment	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6303	1 fragment	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
17274	6306	1 fragment	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
17274	6361	2 fragments	Lias	2144	2055/ 2058/ 2070/ 2080/ 2225
<i>Phase 7.3</i>					
17105	6030	1 fragment	Lias	2270	2084
17157	6080	1 fragment	Lias	2185	2195
<i>Period 8</i>					
<i>Phase 1</i>					
15699	—	1 fragment, probable <i>building stone</i>	Lower Old Red Sandstone tilestone	2653	2102
16468	5838	1 fragment	Lias	2226	2095
16620	5323	1 tessera	Lower Old Red Sandstone, tilestone	2292	2101
16837	—	3 burnt fragments, 1 probably <i>paving</i>	Lias	2391	2109
17226	—	1 fragment	Lias	2282	2098
<i>Phase 2</i>					
16052	—	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2419	2123
16345	—	1 fragment, possibly <i>roofing tile</i>	Sandy Lias	2259	2117
16445	—	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2228	2116
16451	5828	1 fragment, probably worn <i>paving</i>	Lias	2533	2117
16453	5831	5 fragments	Lias	2227	2116
16533	—	1 block <i>building stone</i>	Lias	2331	2122
16681	—	1 fragment, burnt	Lias	2308	2111
16681	—	1 small, burnt fragment, probably <i>building stone</i>	Lower Keuper sandstone	2308	2111
16826	—	1 fragment, burnt	Lias	2401	2113
17246	—	1 shaped fragment, architectural, may be base of small column?	Oolitic limestone	2221	2115
<i>Phase 3</i>					
16168	—	13 fragments, including some <i>paving</i>	Lias	2298	2128
16435	—	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2535	2125
16749	—	1 fragment, probably <i>paving</i>	Lias	2359	2133
<i>Phase 4</i>					
15900	—	1 fragment	Lias	2568	2135
15900	—	1 fragment, possibly <i>building stone</i>	Lower Old Red Sandstone	2568	2135

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
15902	-	1 fragment <i>paving</i>	Lias	2568	2135
<i>Period 9</i>					
<i>Phase 1</i>					
16064	-	2 fragments 1 <i>roofing tile</i> , nearly complete; 227mm × 140mm × 130mm	Lias Lower Old Red Sandstone, tilestone	2422 2500	2157 2150
16152	-		Lias Lower Old Red Sandstone, tilestone	2318	2149
16176	-	1 fragment worn <i>paving</i>	Lias Lower Old Red Sandstone, tilestone	2318	2149
16176	-	1 fragment <i>roofing tile</i> , re-used as <i>paving</i>	Lias Lower Old Red Sandstone, tilestone	2478	2154
16276	-	1 fragment, burnt	Lias Jurassic limestone Sandy Lias	2459	2147
16287	-	1 large fragment	Jurassic limestone	2536	2146
16432	-	1 fragment <i>roofing tile</i>	Sandy Lias	2336	2153
16518	-	2 <i>roofing tiles</i> , 1 complete	Lower Old Red Sandstone, tilestone	2367	2148
16720	-	1 fragment <i>roofing tile</i>	Lias	2360	2154
16742	-	1 fragment	Lower Old Red Sandstone, tilestone	2360	2154
16742	-	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2360	2154
<i>Phase 2</i>					
16145	-	1 fragment <i>building stone</i> , squared	Lower Old Red Sandstone	2501	2228
16145	-	1 slab <i>building stone</i> , nearly circular; 280mm × 197mm × 65mm	Lower Old Red Sandstone	2501	2228
16145	-	8 fragments <i>roofing tiles</i> , 7 with holes	Lower Old Red Sandstone, tilestone	2501	2228
16145	-	16 fragments <i>roofing tiles</i> , 7 with holes	Jurassic limestone	2501	2228
16145	-	1 roofing tile, nearly complete; 395mm × 277mm × 20mm	Jurassic limestone	2501	2228
16433	5817	1 block <i>building stone</i>	Lias	2538	2158
16504	-	3 fragments <i>roofing tile</i>	Jurassic limestone	2519	2169
17189	-	1 fragment	Lias	2538	2158
<i>Phase 3</i>					
15455	5080	3 fragments	Lias	2498	2221
15456	-	2 fragments, wear suggests <i>paving</i>	Lias	2497	2221
15936	-	1 large fragment, possibly <i>paving</i>	Lias	2706	2176
15936	-	1 large fragment, possibly <i>paving</i>	Lower Old Red Sandstone, tilestone	2706	2176
15936	-	1 small fragment <i>building stone</i>	Lower Keuper sandstone	2518	2175
16086	-	1 fragment	Lias	2518	2175

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
16105	-	1 fragment <i>roofing tile</i>	Jurassic tilestone	2456	2179
16251	-	1 fragment	Lias	2445	2179
16305	-	1 fragment	Lias	2544	2173
16335	-	1 fragment	Lias	2570	2179
16356	-	2 fragments <i>roofing tile</i>	Jurassic tilestone	2572	2172
16358	-	1 fragment	Lias	2549	2179
16358	-	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2549	2179
16364	5452	3 fragments	Lias	2558	2171
16364	-	1 fragment possible <i>paving</i> , th 30mm	Lower Old Red Sandstone, tilestone	2558	2171
16365	-	1 fragment possible <i>paving</i> , th 29mm	Lower Old Red Sandstone, tilestone	2558	2171
16832	-	1 fragment, burnt	Lias	2528	2175
<i>Phase 4</i>					
15898	-	1 fragment <i>roofing tile</i> , with hole	Jurassic tilestone	2711	2182
15918	-	1 fragment <i>paving</i>	Lower Old Red Sandstone, tilestone	2590	2189
15933	-	3 fragments	Lias	2592	2189
15933	-	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2592	2189
15934	-	1 fragment <i>roofing tile</i>	Jurassic tilestone	2591	2189
15987	-	10 fragments, 1 possibly <i>paving</i>	Lias	2597	2189
15987	-	5 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2597	2189
16000	-	1 large fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2576	2183
16473	-	1 diamond shaped block, probably <i>paving</i> ; 112mm × 61mm × 52mm	Lias	2587	2189
<i>Phase 5</i>					
15875	-	2 fragments <i>roofing tile</i>	Welsh slate	2601	2196
15912	-	1 fragment, burnt	Lias	2595	2192
15944	5290	1 small fragment <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	2604	2197
15944	-	5 fragments <i>building stone</i>	Lower Keuper sandstone	2604	2197
15948	5294	6 fragments, <i>building stone?</i>	Lower Old Red Sandstone	2603	2197

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
<i>Period 9/10</i>					
<i>Phases 9.3 / 10.1</i>	16260	–	1 fragment <i>building stone?</i>	Lower Old Red Sandstone	2445
<i>Phase 10</i>					2179
<i>Phase 1</i>	15771	–	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2625
	15796	–	1 fragment <i>roofing tile</i>	Jurassic limestone	2620
	16012	–	1 fragment <i>roofing tile</i> with hole	Lower Old Red Sandstone, tilestone	2409
	16026	–	2 fragments	Lias	2526
	16026	–	1 fragment <i>roofing tile</i>	Jurassic limestone	2526
	16087	–	5 fragments	Lias	2511
	16087	5179	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2511
	16089	–	1 fragment <i>roofing tile</i>	Jurassic limestone	2510
	16093	–	1 fragment	Lias	2510
	16093	–	1 fragment <i>roofing tile</i>	Jurassic limestone	2510
	16095	5184	1 fragment	Lias	2513
	16098	–	4 fragments	Lias	2513
	16212	–	1 small fragment <i>building stone</i>	Oolitic limestone	2428
	16212	–	1 fragment	Lias	2428
	16216	–	1 fragment	Lias	2433
<i>Phase 2</i>	15429	–	1 fragment <i>moulding?</i>	Lower Old Red Sandstone	2684
	15449	–	1 fragment	Lias	2676
	15557	–	1 fragment <i>moulding</i>	Oolitic limestone	2434
	15682	5162	1 fragment <i>roofing tile</i> with hole	Jurassic limestone	2692
	15711	–	1 carved fragment with boring, possibly a <i>final</i>	Oolitic limestone, shelly	2635
	16013	–	1 fragment	Lias	2702
	16197	–	1 fragment <i>roofing tile</i> with hole	Jurassic limestone	2494
<i>Phase 3</i>	15555	–	1 shaped decorative fragment	Oolitic limestone	2441
	15555	–	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2441
	15551	–	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2440
	15571	–	1 fragment	Lias	2435
	15594	–	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2717
					2219
					2119
					2219
					2219
					2219

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
<i>Period 11</i>					
15764	—	1 shaped fragment, weathered	Oolitic limestone	2628	n/a
15764	5258	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	2628	n/a
16196	—	1 fragment <i>building stone</i> , weathered	Oolitic limestone	2495	n/a
<i>Unstratified</i>					
15018	—	1 fragment	Tufa	—	—
15041	—	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	—	—
15054	—	1 fragment <i>facing</i>	Larvikite	—	—
15073	—	1 shaped <i>block with tooling</i>	Green Arden sandstone	—	—
15133	—	1 fragment <i>roofing tile</i>	Welsh slate	—	—
15231	—	1 fragment	Tufa	—	—
15231	—	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	—	—
15223	—	1 fragment <i>roofing tile</i>	Welsh slate	—	—
15234	—	1 circular fragment, <i>moulding?</i>	Lower Old Red Sandstone	—	—
15271	—	1 fragment <i>roofing tile</i>	Jurassic limestone, shelly	—	—
15271	—	2 fragments <i>roofing tile</i>	Welsh slate, fine-grained	—	—
15278	—	1 fragment <i>roofing tile</i> , burnt	Welsh slate	—	—
15306	—	1 fragment <i>building stone?</i>	Micaceous sandstone	—	—
15322	—	1 fragment <i>carved with leaves</i>	Oolitic limestone	—	—
15333	—	1 small fragment, burnt	Lias	—	—
15333	—	1 fragment	Lias	—	—
15333	—	2 fragments <i>roofing tile</i> , burnt	Welsh slate, fine-grained	—	—
15433	—	1 fragment <i>roofing tile</i>	Welsh slate, fine-grained	—	—
15435	—	1 fragment <i>building block</i> , burnt?	Arden sandstone?	—	—
15435	—	1 shaped fragment	Oolitic limestone	—	—
15445	—	1 fragment <i>building stone</i> , burnt	Arden sandstone probably	—	—
15470	—	1 burnt fragment <i>building stone?</i>	Lower Old Red Sandstone	—	—
15470	—	Small burnt fragments <i>roofing tile</i>	Welsh slate	—	—
15472	—	1 fragment <i>moulding</i>	Arden sandstone	—	—
15472	—	1 fragment <i>roofing tile</i> with hole	Jurassic limestone	—	—
15479	—	1 carved fragment	Oolitic limestone	—	—
15483	—	1 carved fragment (Fig 13:23)	Oolitic limestone	—	—
15504	—	2 fragments	Lias	—	—
15513	—	1 fragment <i>roofing tile</i> , burnt	Welsh slate	—	—
15559	—	1 carved fragment	Oolitic limestone	—	—

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
15559	-	1 fragment <i>roofing tile</i> , burnt 2 mouldings	Welsh slate	-	-
15560	-	1 fragment carved architectural detail, <i>building stone</i>	Oolitic limestone	-	-
15627	-	1 fragment <i>roofing tile</i>	Oolitic limestone	-	-
15647	-	4 fragments <i>roofing tile</i> , 1 with hole	Welsh slate, fine-grained	-	-
15656	-	1 fragment <i>roofing tile</i>	Jurassic limestone	-	-
15748	-	1 fragment <i>roofing tile</i>	Welsh slate	-	-
16047	-	1 fragment <i>roofing tile</i>	Jurassic limestone	-	-
16019	-	3 fragments	Lias	-	-
16019	-	2 weathered fragments	Oolitic limestone	-	-
16236	-	1 weathered fragment	Oolitic limestone	-	-
16715	-	1 fragment	Lias	-	-
17235	-	1 fragment	Lias	-	-
<i>Site 3</i>					
<i>Period 3</i>					
<i>Phase 3</i>					
18299	7558	2 fragments	Lias	3 070	3007
<i>Period 4</i>					
<i>Phase 1</i>					
18118	-	1 small fragment	Lias	3045	3018
18194	-	1 fragment	Lias	3116	3020
<i>Period 5</i>					
<i>Phase 2</i>					
18091	-	1 fragment <i>roofing tile</i>	Old Red Sandstone, tilestone	3111	3029
18098	-	1 fragment	Lias	3047	3029
18098	-	2 fragments <i>roofing tile</i>	Old Red Sandstone, tilestone	3047	3029
18103	-	1 fragment	Lias	3047	3029
<i>Period 8</i>					
<i>Phase 2</i>					
18005	-	1 fragment	Lias	3173	3040
<i>Period 9</i>					
<i>Phase 1</i>					
18042	-	1 fragment <i>roofing tile</i> , with hole	Welsh slate	3114	3043
<i>Period 12</i>					
<i>Phase 2</i>					
18000	-	1 shaped fragment <i>building stone</i>	Oolitic limestone	3176	3058

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
18000	-	1 fragment moulding	Oolitic limestone	3176	3058
<i>Site 4</i>					
<i>Period 4</i>					
20332	-	1 fragment, possible paving	Lias	4097	4024
20408	-	2 fragments possible building stone	Lower Keuper sandstone	4150	4024
<i>Period 5</i>					
<i>Phase 1</i>					
20616	-	1 block building stone, now 240mm × 200mm × 70mm	Lower Keuper sandstone	4106	4036
<i>Phase 2</i>					
20547	-	1 fragment	Lias	4142	4037
<i>Phase 3</i>					
20309	-	1 fragment	Lias	4158	4039
<i>Period 6</i>					
20345	-	1 fragment, possible paving stone	Lower Old Red Sandstone tilestone	4156	4051
20345	-	1 fragment	Lias	4156	4051
<i>Period 7</i>					
20555	-	3 fragments, one possible paving stone	Lias	4159	4052
20555	-	1 fragment roofing tile	Lower Old Red Sandstone tilestone	4159	4052
22301, 22279		8 fragments	Lias	5017	4045
<i>Period 8</i>					
<i>Phase 1</i>					
20491	-	2 fragments	Lias	4234	4106
20601	-	1 fragment	Lias	4204	4104
21033	-	4 rectangular roofing tiles, 2 nearly complete; 350mm × 143mm × c 31mm and 265mm × 142mm × 2.2mm	Jurassic tilestone	4044	4102
<i>Phase 2</i>					
20191	9020	1 fragment, architectural stone?	Oolitic limestone, shelly	4246	4056
20234	9014	1 complete roofing tile; 212mm × 164mm × c 18mm	Jurassic tilestone	4253	4056
20401	-	3 small fragments	Lias	4252	4102
<i>Period 9</i>					
<i>Phase 1</i>					
20227	-	1 fragment, part of circular slab, perhaps paving; diam c 360mm, th 25mm	Lower Old Red Sandstone, tilestone	4254	4076
20480	-	1 fragment, burnt	Lias	4225	4099

Table 140 (cont.) Catalogue of building stone

Context	Sample	Identification	Stone type	Context group	Activity unit
20482	-	1 fragment, burnt	Lias	4225	4099
20524	-	1 small fragment	Lias	4183	4099
20524	-	1 fragment <i>roofing tile</i>	Lower Old Red sandstone tilestone	4183	4099
21036	-	1 fragment <i>roofing tile</i> , with hole	Jurassic tilestone	4170	4055
<i>Phase 2</i>	20368	13 fragments	Lias	4299	4078
	20368	2 fragments <i>roofing tile</i>	Lower Old Red Sandstone, tilestone	4299	4078
20458	-	2 fragments, architectural stone?	Oolitic limestone, shelly	4226	4080
20458	9045	1 part of <i>slab</i> with a straight edge and a flat, polished surface; th 31mm	Oolitic limestone, shelly	4226	4080
20473	-	1 fragment, part of block of <i>building stone</i> with 2 worked sides	Lower Old Red Sandstone, sandstone	4236	4079
20536	-	1 fragment <i>roofing tile</i> , with hole	Jurassic tilestone	4198	4082
20627	-	3 fragments <i>roofing tile</i> , 1 with hole	Jurassic tilestone	4189	4082
21023	-	4 fragments <i>roofing tile</i> , 2 with holes	Jurassic tilestone	4172	4069
<i>Period 10</i>	20229	1 fragment <i>roofing tile</i>	Welsh slate	4216	4070
	21025	1 fragment <i>roofing tile</i> , with hole	Jurassic tilestone	4247	4067
<i>Unstratified</i>	20366	1 fragment <i>roofing tile</i>	Lower Old Red Sandstone tilestone	-	-
	20421	3 fragments	Lias	4192	-
20433	-	1 fragment	Lias	-	-

7.26 Flint by Hal Dalwood**Table 143 Catalogue of flint**

No	Context	Context group	Activity unit	Description
<i>Site 1</i>				
1	10126	–	–	Not struck
2	10227	1632	1144	Flake (brk)
3	10246	0632	1144	Flake (brk)
4	10342	1361	–	Not struck
5	10342	1361	–	Notched flake
6	10416	1546	1145	Not struck
7	10416	1546	1145	Unclassified retouch
8	10476	1555	1113	Not struck
9	11421	1168	1028	Flake
10	11422	1168	1028	Notched flake
11	11472	1018	1011	Flake
12	11472	1018	1011	Flake
13	11481	1017	1006	Spall
14	11537	1528	1125	Flake
15	11661	1634	1056	Flake
<i>Site 2</i>				
16	15015	–	–	Not struck
17	15475	2678	2216	Flaked lump
18	15511	–	–	Flake
19	15513	–	–	Flake
20	15513	–	–	Not struck
21	15625	–	–	Not struck
22	15656	–	–	Not struck
23	15664	–	–	Flake
24	16024	2689	2216	Flaked lump
25	16047	–	–	Spall
26	16380	2253	2227	Flake
27	16398	2235	2088	Spall
28	16691	2158	2225	Flake
29	16691	2158	2225	Flake
30	16692	2142	2055	Flake
31	16692	2142	2055	Flake
32	16695	2146	2052	Not struck
33	16903	2142	2055	Scraper
34	16908	2386	2060	Flake
35	17098	2029	2033	Scraper (end) Fig 262:1
36	17104	2215	2091	Not struck × 2
37	17224	2276	2076	Not struck
38	17274	2144	2080	Flake (burnt)
39	17280	2143	2225	Scraper (end) Fig 262:2
40	17291	2143	2225	Not struck
41	17303	2142	2055	Flake
42	17304	2142	2055	Flake
43	17692	2086	2036	Flake
44	17780	2072	2029	Broken lump
45	17873	2063	2008	Flake (burnt)

Table 143 (cont.) Catalogue of flint

No	Context	Context group	Activity unit	Description
<i>Site 3</i>				
46	18091	3111	3029	Spall
47	18200	3029	3010	Flake
48	18230	3099	3030	Flake
49	18331	3019	3010	Flake
50	18333	3016	3008	Flake
51	18333	3016	3008	Flake
<i>Site 4</i>				
52	20342	4128	4029	Not struck
53	21035	4043	4041	Flake
54	21068	4025	4037	Spall
55	21090	4024	4017	Notched flake

7.28 Animal remains

Rebecca A Nicholson and Sally A Scott

7.28.11 Spatial variation

So far the bone assemblage has been treated as a uniform group. Different types of rubbish would, however, tend to accumulate in different areas over time, and so the nature of the assemblages may reflect a wide range of activities. Variations in assemblage composition may reveal the location of specific trades, such as butchering and horn working. Primary dumps of butchery waste should be identifiable by the dominance of bones from anatomical units of low meat value, such as heads and feet, as well as other large bones which may have been removed prior to sale of the meat. Table waste, by contrast, would be expected to comprise mainly the bones of smaller animals and selected joints from meat-bearing areas of the carcass. A correlation between species and feature type would indicate how different sorts of rubbish were disposed of.

As a means of examining spatial variation, the relative abundance of species was quantified for four groups of feature types: pits (primary fills only), indeterminate cuts, layer dumps and soil accumulations, and surfaces (Fig 275). Additionally, the representation of cattle, sheep, pig, and goat skeletal units was examined for Sites 2 and 4 (Figs 276, 277, 278, and 279), and for two large pits from Site 1 (CG 1546 and 1547; Fig 280). Ideally anatomical part frequencies should be considered for individual features or feature type, but the extreme variation in feature types in each period prevented this type of comparison if a temporal perspective was to be maintained. Sites 2 and 4 were selected as areas documented as having very different economic status at least in the 16th century (Section 2.2). The two pits from Site 1 were large and contained well-preserved bones in primary fill.

Cattle bones from primary pit fills alone were examined in more detail, and the representation of

various meat cuts investigated as a guide to the economic status of the population living in the vicinity of Sites 1 and 2 compared with those of Sites 3 and 4 in the medieval and late medieval periods. At earlier dates butchery methods were undoubtedly different (as evidenced by cuts and chops to bones) so such an analysis would be spurious; there were also small numbers of bones from earlier pit fills. Bones were grouped by units based on cuts of beef comparable to those used by 19th-century butchers, as discussed by Lyman (1987). Some cuts were excluded, or were identified from a reduced number of skeletal elements, as ribs and vertebrae were not identified to species or exact anatomical position. Only unique bones were scored from each context or sample, and the minimum number of each beef cut (MNBC) calculated as described by Lyman (1987). These numbers, with the resulting estimated total kilograms of meat represented are given in Table 153.

This table also presents the relative ranks of each cut of meat in terms of the total quantity of edible meat represented by the archaeologically recovered bones, and the economic rank of each cut based on values presented by Lyman (1987). The underlying assumption is that the socio-economic status of a human population will be reflected in the economic value of the cuts of meat which they purchase and consume, as defined by the amount of meat per unit cost. The figures for the available meat per cut, and the rank of economic value used here are from Lyman, and are based on modern studies. Although the figures may not accurately reflect relative economic value in the past, the relative ratios of meat to bone are likely to have been similar even for unimproved cattle breeds. It is therefore a reasonable assumption that these would have dictated economic value to a large extent in the past. There are, of course, complicating factors with this, as with any analysis of skeletal part frequencies, in that meat may have been sold in fillets, removed from the bone. Also, in some societies meat is purchased by weight, irrespective of carcass position (S Payne, pers

Table 153 Economic rank, minimum number of beef cuts (mnbc), weight of meat provided and rank pounds of meat provided (after Lyman 1987)

Beef cut	Economic rank	Site 1 and 2		Period 8+9		Site 1 and 2		Period 10		Site 3 & 4		Period 8+9		Site 3 & 4		Period 10			
		MNBC	Kg (lbs)	Rank	MNBC	Kg (lbs)	Rank	MNBC	Kg (lbs)	Rank	MNBC	Kg (lbs)	Rank	MNBC	Kg (lbs)	Rank	MNBC	Kg (lbs)	Rank
Shortloin	1	5	45 (100)	6	8	73 (160)	6	0.5	5 (10)	7	0.3	3 (6)	3	0.3	3 (6)	6	0.3	3 (6)	6
Sirloin	2	4	22 (48)	8	8	44 (96)	7	0	0 (0)	9	0	0 (0)	9	0	0 (0)	9	0	0 (0)	9
Round	3	16	181 (400)	3	19	215 (475)	2	7	80 (175)	1	2	23 (50)	2	2	23 (50)	2	2	23 (50)	2
Rump	4	14	32 (70)	7	15	34 (75)	8	3	7 (15)	6	1	2 (5)	7	1	2 (5)	7	1	2 (5)	7
Chuck	5	32	406 (896)	1	40	508 (1120)	1	3	38 (84)	2	3	38 (84)	1	3	38 (84)	1	3	38 (84)	1
Arm	6	10	68 (150)	5	17	116 (255)	3	4	27 (60)	3	2	14 (30)	3	2	14 (30)	3	2	14 (30)	3
Neck	7	5	2 (5)	9	6	3 (6)	9	1	0.5 (1)	8	0.2	0.1 (0.2)	8	0.2	0.1 (0.2)	8	0.2	0.1 (0.2)	8
Foreshank	8	23	73 (161)	4	33	105 (231)	5	4	13 (28)	5	1	3 (7)	5	1	3 (7)	5	1	3 (7)	5
Hindshank	8	18	218 (481)	2	31	112 (248)	4	4	15 (32)	4	1	4 (8)	4	1	4 (8)	4	1	4 (8)	4

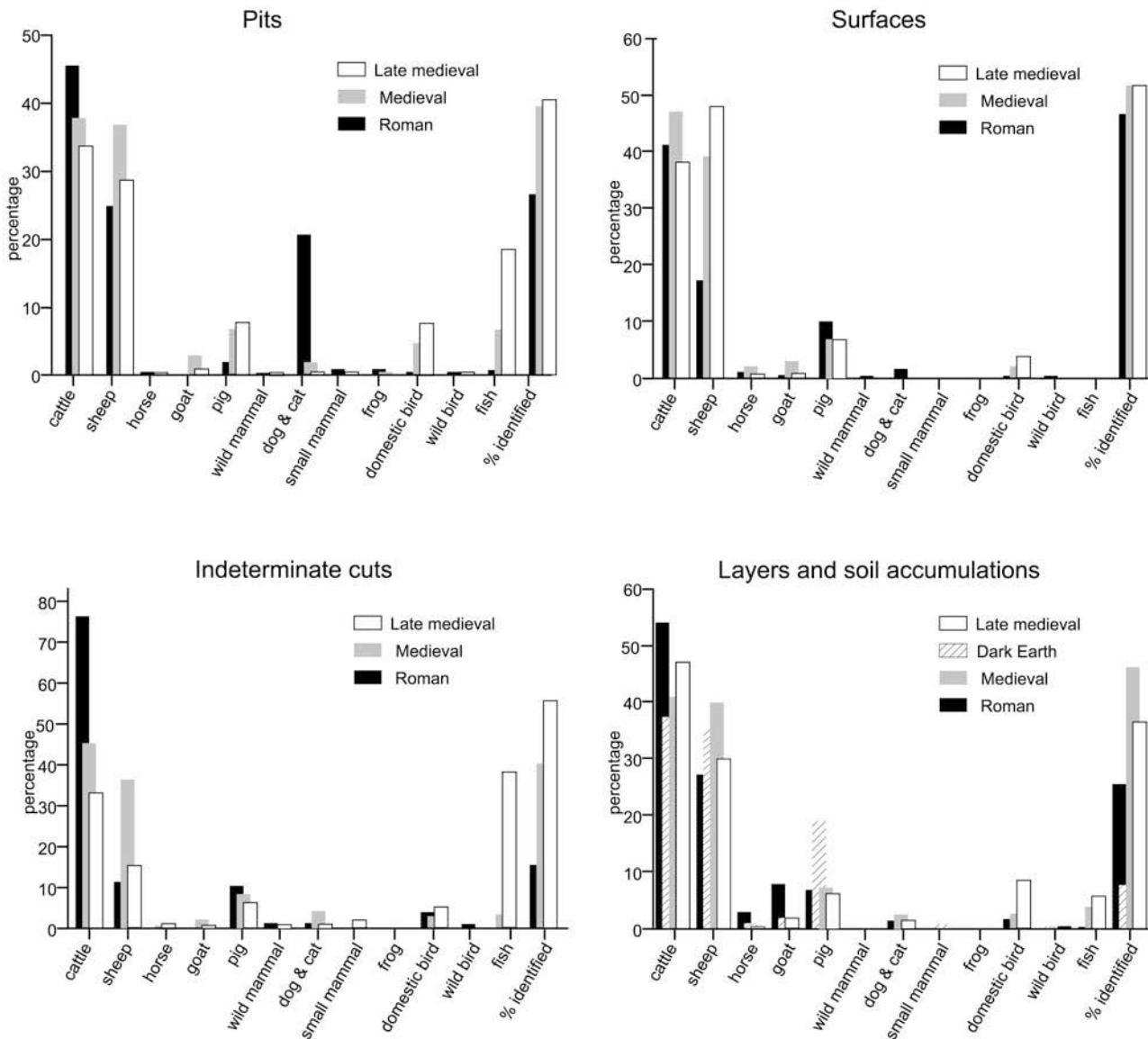


Figure 275 Representation of animal groups within major context types, by fragment counts

comm.). Additionally, in less than ideal conditions of preservation some areas of bone, such as proximal humeri and vertebrae, are likely to have been preferentially destroyed.

Examining first the overall representation of skeletal elements and relative abundance of species, surprisingly little intra-site variation was apparent. In general all domestic ungulate skeletal parts were represented in similar proportions on Sites 2 and 4 and in the two pit groups from Site 1. There was a general tendency for under-representation of vertebrae and phalanges, but this may be a result of differential preservation and recovery, particularly as it was mainly confined to the hand-picked groups. One phase does stand out, however, on both Sites 2 and 4. In the medieval period (Periods 8 and 9), at least in the large hand-collected assemblage, the dominance of cattle and sheep heads and feet was particularly evident, as was the concentration of goat horncores.

When examined by feature type, there was no apparent concentration of bones from the head and feet in pits, which is what one might expect if the bones represent primary butchery waste or the waste from tanning or bone working. The distribution of species by feature type was fairly uniform, with the ratios of cattle, sheep, and pig fairly constant. Although cattle bones were relatively more numerous in the fills of indeterminate cuts, there was no obvious trend towards the preferential disposal of large bones in pits, which may indicate that much of the bone from street surfaces and layers had been redeposited. Support for this interpretation was given by the apparently haphazard distribution of goat horncores. Occasional concentrations of horncores were found in pits and other cut fills, for example in Contexts 20148 (CG 4200, no AU) and 20478 (CG 4235, AU 4106, Site 4, early medieval), 10738 and 10722 (Site 1, medieval), and these probably represent primary deposition, but

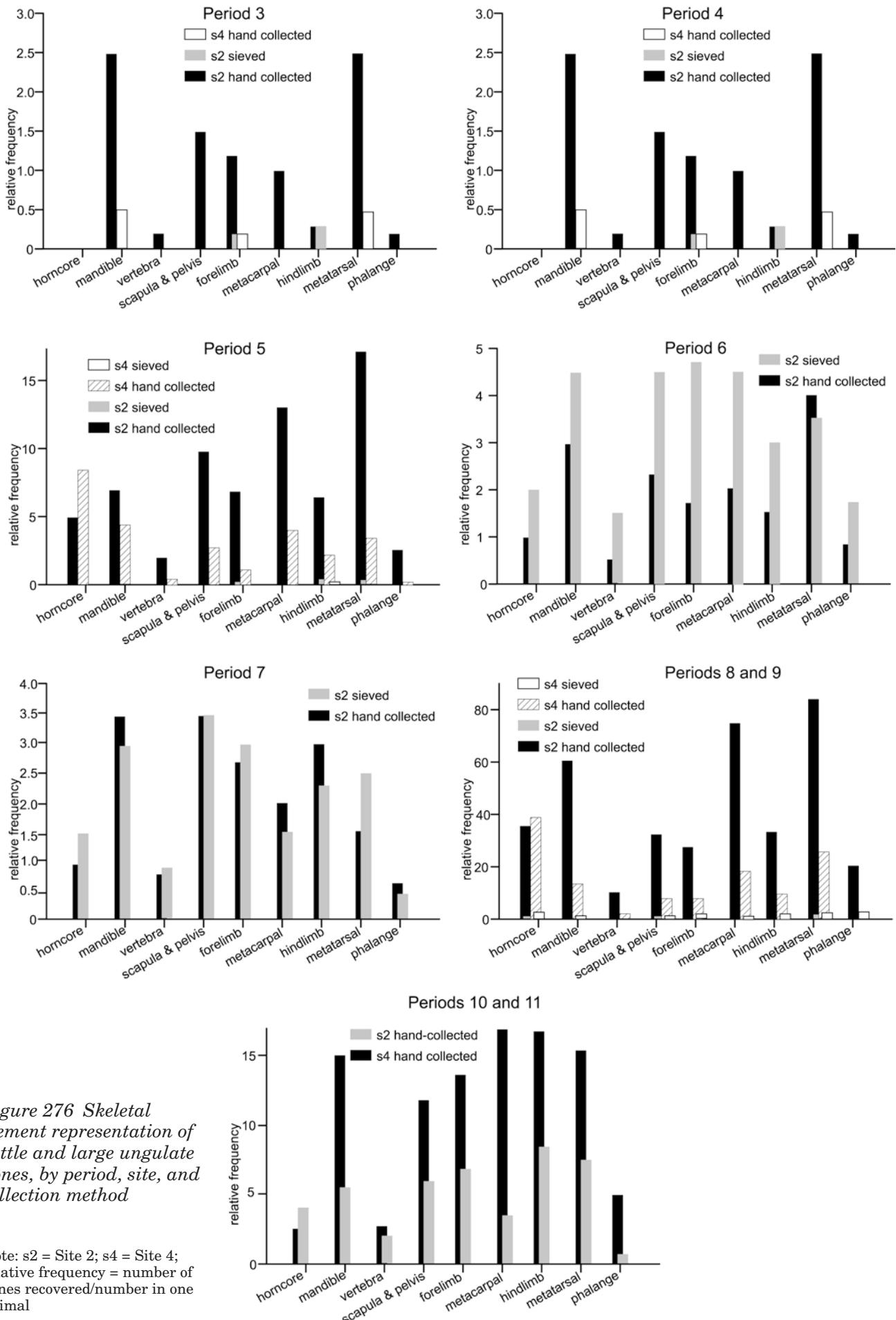


Figure 276 Skeletal element representation of cattle and large ungulate bones, by period, site, and collection method

Note: s2 = Site 2; s4 = Site 4;
relative frequency = number of bones recovered/number in one animal

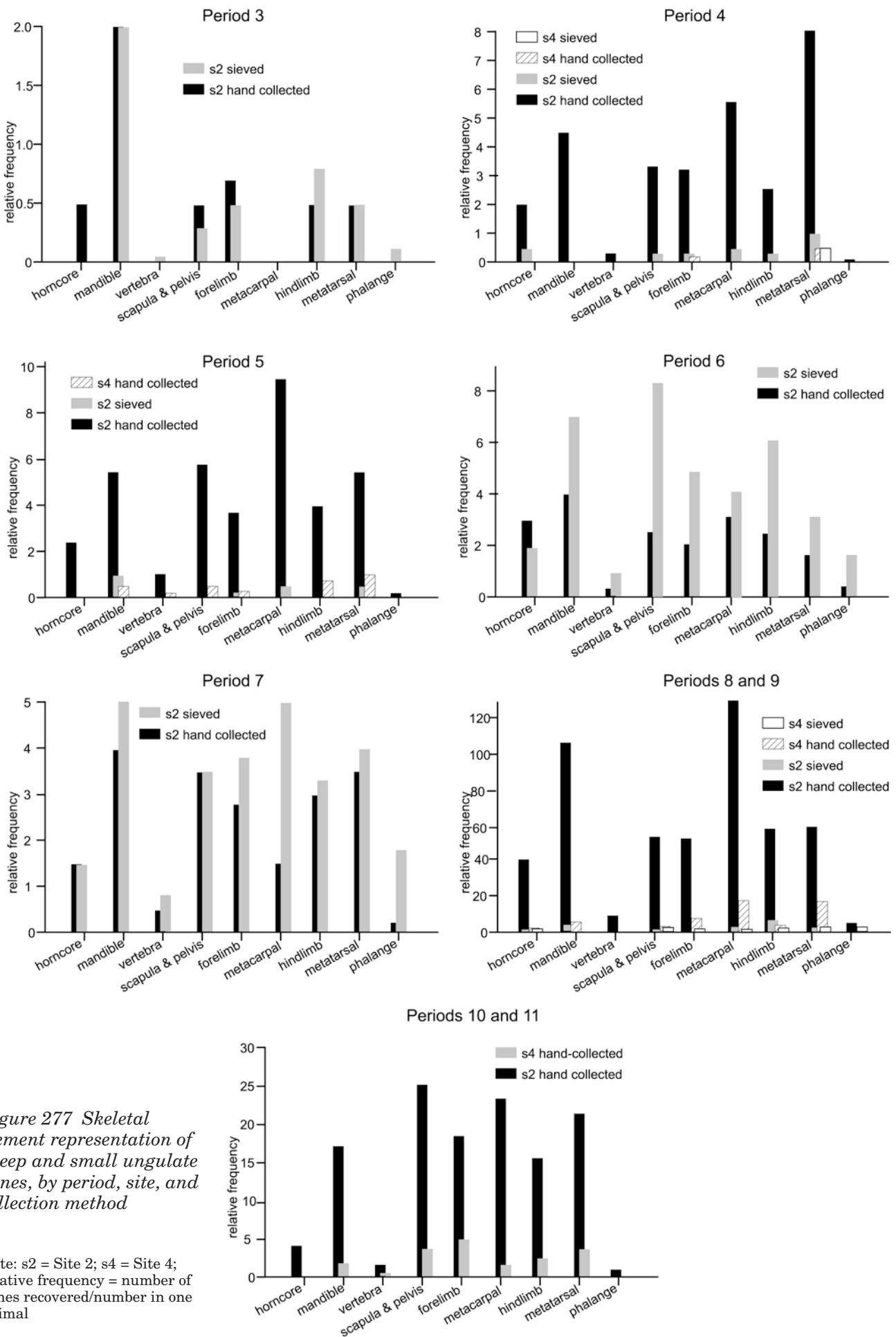


Figure 277 Skeletal element representation of sheep and small ungulate bones, by period, site, and collection method

Note: s2 = Site 2; s4 = Site 4;
relative frequency = number of bones recovered/number in one animal

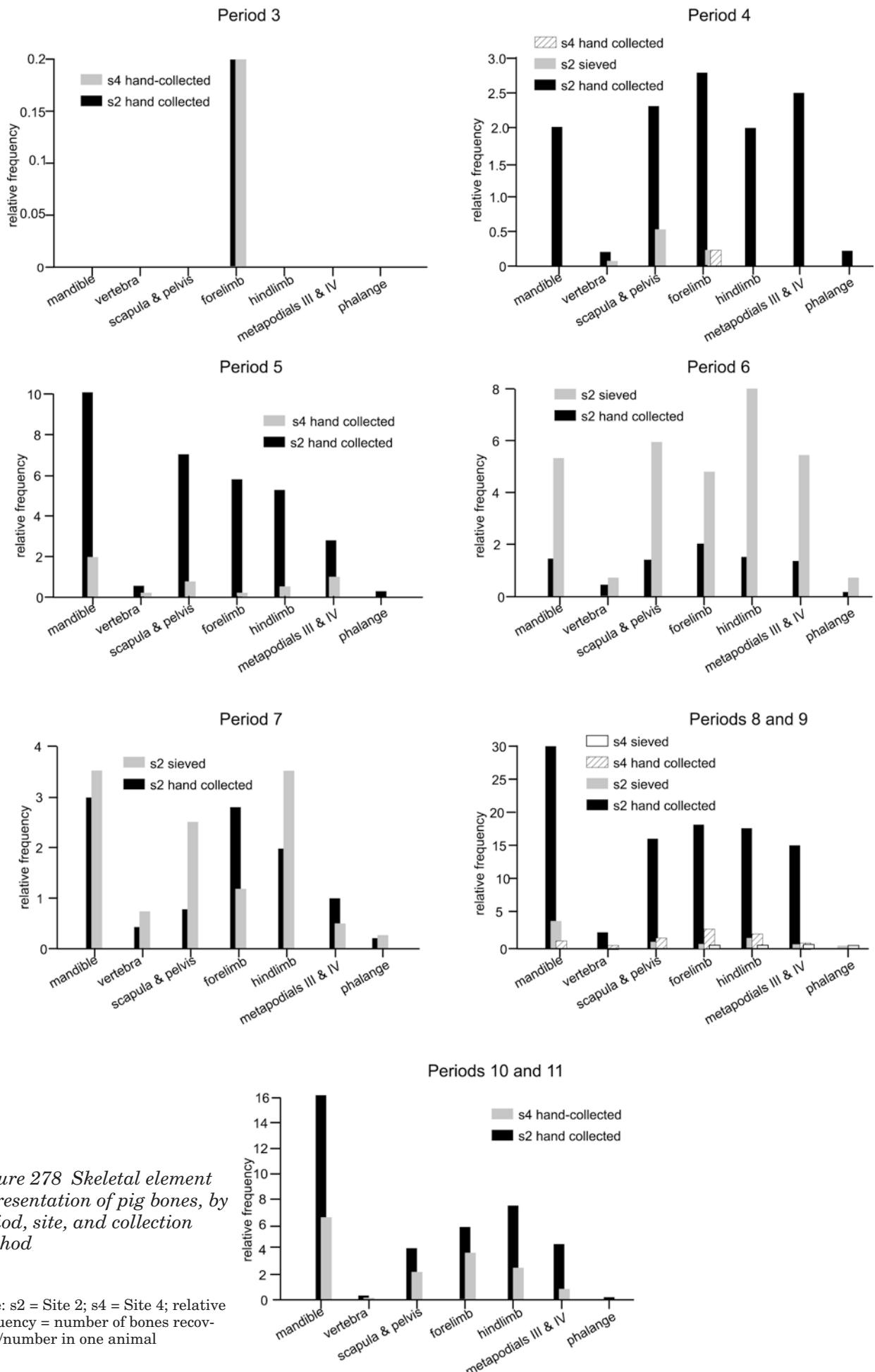


Figure 278 Skeletal element representation of pig bones, by period, site, and collection method

Note: s2 = Site 2; s4 = Site 4; relative frequency = number of bones recovered/number in one animal

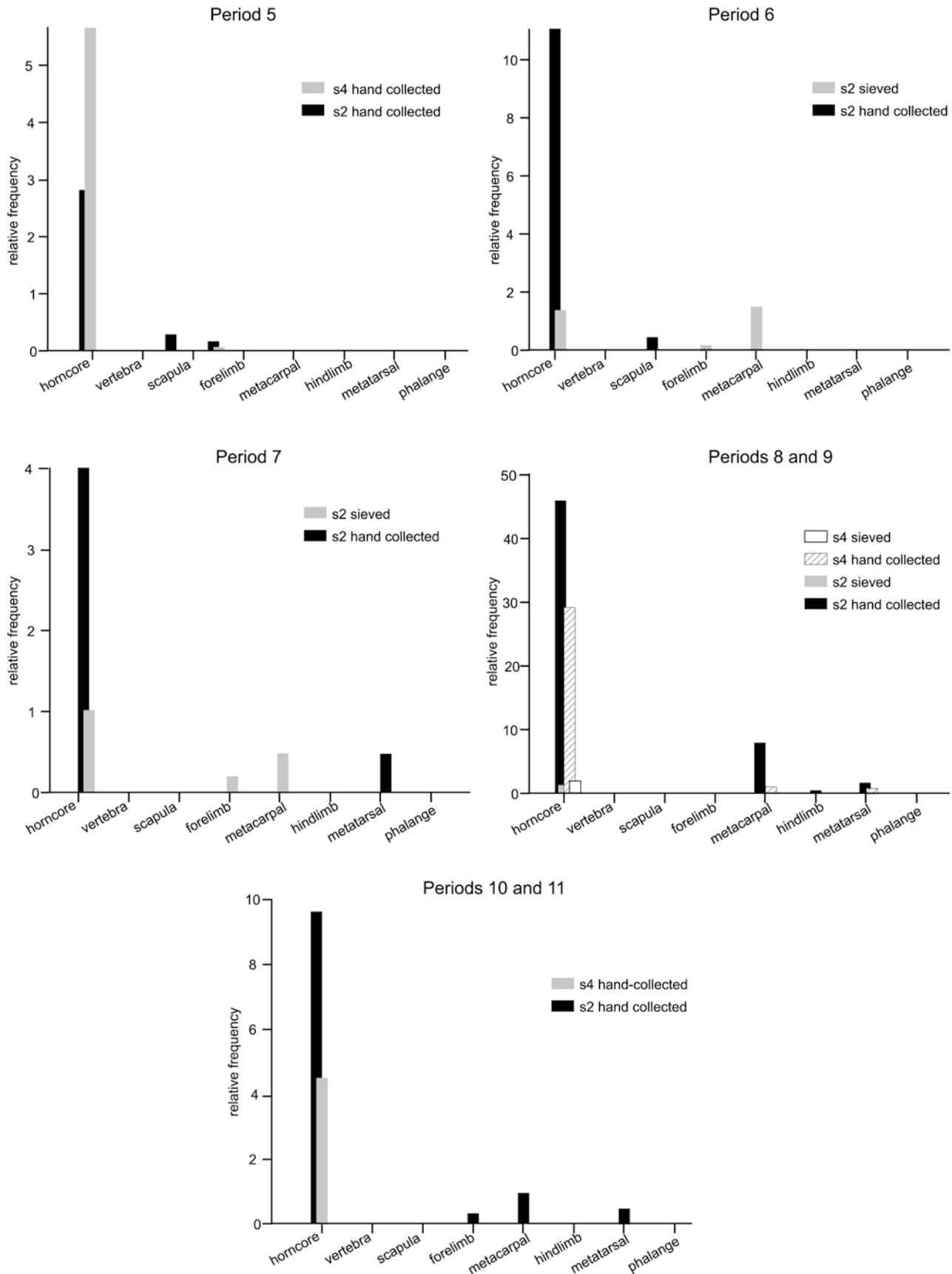


Figure 279 Skeletal element representation of goat bones, by Period, Site, and collection method

Note: s2 = Site 2; s4 = Site 4; relative frequency = number of bones recovered/number in one animal

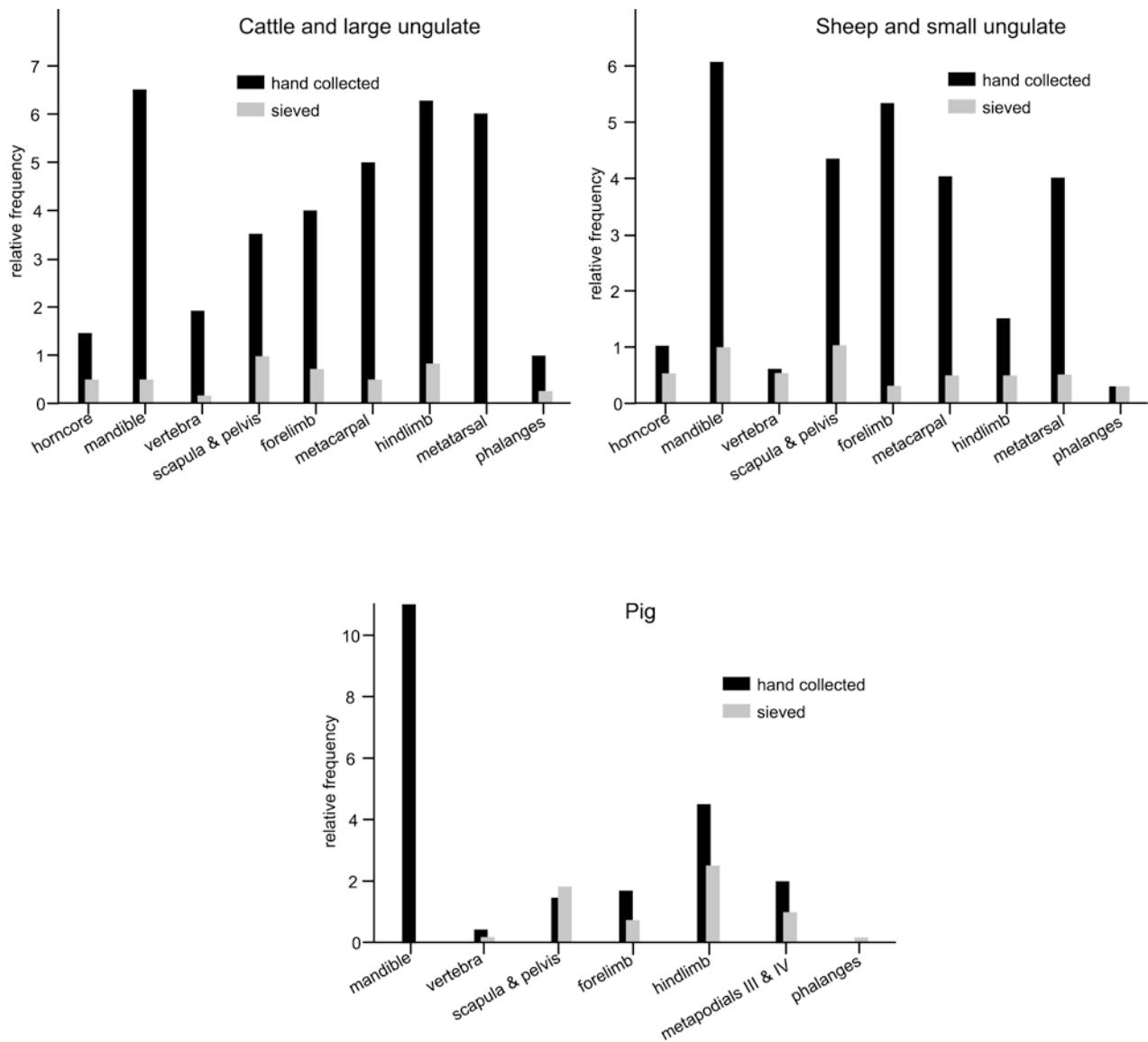


Figure 280 Skeletal element representation of cattle, sheep, and pig bones from CG 1546 (AU 1145) and CG 1547 (AU 1144), Period 10 Site 1

similar numbers were scattered among other vertebrate debris on street surfaces and in various layers. Otherwise, apart from a relative under-representation of cattle bones in Period 7 layer dumps, there was very little spatial patterning in the deposition of the remains of the domestic animals, including domestic birds. Dogs and cats appear to have been buried fairly indiscriminately, and again individual bones may represent distribution of the skeleton at a later date.

Small mammals, fish, and amphibians were more commonly represented in pits, possibly because small bones discarded at the table were thrown into back-yard cess pits, which may also have acted traps for small creatures. Perhaps more likely an explanation, though, is that damp conditions and rapid deposition within pits favoured the preservation of small bones.

In terms of beef cuts, it was apparent that for both pairs of sites (1 and 2, 3 and 4) a similar pattern of representation obtained during the medieval period.

Assuming that the majority of bone represents household rubbish, by meat weight the round and chuck cuts were the most popular, followed by the arm, foreshank, and hindshank. In the later medieval period on Sites 1 and 2 the chuck, round, foreshank, shortloin, and hindshank were most frequently represented; on Sites 3 and 4 cuts other than the chuck, round, and arm were rare. Lyman argues (1987) that of the cuts quantified here, people of low economic rank would purchase high yield, cheaper cuts of meat such as the chuck and round. The upper economic class would purchase a wider range of high and medium yield cuts. The middle economic class would buy a range of cuts, including the lowest and occasionally the relatively high cost cuts. On this analysis, assuming a correlation between meat cut and economic status in the medieval period, the inhabitants of medieval and late medieval Deansway fall into the middle class category for both sites, and there is no evidence for the documented difference in social status. Given the

possibility that butchery and/or craft waste were also dumped in the pits, as evidenced by the presence of bones from the head and feet, it is likely that mixing of rubbish has occurred, however, and this may have obscured other trends.

7.29 Human skeletal remains

Christine Osborne

7.29.3 Skeletal inventory

In the skeletal inventory the dentition is recorded using the following:

For the permanent dentition:

maxilla									
right side 8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8					left side				
right side 8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8					left side mandible				

where

- 1 = medial incisor
- 2 = lateral incisor
- 3 = canine
- 4 = 1st premolar
- 5 = 2nd premolar
- 6 = 1st molar
- 7 = 2nd molar
- 8 = 3rd molar

For the deciduous dentition:

maxilla									
right side e d c b a a b c d e					left side				
right side e d c b a a b c d e					left side mandible				

where

- a = medial incisor
- b = lateral incisor
- c = canine
- d = 1st molar
- e = 2nd molar

Any tooth loss, either ante mortem or post mortem, along with any pathology or dental anomalies and the different stages of tooth development are recorded using the following notation:

- X = ante mortem loss
- / = post mortem loss
- A = abscess
- C = caries
- U = unerupted
- O = erupting
- = section of jaw missing (ie tooth and empty socket lost post mortem)
- NP = not present

Site 2

Context 17650, CG 2017, AU 2007

Present: skull, mandible, seven cervical vertebrae, left clavicle, both scapulae, left humerus

Dentition

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	C

There is a small carious lesion in the buccal crown of mandibular left 8. There is some slight periodontal disease and a small amount of calculus. Maxillary left 8 is only partially erupted and is lying at an angle with the occlusal surface facing the buccal side of the jaw.

Age: adult – probably young

Sex: ?female

Morphological Variances: the skull has a metopic suture.

Context 17897, CG 2027, AU 2018

Present: skull, two mandibles, fragments of rib, one fragment of radius, right femur, one malleus, one incus, animal bone. Note, although both mandibles are reasonably undamaged the skull is too fragmented to see which, if either, of the two mandibles is associated with it.

Dentition

First mandible

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
---	---------------------------------	---

Second mandible

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
	CC	

In the second mandible left 8 has two small carious lesions in the occlusal surface and left 7 has a medium sized lesion spanning the occlusal and buccal crown. Both mandibles are similar in size and shape.

Age: both adult

Sex: both ?

Site 3

Context 18210, CG 3106, AU 3034

Present: skull, mandible, 35 vertebral arch halves, 19 vertebral bodies, right scapula, two left and two

right ribs + fragments, right humerus, both radii, both ulnae, one right carpal, five left and five right metacarpals, thirteen hand phalanges, both innomates, both femora, both tibiae, both fibulae, two left tarsals, two left metatarsals

Dentition

R	e-d-e-b a a-b-e-d-e	L
	e-d-e b b b b b b	

Loose, partially developed teeth: two deciduous molar crowns, two deciduous canine crowns

Age: birth ± 2 months

Context 18340, CG 3071, AU 3026 – cremation

Colour: Predominantly white with a few blue/grey fragments

Maximum length: 85.8mm (fibula)

Weight: 950g

Identifiable fragments: Right and left clavicle, right talus, left first cuneiform, tibia, pelvis, radius, skull, four metacarpals, four hand phalanges, one foot phalanx, two metatarsals, ribs, humerus, ulna, femur, fibula

Number of individuals: one

Age: adult

Sex: ?

Remarks: the predominantly white colour of the bone (which is also twisted and cracked) indicates efficient burning at a relatively high temperature.

Context 18140, CG 3026, AU 3019

Present: mandible, right humerus

Dentition

R	8 X 6 5 4 3 2 1 1 2 3 4 5 6 X 8	L
C C	C C	C C

Left 8 has two small carious lesions in the occlusal surface and left 3 has a medium-sized lesion in the labial neck. Right 6 has a medium-sized lesion in the buccal crown and right 8 has two lesions, one small and one medium-sized, in the buccal crown.

Age: adult

Sex: ?male

Context 18151, CG 3026, AU 3019

Present: two fragments of skull, one fragment of humerus shaft

Age: adult

Sex: ?

Context 18305, CG 3013, AU 3007

Present: one femur shaft – too worn to identify side

Age: probably adult

Sex: ?

Site 4

Context 20375, CG 4152, AU4037

Present: skull, two cervical vertebrae, fragments of rib, both humeri, right radius, both ulnae, one left and two right carpals, two left and four right metacarpals, eight hand phalanges, both innomates, both femora, both tibiae, both fibulae, two left and one right tarsal, one foot phalanx animal bone

Dentition

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	

Loose teeth: One lower molar with a carious lesion in the crown and the broken crown of another molar.

Age: relatively older adult

Sex: ?male

Pathology: There is lipping on the dens of the axis (second cervical vertebra), on its corresponding articular facet on the atlas (first cervical vertebra) and on the apophyseal joints of the same two vertebrae.

The acetabulum of the left innominate (the right acetabulum is not present) has lipping around those areas of surviving rim.

Context 20360, CG 4153, AU4037

Present: skull, mandible, one cervical vertebra, one thoracic vertebra, right scapula, both humeri, both radii, both ulnae, two metacarpals, seven hand phalanges, both innomates, both femora, both tibiae, both fibulae, four left and five right tarsals, one left, two right and two unsided metatarsals, one foot phalanx

Dentition

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
8 X X 5 4 3 2 1 1 2 3 4 5 6 X 8		

Mandibular right 8 has a medium-sized lesion in the lingual neck. Right 5 has a large lesion spanning the occlusal and mesial crown and right 4 has a small lesion in the distal neck. Mandibular left 3 has a gross carious lesion leaving only a small fragment of distal crown unaffected. Left 8 has two small lesions in the buccal neck. There is a severe amount of

periodontal disease.

Age: adult
Sex: ?female

Context 20404, CG 4143, AU 4037

Present: skull, mandible, one cervical vertebra, fragments of humerus, fragments of radius, fragments of ulna, one fragment of acetabulum (pelvis), fragments of femur, both tibiae, fragments of fibula, two tarsals plus fragments

Dentition

8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		L
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		L

Loose teeth: three premolars, two incisors, two canines and three lower molars, two of which have large carious lesions.

Age: adult
Sex: ?male

Context 20436, CG 4144, AU 4037

Present: skull, mandible, four cervical vertebrae, one fragment of scapula, both humeri, both radii, fragments of ulna, both innomates, both femora, one patella, both tibiae, fragments of fibula, two left and two right tarsals

Dentition

NP		L
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		L
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		CC
NP		CC

There is a slight amount of periodontal disease. Mandibular right 2 has been crowded back and is positioned directly behind right 1 and 3. Maxillary left 3 is rotated. Maxillary right 8 is very small in size.

Age: adult – probably young
Sex: female

Context 20505, CG 4120, AU 4037

Present: both humeri, fragments of radius, left ulna, fragments of pelvis, both femora, both tibiae, one fibula, one right tarsal, animal bone. Note, although the plan shows the left leg cut away by pit 20527, there are fragments of a left femur and tibia present. They seem to be the pairs of the right femur and tibia, though the bones are in a very poor condition.

Age: adult
Sex: ?

Context 20512, CG 4119, AU 4037

Present: both femora, both tibiae, both fibulae

Age: adult
Sex: ?

Context 20542, CG 4109, AU 4037

Present: both scapulae, left humerus, proximal left ulna,
Age: adult
Sex: ?

Context 20559, CG 4142, AU 4037

Present: skull, mandible, both scapulae, both humeri, left ulna, both innomates, both femora

Dentition

8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		L
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8		CC

Mandibular right 6 has rotted away leaving only the mesial root. Left 6 has a small lesion in the occlusal surface and left 7 has two lesions, one medium and one small, in the occlusal surface.

Age: adult
Sex: ?female

Context 20575, CG 4082, AU 4037

Present: fragments of the skull
Note, the rough plan shows the presence of leg bones which are no longer here.

Age: adult
Sex: ?

Context 21072, CG 4025, AU 4037

Present: skull, fragments of at least two vertebrae (either upper thoracics or lower cervicals), left radius, left ulna, eight left and four right carpals, five left and three right metacarpals, eighteen hand phalanges, left and right patellae, both tibiae, both fibulae, six left and seven right tarsals, five left and one right (plus fragments) metatarsal, three foot phalanges, Also a third first metacarpal belonging to another individual

Age: adult

Sex: ?

Pathology: both tibiae have some slight lipping around the surviving areas of posterior rim on the proximal condyles. The bodies of the two vertebrae are compressed with lipping around the rims and wear and pitting on the body surfaces.

Context 21076, CG 4030, AU 4037

Present: fragments of distal left tibia and fibula, three left tarsals, four left metatarsals, the distal epiphysis of the tibia. Note, also present are the following loose teeth (all permanent): Three upper incisors, one canine, and one premolar. All demonstrate considerable wear so are probably not associated with the above remains.

Age: immature

Sex: ?

Context 21079, CG 4028, AU 4037

Present: skull, mandible, seven cervical vertebrae, eleven thoracic vertebrae, five lumbar vertebrae, sacrum with four surviving segments, left clavicle, left scapula, three left and six right ribs plus fragments, both humeri, both radii, both ulnae, five left and five right carpals, four left and three right metacarpals, eighteen hand phalanges, both innomates, both femora, both tibiae, both fibulae, seven left and six right tarsals, five left and four right tarsals, two foot phalanges

Dentition

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	

There is some slight periodontal disease. Mandibular right 3 is crowded outwards and right 2 is slightly pushed in.

Age: relatively older adult

Sex: male

Pathology: there is some slight lipping around the surviving areas of acetabular rim of the right innominate. The distal half of the right tibia has lumps of periosteal reaction running along the lateral and medial shaft. Fragments of fibula also exhibit these lumpy areas of periosteal reaction. The right scapula has lipping around the glenoid and the right humerus has lipping around the surviving areas of the proximal articulation. There is lipping

around the articulation of the dens (on the axis) of the atlas. Although the thoracic and lumbar vertebrae are all broken and fragmented, lipping can be seen on some of their surviving body rims.

Context 21122, CG 4027, AU 4037

Present: distal ends of the left tibia and fibula, seven left and six right tarsals, three left and four right metatarsals, two foot phalanges

Age: adult

Sex: ?

Pathology: there is lipping around the dorsal rim of the left navicular.

Context 21120, CG 4029, AU 4037

One upper mesial incisor (permanent)

Age: ?

Sex: ?

Context 20425, CG 4146, AU 4014

Mandible

Dentition

R	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	L
	NP	

Age: Adult

Sex: ?

7.30 Botanical remains by Lisa Moffett

Detailed quantifications of botanical remains

The results are combined for all samples within each context group except for scored samples. All items are 'seeds' in the broadest sense unless noted otherwise. Identifications by L Moffett.

The number of items per litre of soil is given for all samples where the total number of items in the analysed portion of the sample was counted even though numbers of individual species may not have been counted.

Table 159 Roman botanical remains, Periods 3-4

Table 159 (cont.) Roman botanical remains, Periods 3–4

Period	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
Context group	2022	2025	2033	2064	2064	2117	3013	3021	3070	3070	2036	2046	2050	2054	2061
Other plants															
<i>Ranunculus flammula / reptans</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Brassica / Sinapis</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Montia fontana</i> ssp <i>chondrosperma</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Chenopodium</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Vicia tetrasperma</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Vicia / Lathyrus</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	+
<i>Medicago / Melilotus / Trifolium</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	+	—
<i>Trifolium</i> type ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Conium maculatum</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Polygonum aviculare</i> agg ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Rumex acetosella</i> agg ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Rumex</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Solanum nigrum</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Galium</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Anthemis cotula</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Tripleurospermum inodorum</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Onopordum acanthium</i> ch	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—
Compositae indet ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Eleocharis palustris / uniglumis</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Carex</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Festuca / Lolium</i> type ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Lolium</i> sp (glume bases) ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Lolium</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Arrhenatherum elatius</i> ssp <i>bulbosum</i> (tuber) ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Phleum pratense</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Gramineae indet (rachises) ch	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—
Gramineae indet ch	—	2	—	—	—	—	—	—	—	49	38	—	—	—	—
Unidentified ch	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—

Table 160 Roman botanical remains, Period 4

Table 160 (cont.) Roman botanical remains, Period 4

Period:	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
<i>Vicia</i> / <i>Lathyrus</i> ch	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Medicago lupulina</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Medicago/Melilotus/Trifolium</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifolium type ch	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-
<i>Aphanes arvensis</i> ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Polygonum aviculare</i> agg ch	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Fallopia convolvulus</i> ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rumex</i> sp ch	-	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-
<i>Euphrasia/Odontites</i> ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Galium aparine</i> ch	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Galium</i> sp ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Anthemis cotula</i> ch	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Tripleurospermum inodorum</i> ch	-	3	4	-	-	-	-	-	-	-	3	-	-	-	-	-
<i>Chrysanthemum segetum</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Lapsana communis</i> ch	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Compositae indet ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Eleocharis palustris/uniglumis</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Festuca/Lolium</i> type ch	-	34	114	-	-	-	-	-	-	-	2	5	-	-	-	-
<i>Lolium perenne</i> (florets) ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Bromus hordeaceus/secalinus</i> ch	+	13	92	-	-	-	-	-	-	-	3	3	-	-	-	-
<i>Avena fatua/sterilis</i> ssp <i>ludoviciana</i> (spikelet forks) ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Avena fatua/sterilis</i> ssp <i>ludoviciana</i> (lemma bases) ch	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Avena fatua/sterilis</i> ssp <i>ludoviciana</i> ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Phleum pratense</i> ch	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
cf <i>Danthonia decumbens</i> ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Gramineae indet ch	+	41	132	+	-	-	-	-	-	-	24	42	+	-	-	-
Gramineae indet (germinated) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gramineae indet (coleoptiles) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified unch	+	-	3	-	-	-	-	-	-	-	3	-	-	-	-	-
Unidentified unch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
? <i>Claviceps purpurea</i> (ergot) ch	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; - = absent

Table 161 Roman botanical remains, Periods 4-5

Table 161 (cont.) Roman botanical remains, Periods 4–5

Period:	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
Context group:	3051	3051	3053	3056	3060	2091	2091	2119	2120	2121	2139	3046	3071	3096	3098	3100	3109
<i>Rumex acetosella</i> agg ch	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	–
<i>Rumex</i> sp ch	+	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Galium</i> sp ch	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–
<i>Triploospermum inodorum</i> ch	+	3	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
<i>Chrysanthemum segetum</i> ch	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
cf <i>Sparganium erectum /emersum</i> ch	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–
<i>Eleocharis palustris /uniglumis</i> ch	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Scirpus maritimus /Schoenoplectus lacustris</i> ch	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Carex</i> sp ch	–	2	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–
<i>Festuca /Lolium</i> type ch	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Poa</i> sp ch	+	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Cynosurus cristatus</i> ch	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Bromus hordeaceus /secalinus</i> ch	+	12	–	–	–	2	+	14	–	+	–	–	–	–	–	–	–
<i>Bromus hordeaceus /secalinus</i> (germinated) ch	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gramineae indet (glume bases) ch	+	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gramineae indet ch	+	50	+	–	–	7	+	34	+	+	–	–	–	–	+	–	–
Gramineae indet (germinated) ch	+	19	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Unidentified ch	+	–	–	+	–	–	–	–	+	5	–	+	–	–	+	–	+

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; – = absent

Table 162 Dark earth botanical remains, Period 6

Table 162 (cont.) Dark earth botanical remains, Period 6

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; +++++ = extremely abundant; - = absent

Table 163 Saxon and medieval botanical remains, Periods 7–8

Table 163 (*cont.*) Saxon and medieval botanical remains, Periods 7-8

Table 163 (*cont.*) Saxon and medieval botanical remains, Periods 7-8

Table 163 (cont.) Saxon and medieval botanical remains, Periods 7–8

Period:	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8
Context group:	2217	2246	2264	2265	2271	2239	2290	2305	2307	2313	2413	2421	3174	3175	4254	
<i>Triplourospermum inodorum</i> ch	—	—	—	—	—	—	—	+	—	—	—	—	—	—	—	
<i>Chrysanthemum segetum</i> ch	—	—	—	—	—	—	—	—	—	2	—	+	+	—	—	
cf <i>Onopordum acanthium</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
<i>Centaurea cyanus</i> ch	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	
cf <i>Centaurea</i> sp ch	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	
<i>Lapsana communis</i> ch	—	—	—	—	—	—	—	+	—	—	—	—	—	—	1	
<i>Sparganium erectum / emersum</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Eleocharis palustris / uniglumis</i> ch	—	—	—	—	—	—	—	—	—	4	—	+	—	—	—	
<i>Eleocharis palustris / uniglumis</i> unch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Carex</i> sp ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Carex</i> sp min	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Carex</i> sp unch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Poa annua</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Cynosurus cristatus</i> ch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Bromus hordeaceus / secalinus</i> ch	—	18	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Phleum pratense</i> ch	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	
Gramineae indet ch	—	11	—	—	—	5	1	—	+	—	—	6	—	—	2	
Unidentified ch	—	1	—	—	—	6	1	+	—	—	—	11	—	—	3	
Unidentified min	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	
Unidentified (tubers) ch	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; - = absent

Table 164 Saxon and medieval botanical remains, Periods 8-9

Table 164 (*cont.*) Saxon and medieval botanical remains, Periods 8-9

Table 164 (cont.) Saxon and medieval botanical remains, Periods 8-9

Period:	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Context group:	3162	2467	2498	2501	2536	2536	2538	2543	2546	2548	2550	2551	2556	2558	2558	2571
<i>Sambucus nigra</i> unch	-	+++	1	+++	-	-	-	-	-	-	-	+++	-	-	-	-
<i>Anthemis cotula</i> ch	1	-	-	+	+	+	2	-	-	-	-	+	+	-	-	+
<i>Triploospermum inodorum</i> ch	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
<i>Chrysanthemum segetum</i> ch	-	-	-	+	+	+	1	-	-	-	-	-	-	-	-	-
cf <i>Centaurea</i> sp ch	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
Compositae indet ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sparganium erectum / emersum</i> ch	-	+	-	-	+	+	1	-	-	-	-	-	-	-	-	-
cf <i>Sparganium erectum / emersum</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Eleocharis palustris / uniglumis</i> ch	-	-	-	+	+	+	1	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp ch	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> spp ch	-	-	-	-	++	-	-	-	-	-	-	-	-	-	-	-
<i>Cynosurus cristatus</i> ch	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Bromus hordeaceus / secalinus</i> ch	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gramineae indet ch	3	-	-	-	+	-	-	4	-	-	+	-	+	-	-	-
Unidentified ch	1	-	-	+	+	-	-	-	-	+	+	-	-	-	-	-
Unidentified min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; - = absent

Table 165 Medieval and post-medieval botanical remains, Periods 9-10

Period:	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10
Context group:	2572	2572	2573	2573	2582	2582	2698	3118	3137	3164	3165	4226	2683	1546	1310	1325	1456
Context:	16355	16356	16349	16351	16354	16307	16045	18053	18027	18050	18057	20458	15457	10416	10551	10386	16106
Sample:	5449	5451	5442	5444	5446	5407	5169	7521	7510	7520	7523	9045	5079	4005	3511	3509	5093
Sample size (litres):	25	25	25	25	25	25	25	25	25	25	25	25	50	9	25	25	25
% analysed:	100%	100%	100%	25%	50%	25%	100%	50%	100%	100%	100%	6%	13%	100%	100%	100%	50%
Items per litre:	2	1	2	4	2	39	9	<1	1	2	8	1059	65				
Date:	C13/ C14	C13/ C14	C13	C12/ C14	C14	C13/ C15	C14/ C15	C14/ C15	C14/ C15	C14/ C15	C13/ C15	C15?	C16/ EC17	LC16/ C17	LC17/ C18	LC17/ C17	
Cultivated and food plants																	
<i>Triticum dicoccum</i> ch	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
<i>Triticum turgidum / durum</i> (rachises) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	
<i>Triticum aestivum</i> s.l. (rachises) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	
<i>Triticum</i> sp free-threshing (rachises) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	

Table 165 (cont.) Medieval and post-medieval botanical remains, Periods 9–10

Table 165 (cont.) Medieval and post-medieval botanical remains, Periods 9–10

Table 165 (cont.) Medieval and post-medieval botanical remains, Periods 9–10

Table 165 (cont.) Medieval and post-medieval botanical remains, Periods 9–10

Period:	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Context group:	2572	2572	2573	2573	2573	2573	2582	2582	2698	3118	3137	3164	3165	4226	2683
<i>Sambucus nigra</i> ch	+	-	+	-	-	-	-	-	-	-	-	1	-	-	-
<i>Sambucus nigra</i> unch	-	-	-	-	-	-	+++	-	-	6	-	-	183	+	++
<i>Valerianella dentata</i> ch	-	-	-	-	-	-	-	-	-	1	-	-	-	-	+++
<i>Anthemis cotula</i> ch	-	-	-	-	-	-	-	-	-	2	-	-	-	21	-
cf <i>Anthemis cotula</i> (flower heads) min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Chrysanthemum segetum</i> ch	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
<i>Carduus/Cirsium</i> min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Centaurea cyanus</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cf <i>Centaurea</i> sp ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Lapsana communis</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sparganium erectum/emersum</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Eleocharis palustris/uniglumis</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Eleocharis palustris/uniglumis</i> unch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp unch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> spp ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> spp unch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Poa annua</i> ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gramineae indet ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gramineae indet min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tree/shrub (bud) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified (flower heads) ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified unch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; - = absent

Table 166 Post-medieval botanical remains, Period 10

Table 166 (*cont.*) Post-medieval botanical remains, Period 10

Table 166 (cont.) Post-medieval botanical remains, Period 10

Period:	10	10	10	10	10	10	10	10	10	10	10
Site:	2	2	2	2	2	2	2	2	3	3	3
<i>Sambucus nigra</i> unch	-	-	-	-	-	-	-	-	-	-	++
<i>Anthemis cotula</i> ch	-	-	-	-	-	-	-	-	-	-	-
<i>Centaurea cyanus</i> ch	-	-	-	-	-	-	-	-	-	-	-
<i>Lemna</i> sp unch	-	-	-	-	-	-	-	-	-	-	-
<i>Eleocharis palustris / uniglumis</i> ch	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp ch	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp unch	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> spp unch	-	-	-	-	-	-	-	-	-	-	-
<i>Cynosurus cristatus</i> ch	-	-	-	-	-	-	-	-	-	-	-
Gramineae inlet ch	-	-	-	-	-	-	-	-	-	-	-
Tree/shrub (bud) ch	-	-	-	-	-	-	-	-	-	-	-
Unidentified ch	-	-	-	-	-	-	-	-	-	-	-
Unidentified min	-	-	-	-	-	-	-	-	-	-	-
Unidentified unch	-	-	-	-	-	-	-	-	-	-	-

ch = charred; min = mineralised; unch = uncharred; + = present; ++ = moderately common; +++ = very common; ++++ = extremely abundant; - = absent

7.32 Soil micromorphology by Richard I Macphail



Figure 293 Site 2; field photo; location of sample A in reddish early Roman deposits, overlain by darker later Roman stratigraphy



Figure 295 Site 2; field photo; location of samples C and B in dark earth sealed by late Saxon ash lime dumps



Figure 294 Site 2; field photo; location of sample D in gully/camber fill of later Roman pebble surfaced street (level with trowel)



Figure 296 Site 1; field photo; location of samples E and F in dark earth over a patch of Roman clay floor

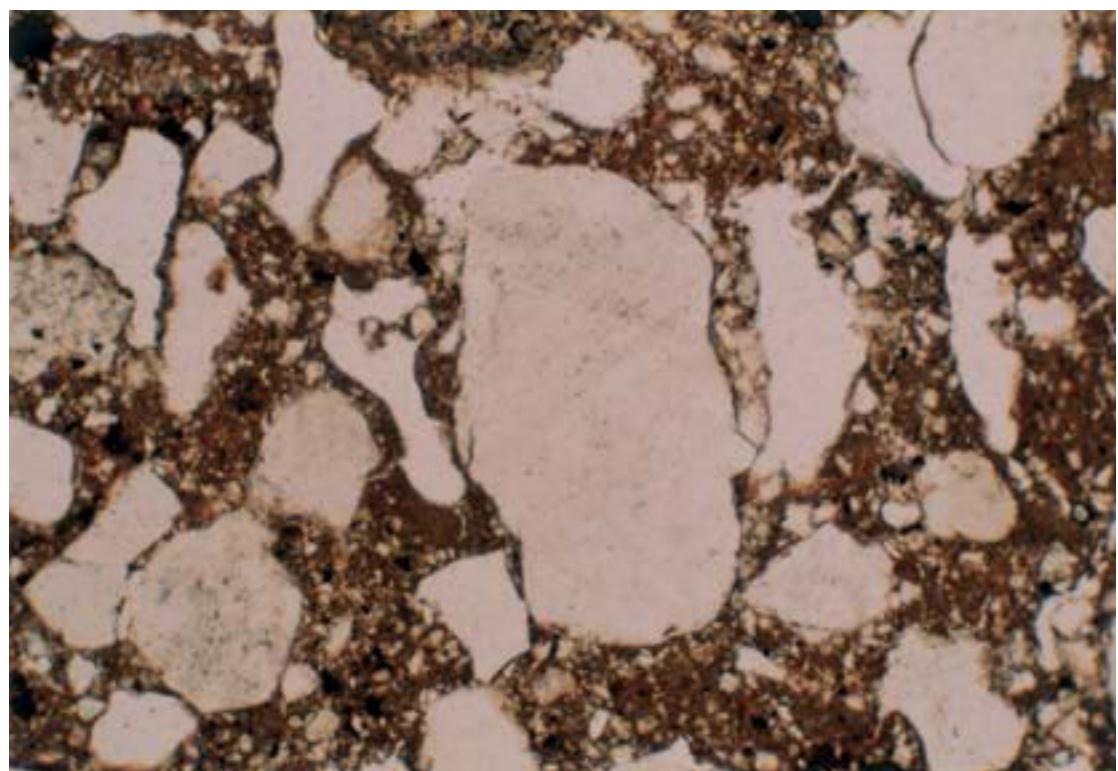


Figure 298 Site 4; sample M; photomicrograph of brown alluvial sandy loam soil, with dusty clay coatings inferring affects of prehistoric/early Roman cultivation. Plane polarised light (PPL), frame length is 3.3mm

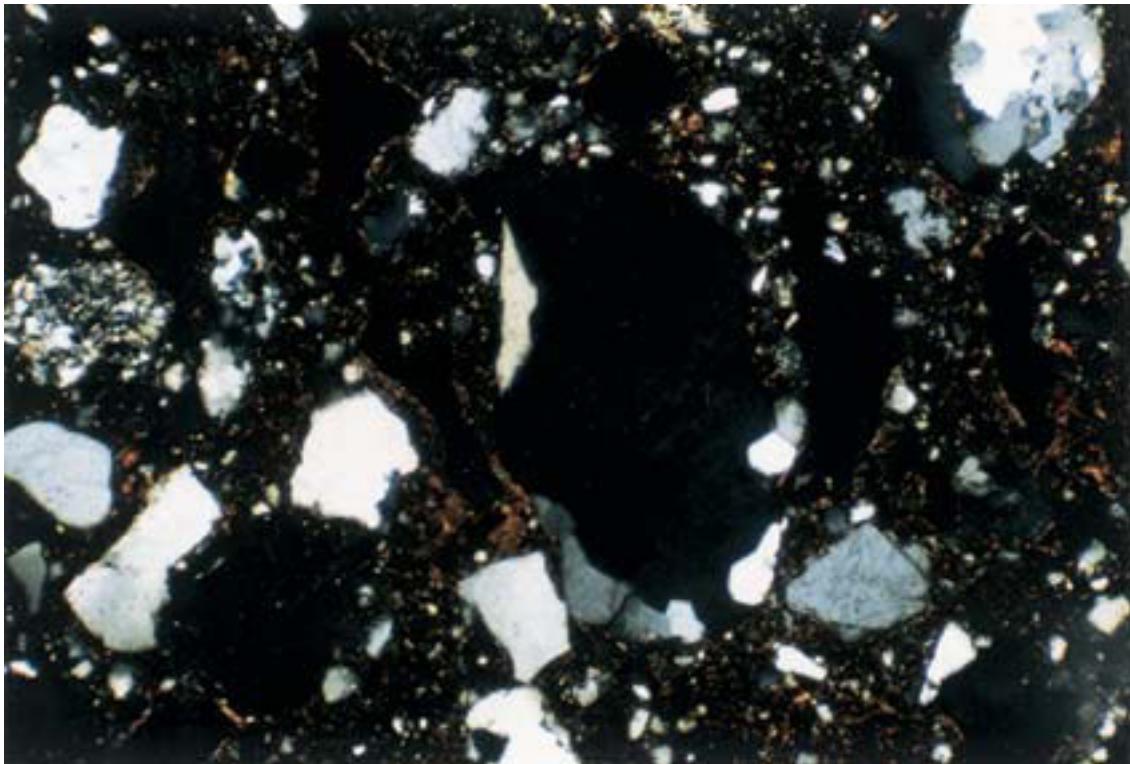


Figure 299 As Figure 298, but crossed polarised light (XPL); note low birefringence of dusty clay coatings

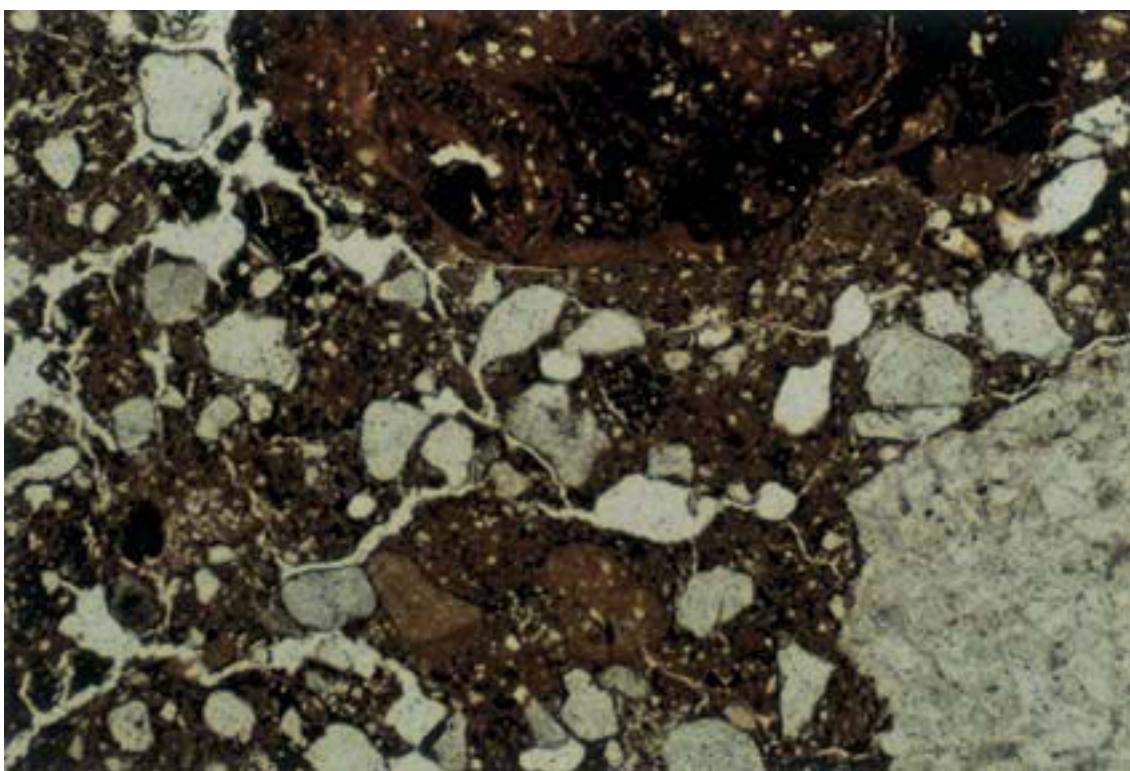


Figure 300 Site 2; sample A; photomicrograph of mixed natural (quartz etc) and anthropogenic (weakly burnt dark brown clay daub? fragments) soil. PPL, frame length is 5.6mm

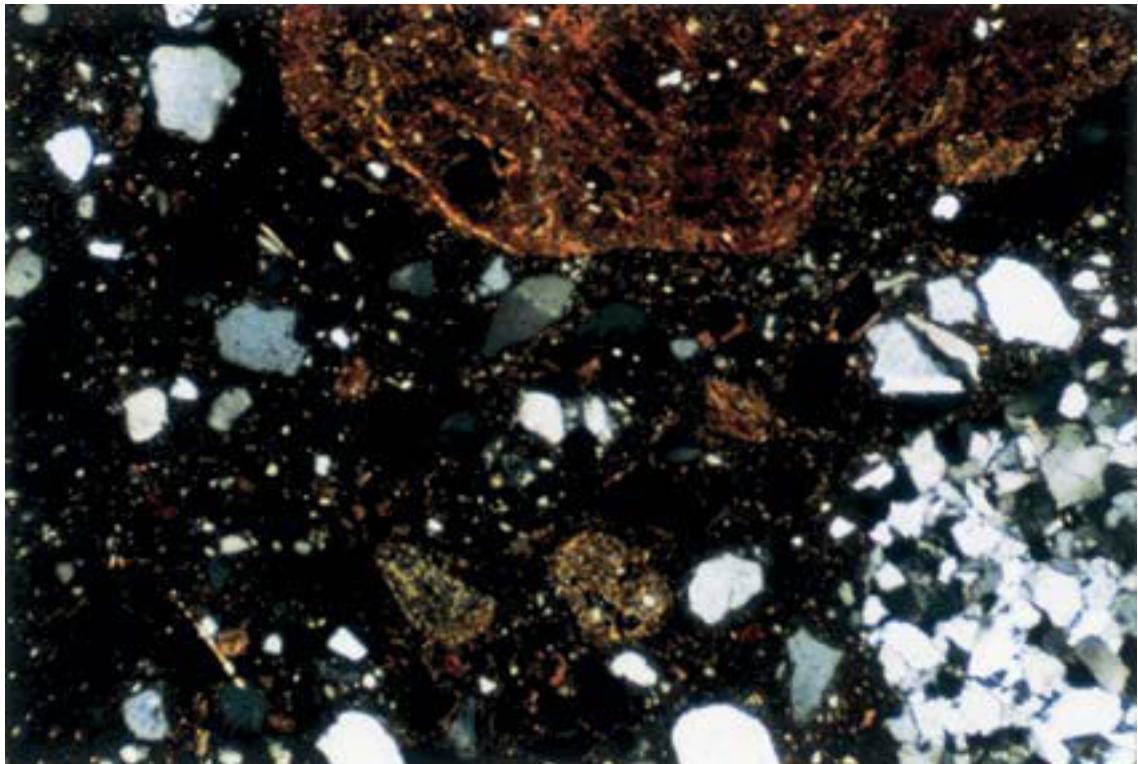


Figure 301 As Figure 300, but crossed polarised light; note birefringence pattern of daub? and textural features, such as intercalations caused by trampling etc

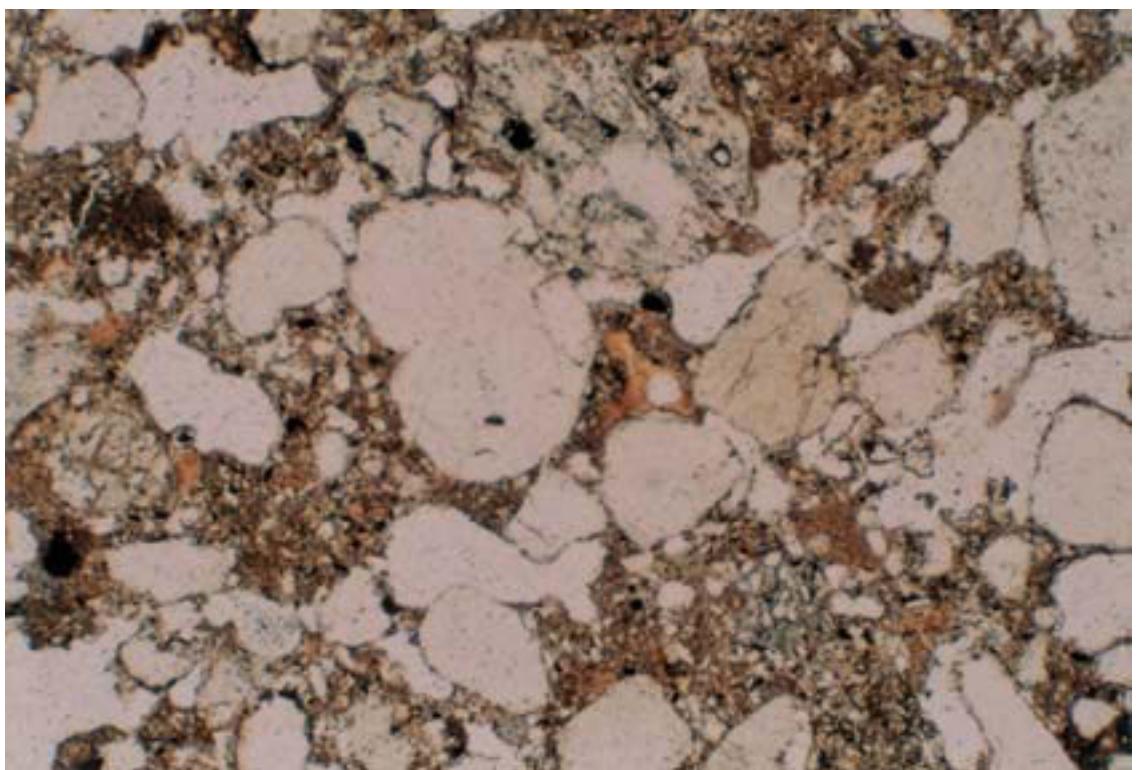


Figure 302 Site 2; sample I; photomicrograph of pale brown pit fill material. Pale colour is the result of including high amounts of strongly burnt organic matter, only translucent phytoliths remain as residues of cereal processing. Weakly dusty yellowish clay coatings and infills may relate to water draining through this pit. PPL, frame length is 3.3mm

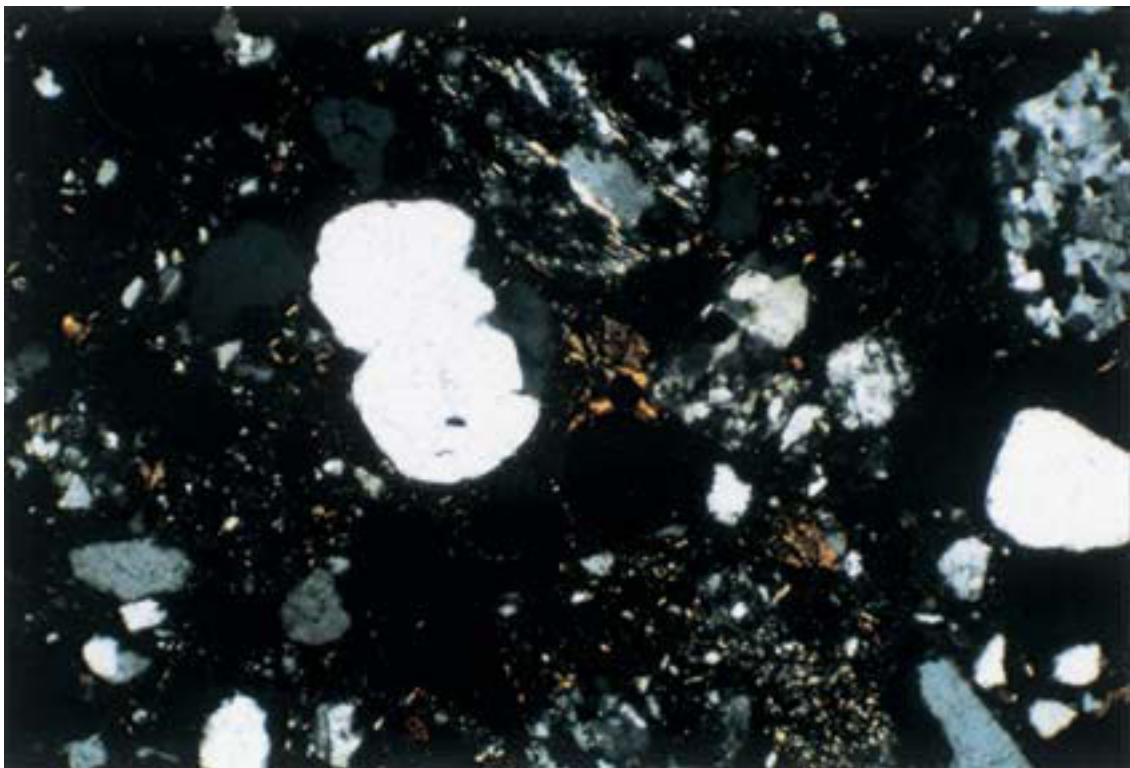


Figure 303 As Figure 302, clay coatings have moderately high birefringence

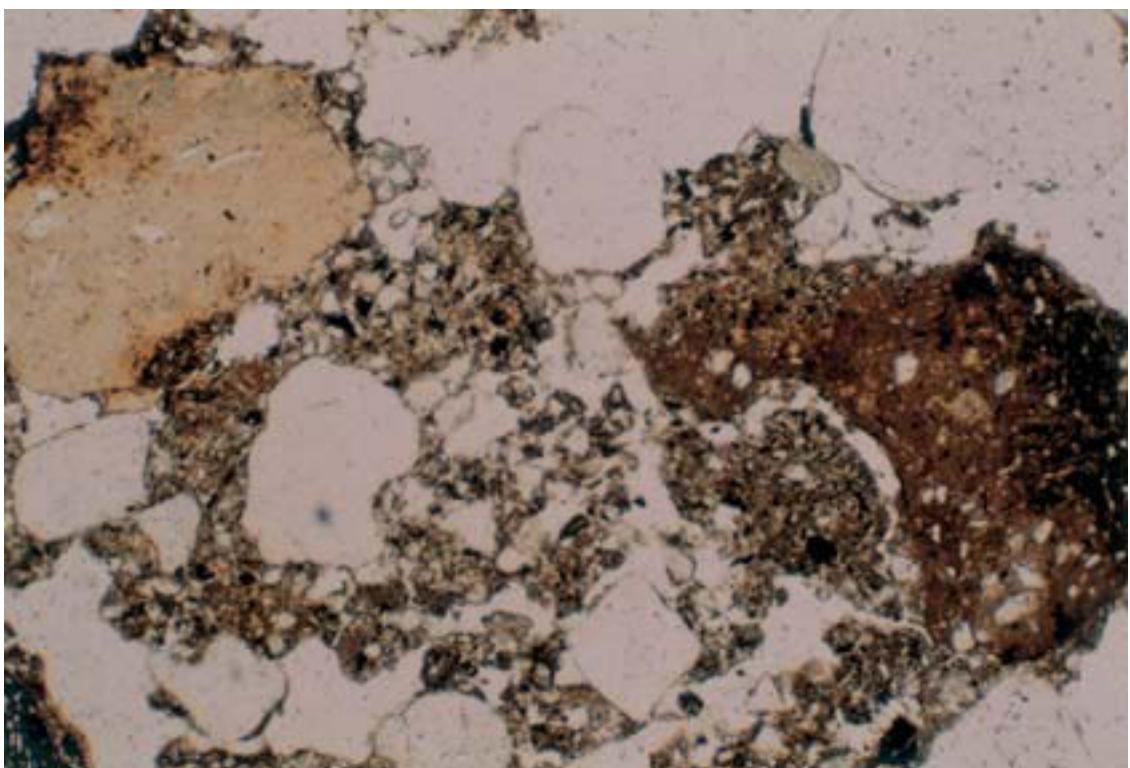


Figure 304 Site 2; sample K; photomicrograph of dark fine soil separating a fragment of pale yellowish and mainly amorphous human coprolite (left) and a reddish brown and slightly blackened silty clay soil fragment. PPL, frame length is 3.3 mm

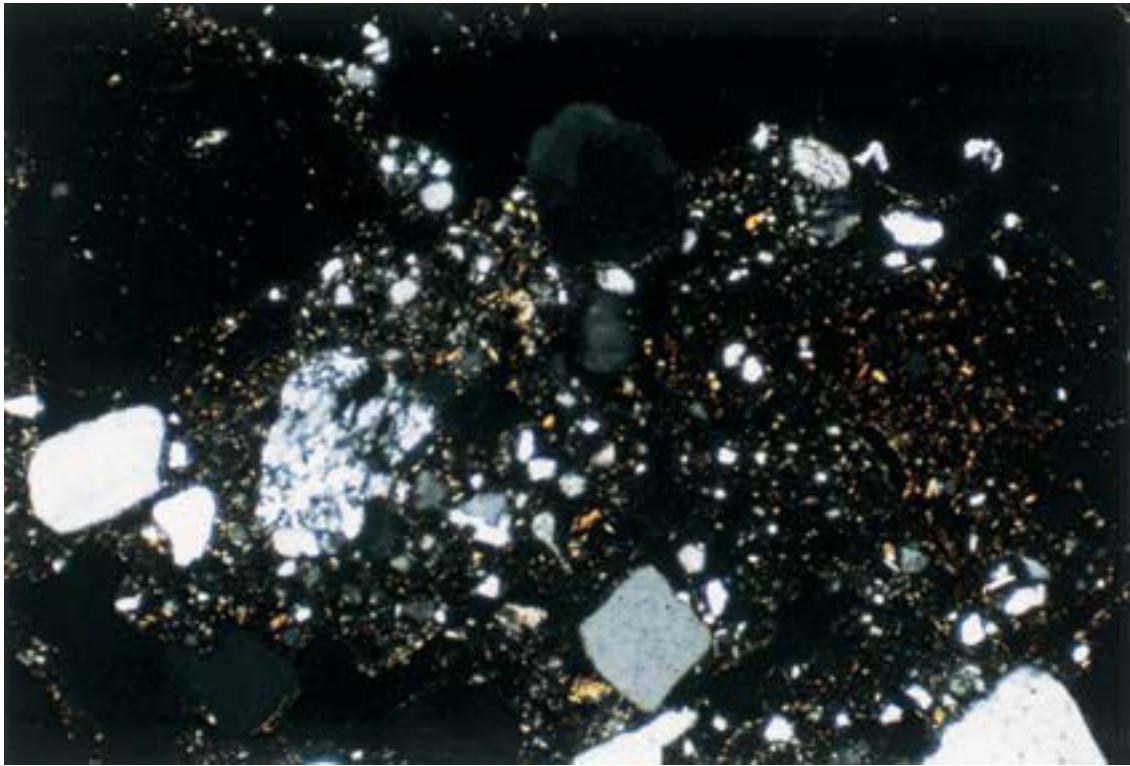


Figure 305 As Figure 304, but XPL; note non-birefringence of human coprolite and moderately low birefringence of probably weakly burnt silty soil fragment

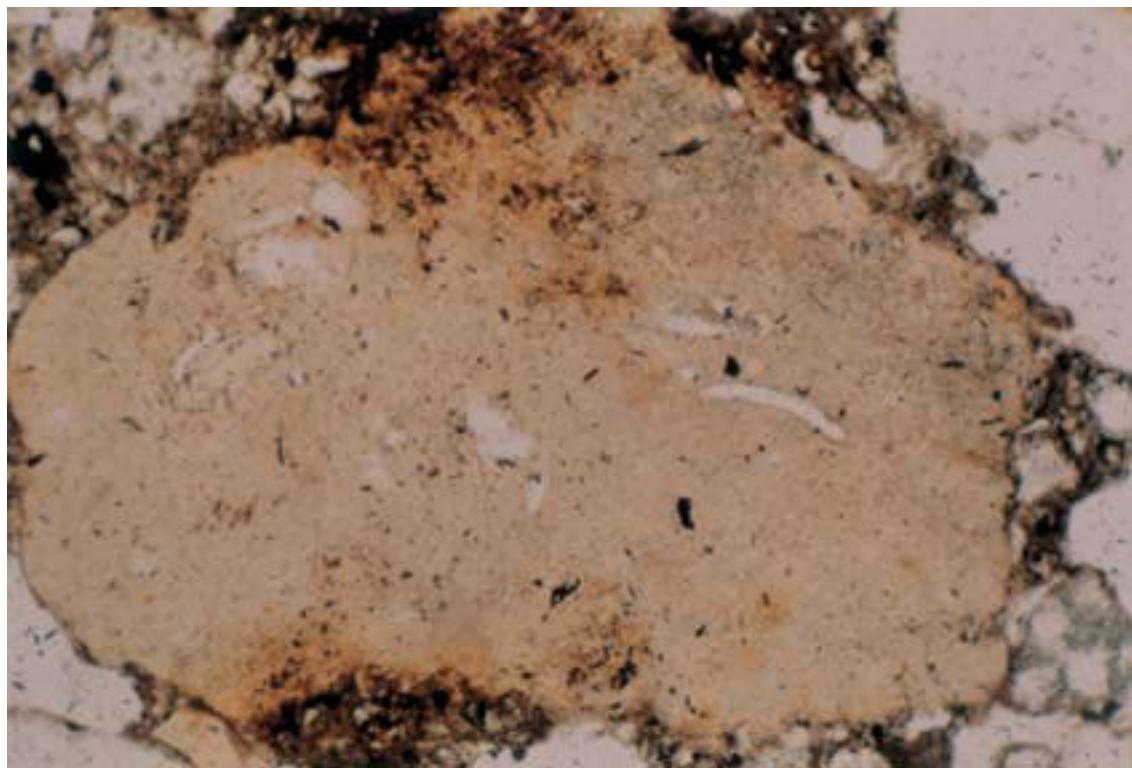


Figure 306 As Figures 304 and 305, but detail of human coprolite. PPL, frame length is 0.3mm

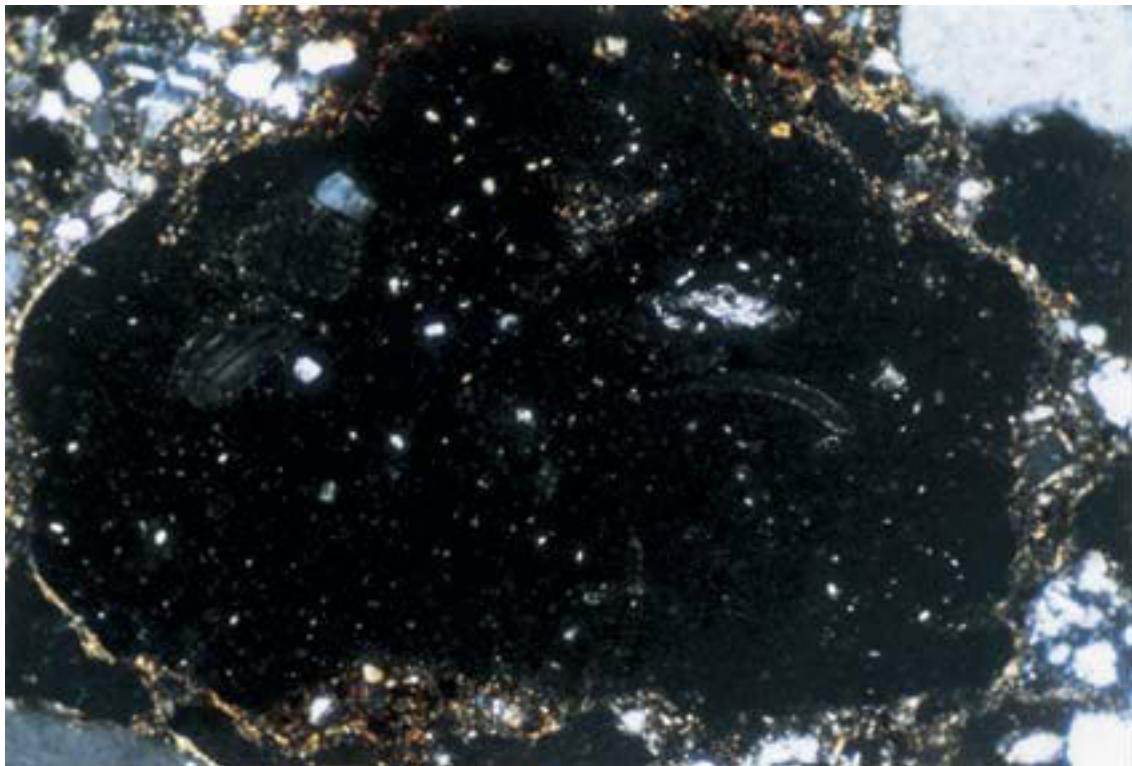


Figure 307 As Figure 306, but XPL; note fragment of included non-phosphatised, but birefringent bone in left centre of human coprolite

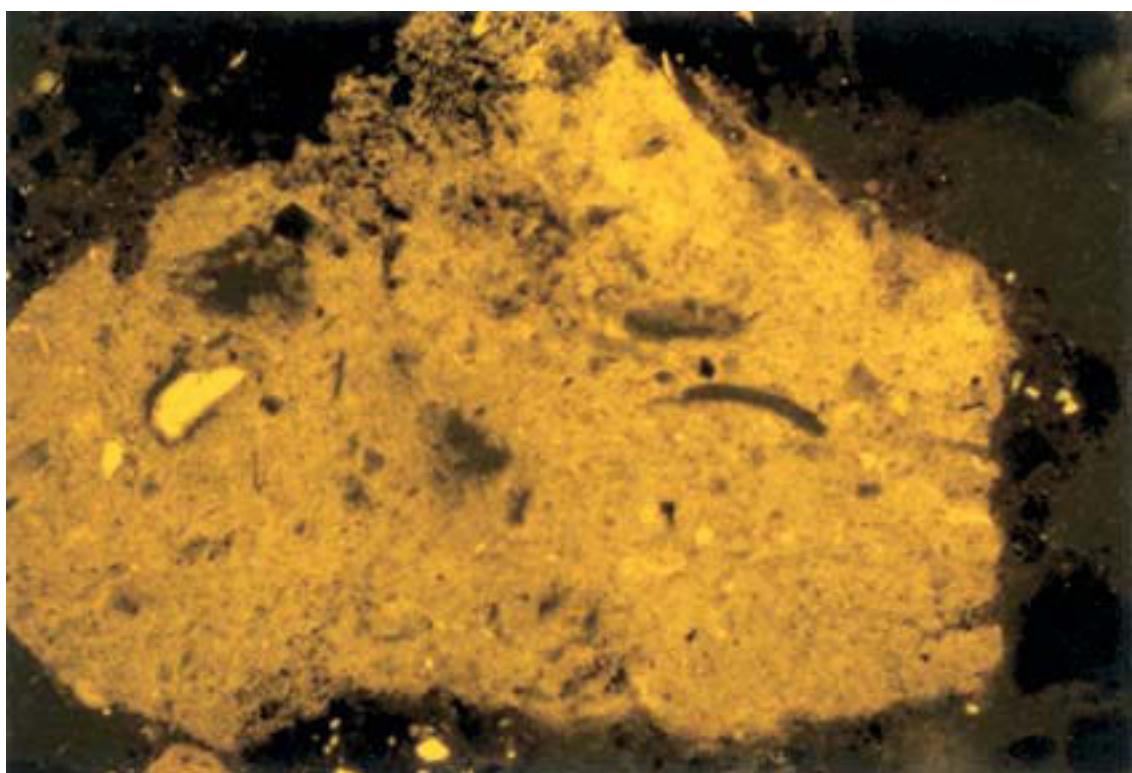


Figure 308 As Figure 306, but under ultra violet light illumination (UV). The strongly phosphatic coprolite fluoresces yellow green, whereas the included, poorly digested? bone fragment has a very high fluorescence

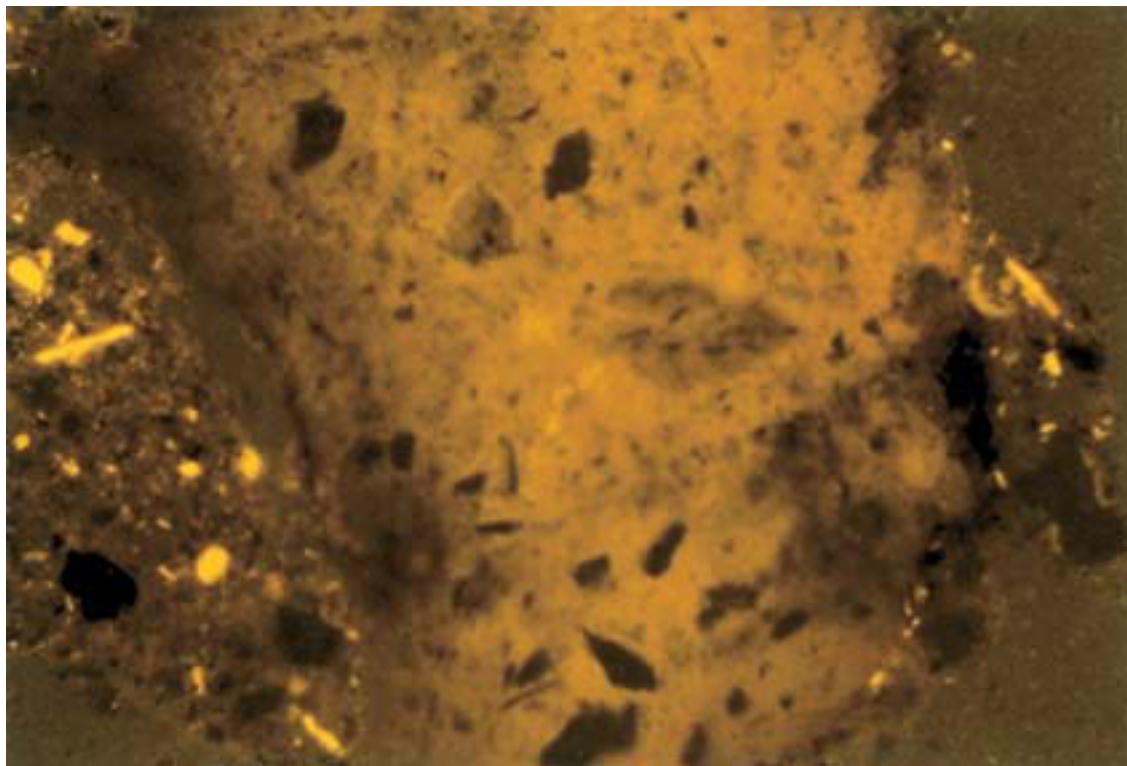


Figure 309 As Figures 304 and 305, but detail of silty clay soil fragment under UV; weak fluorescence indicates weak phosphatisation of this soil fragment, perhaps through ingestion by a herbivore and its inclusion in its coprolites. Frame length is 0.33mm

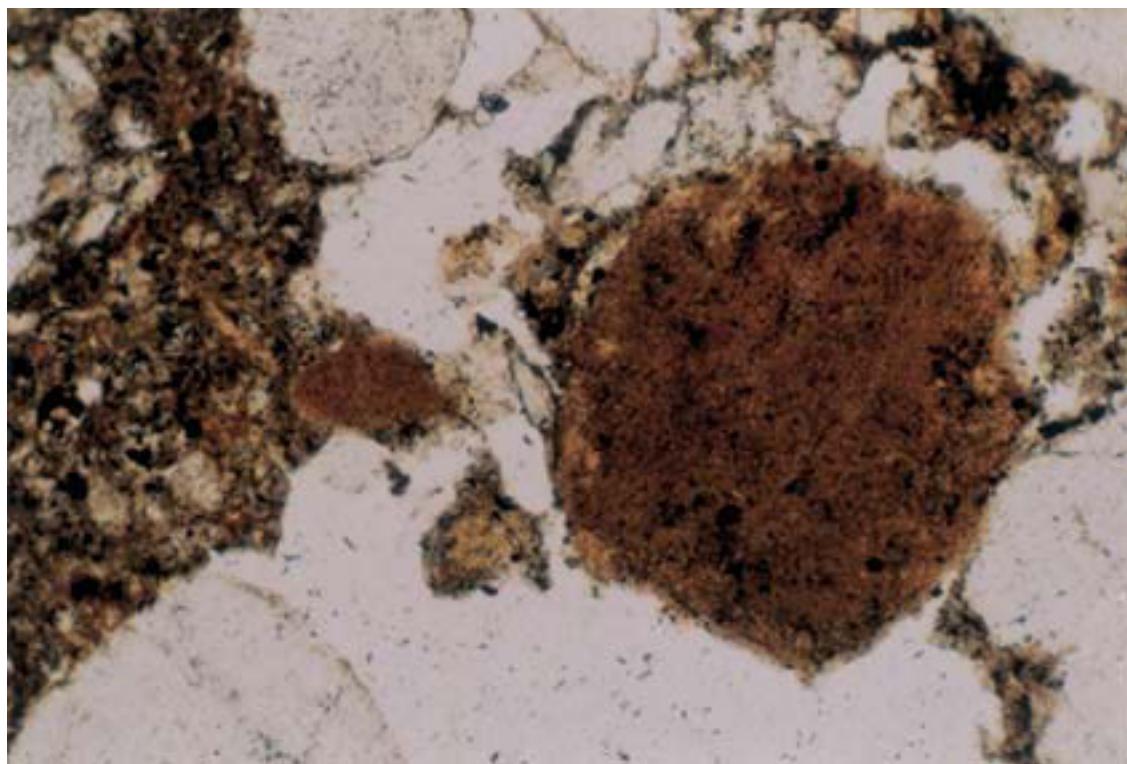


Figure 310 Site 2; sample J: photomicrograph of dark fine soil and further silty clay fragments, which are often rounded. PPL, frame length is 0.33mm

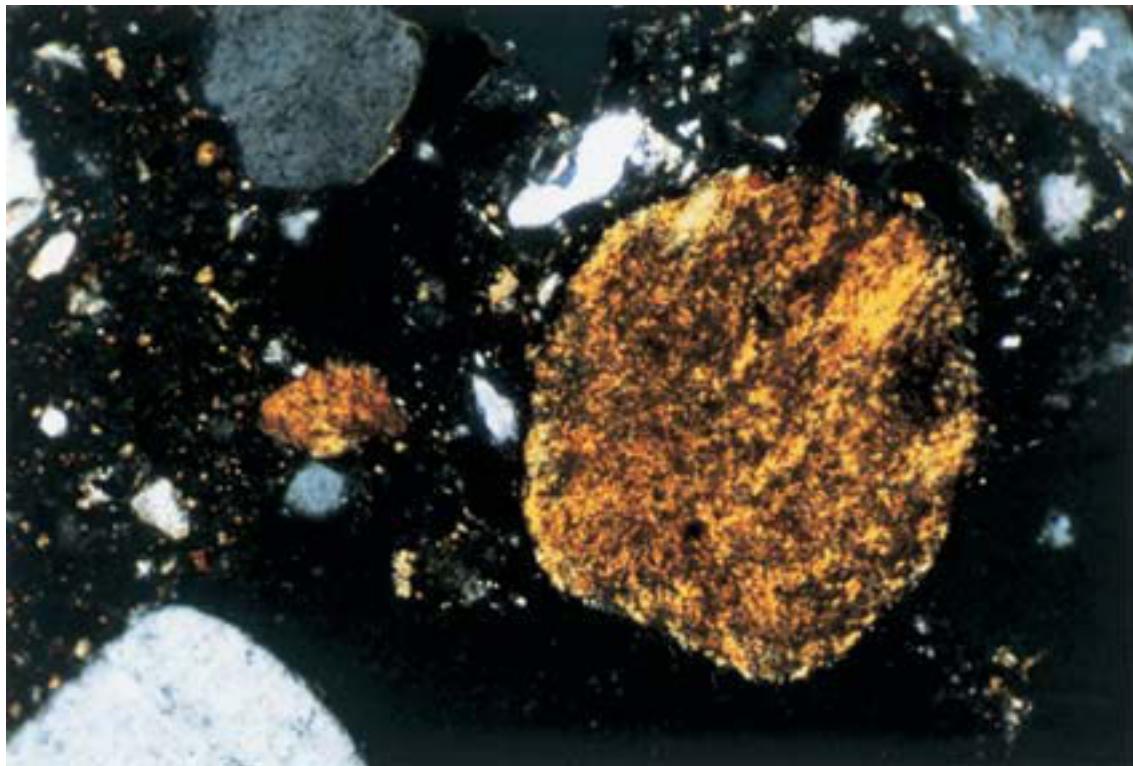


Figure 311 As Figure 310, but XPL showing birefringent character of these clay soil fragments

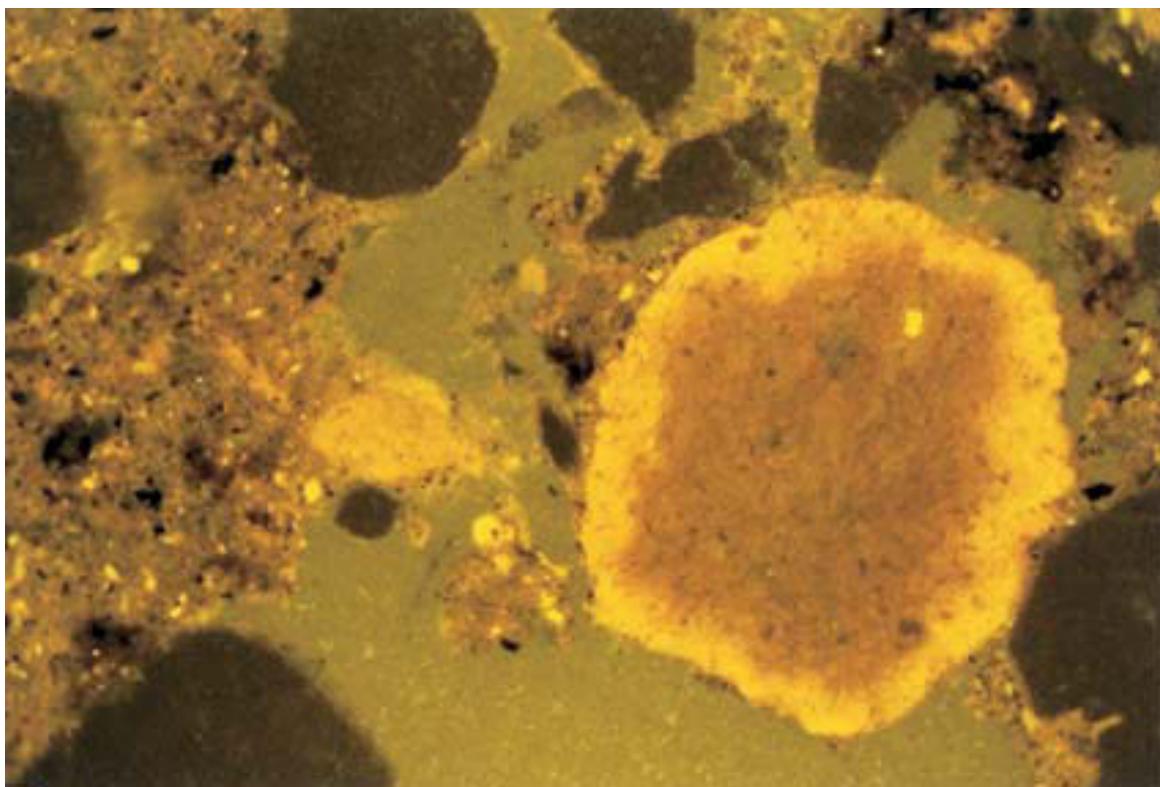


Figure 312 As Figures 310 and 311, but under UV; note fluorescent phosphatized halo of possibly ingested soil fragment. Phosphatation causes these herbivore coprolitic remains to be strongly resistant. They are found throughout the late Roman deposits, and occur as relicts in the dark earth

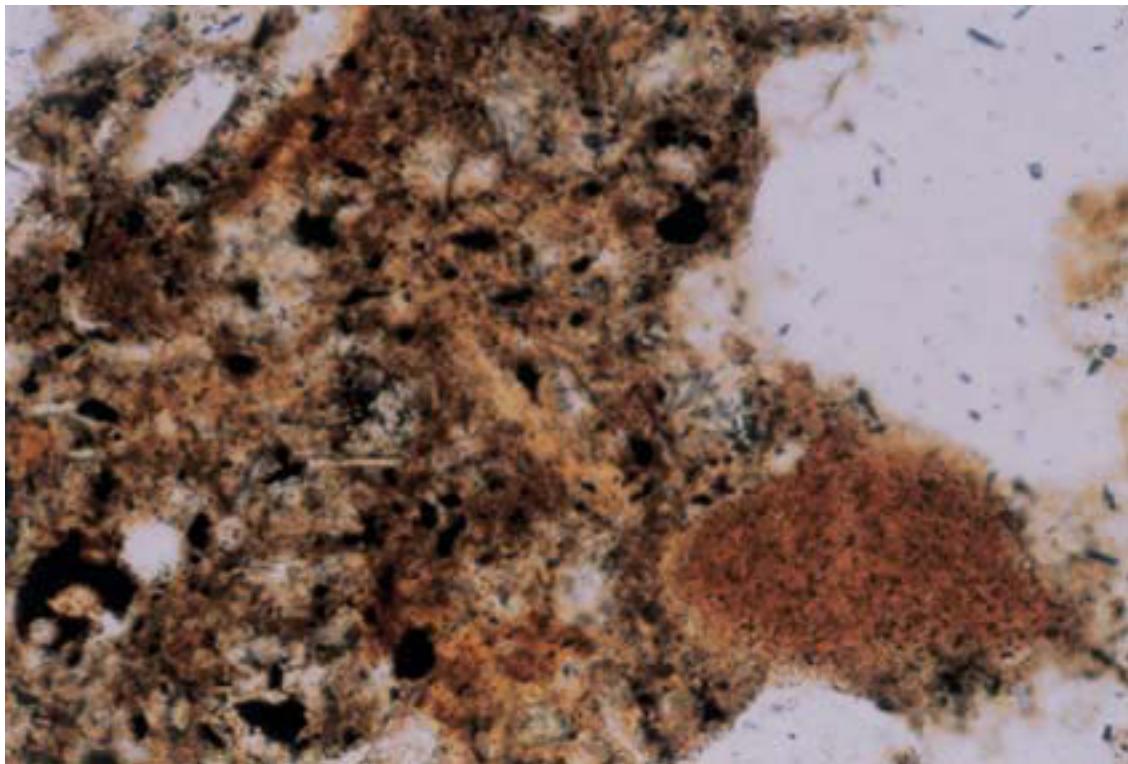


Figure 313 As Figure 310; detail of dark fine soil fabric of charred Gramineae type and amorphous organic matter rich in phytoliths (plant opal rods). PPL, frame length is 0.16mm

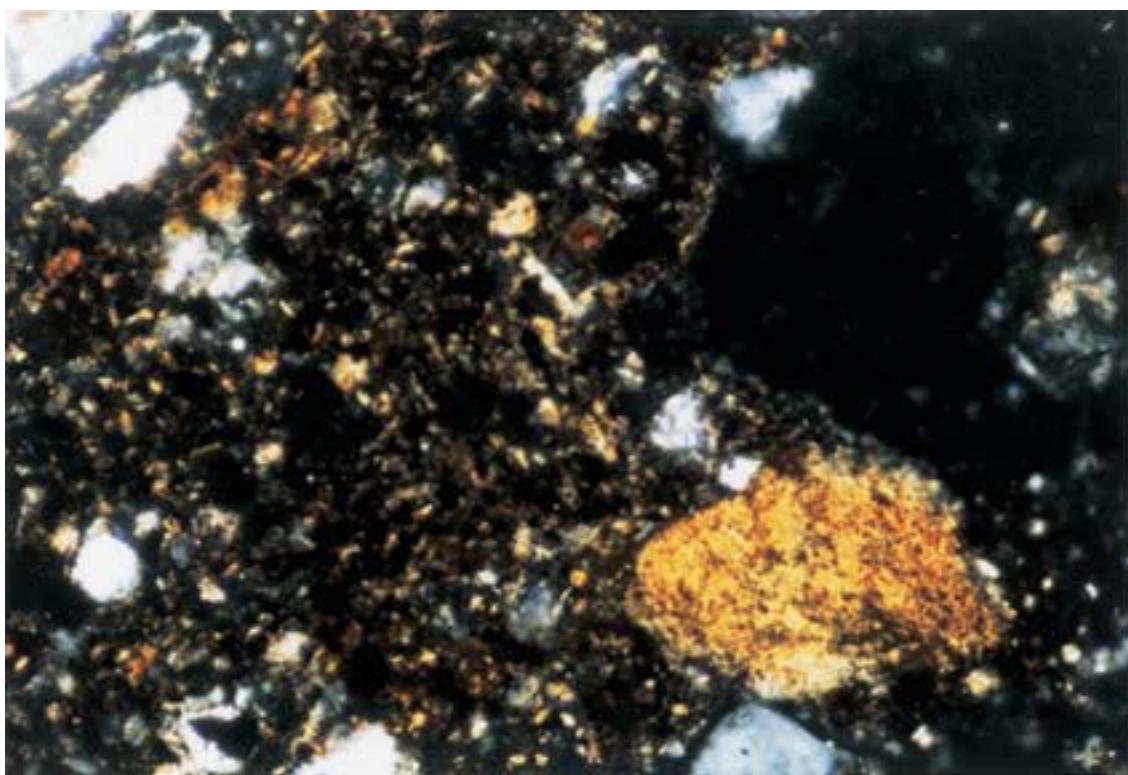


Figure 314 As Figure 313, but XPL; note overall very low birefringence of fine charred organic matter and non-birefringence of phytoliths

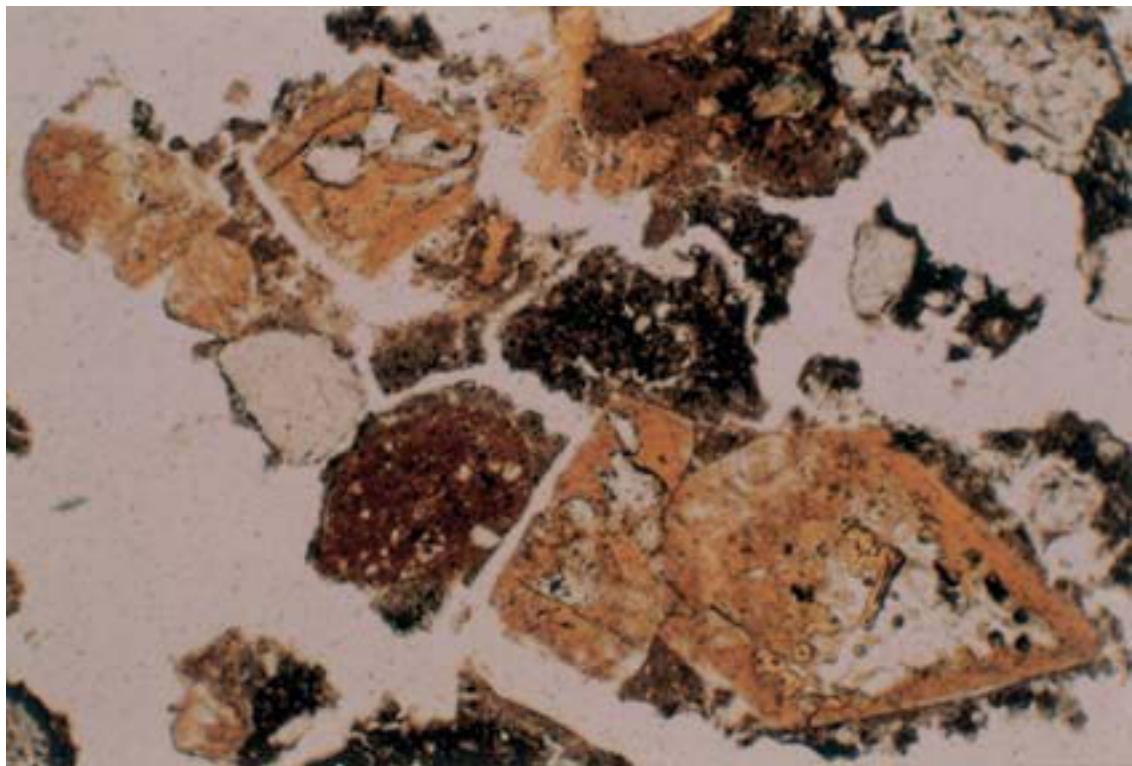


Figure 315 Site 2; sample D; yellow amorphous infills and pseudomorphic? fragments, dark fine charcoal and phytolith-rich soil, and rounded silty clay soil fragment (centre). PPL, frame length is 5.6mm

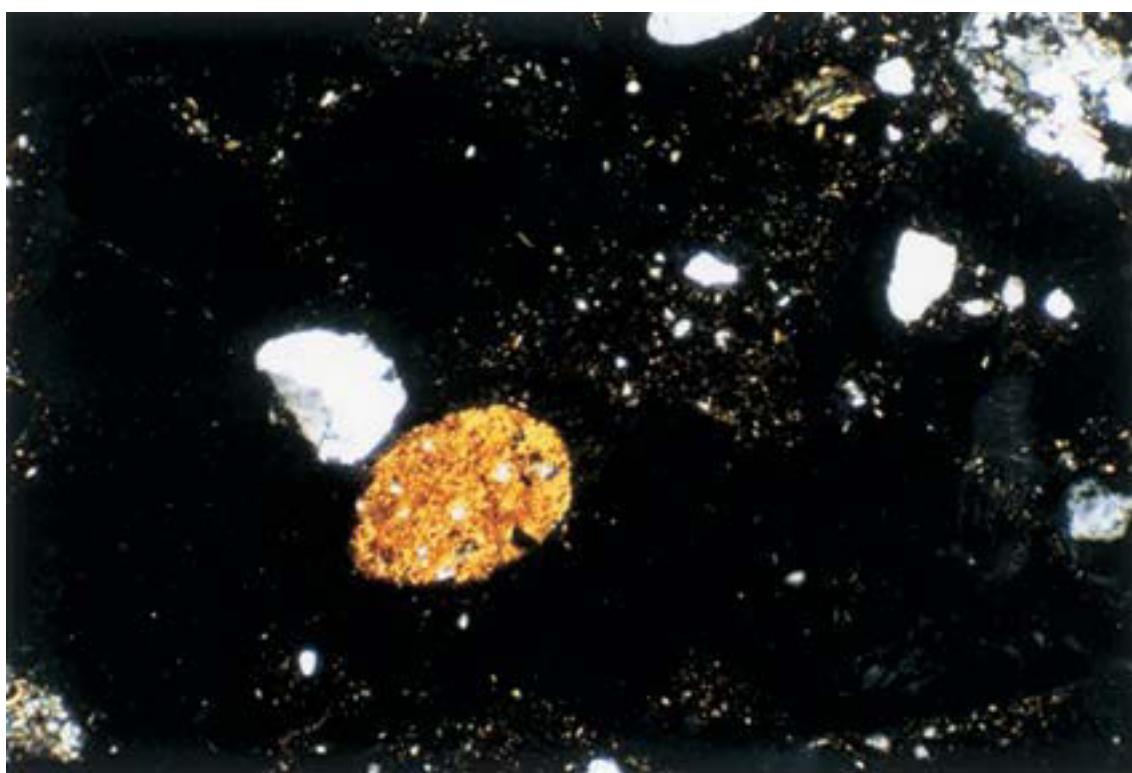


Figure 316 As Figure 314, but XPL; amorphous features probably resulting from the soaking-away of cess/sewage sludge in this street-side gully, are totally non-birefringent. Note birefringent silty clay soil fragment

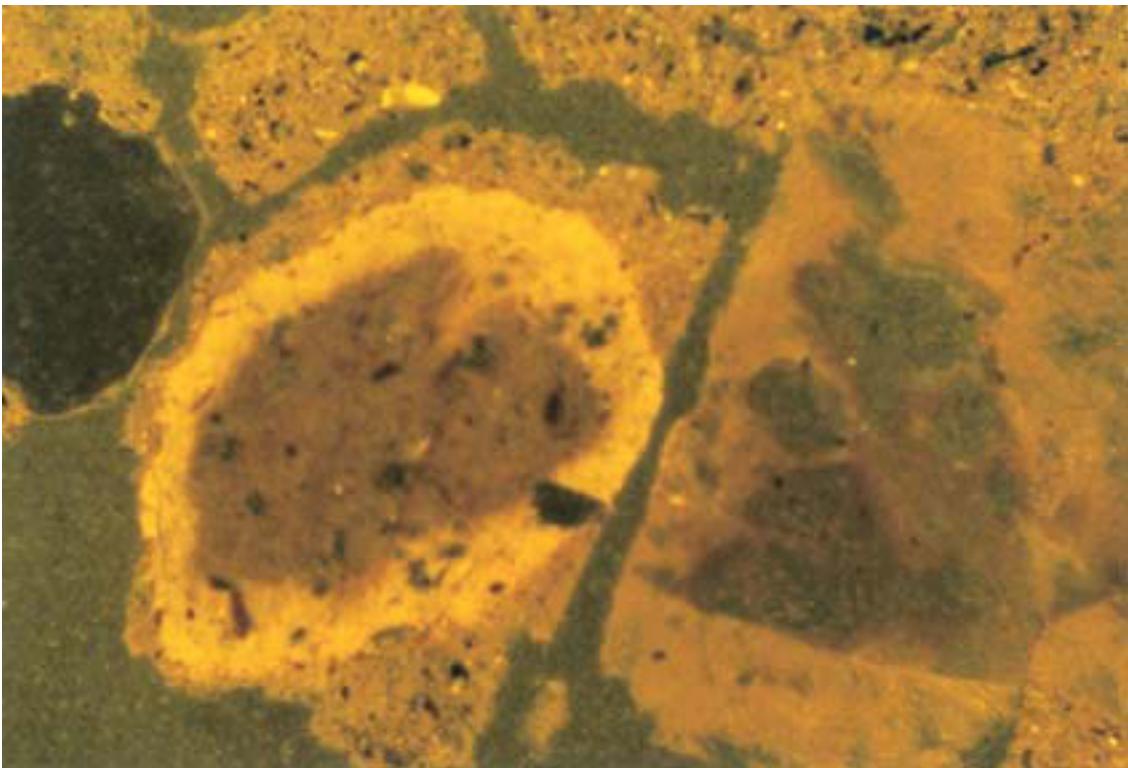


Figure 317 As Figure 314; detail of fluorescent halo (phosphatised) on probably herbivore ingested silty soil fragment; juxtaposed amorphous feature (right) is non-fluorescent. UV, frame length is 0.33mm

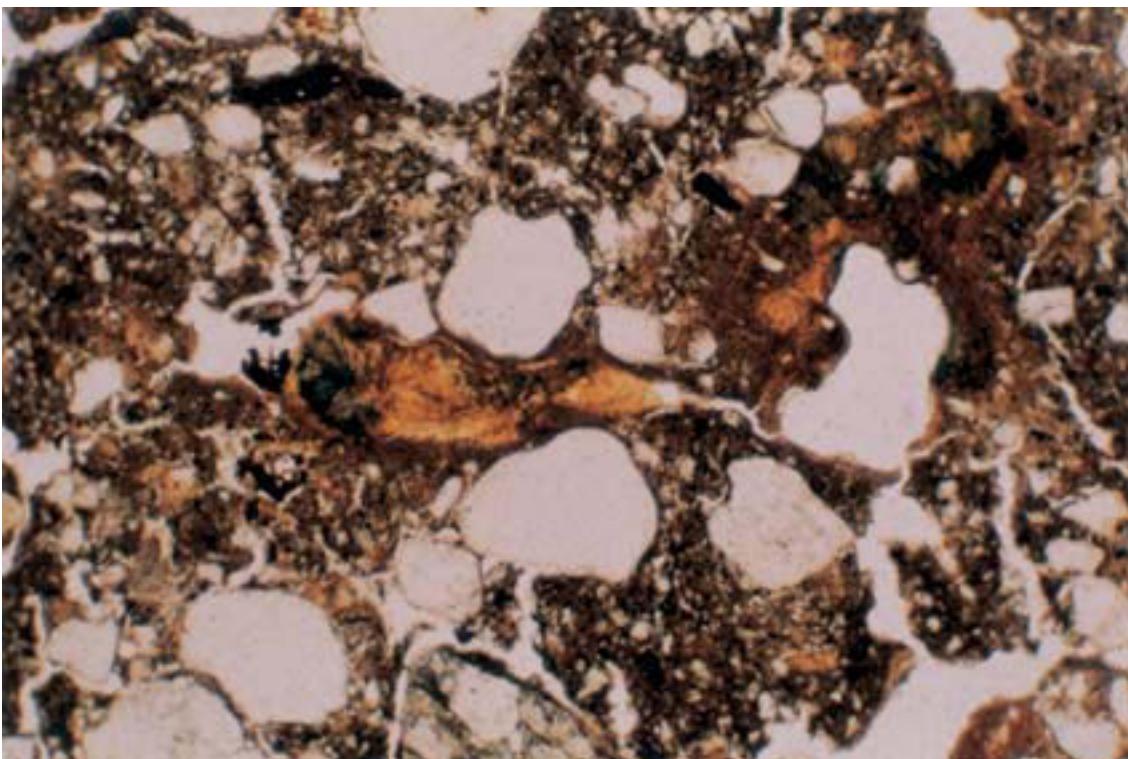


Figure 318 Site 2; sample D; generally dense soil with closed vuggy porosity caused by the slaking of this gully fill which probably arrived as a slurry. Continued drainage of water and cess through the deposit have maintained its 'slaked' appearance and allowed the accumulation of very dusty clay coatings and infills. After the deposition of dusty clay, cess solutions have caused infills of yellow amorphous substances (weakly ferruginous organic and phosphorus compounds?) and crystallisation of blue vivianite. PPL, frame length is 3.3mm

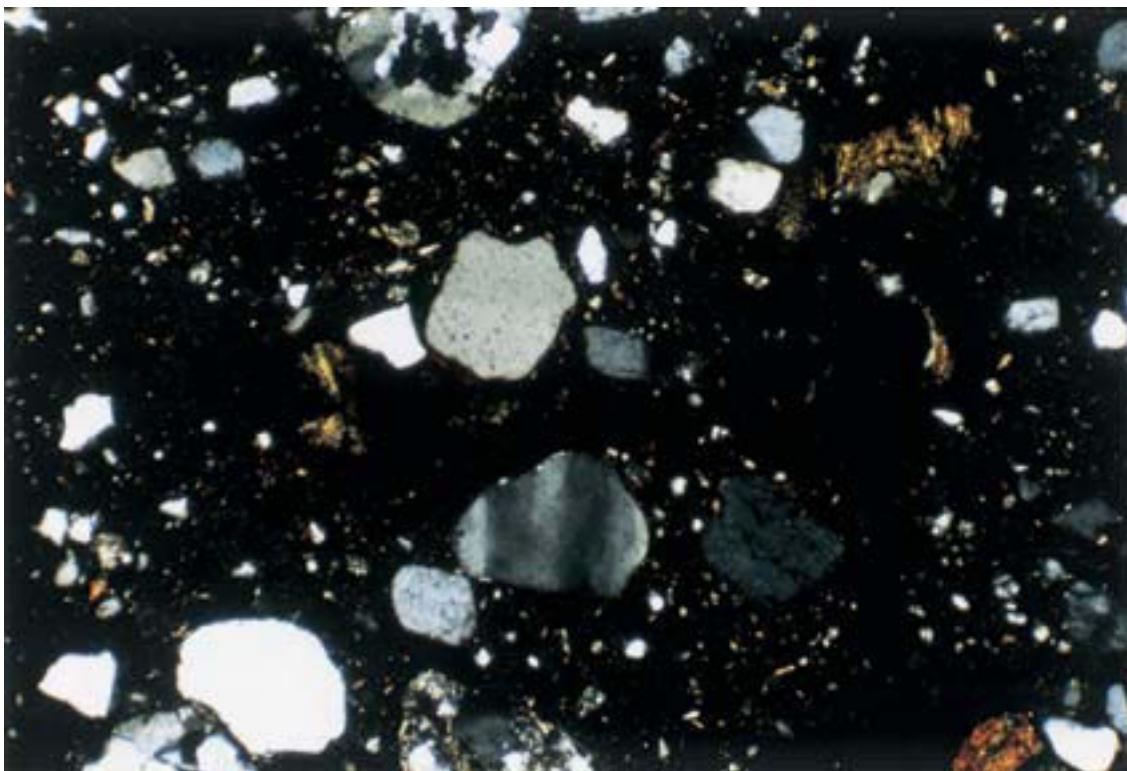


Figure 319 As Figure 318, but XPL; note non-birefringence of amorphous features, very low birefringence of dusty clay coatings, but moderate birefringence of vivianite

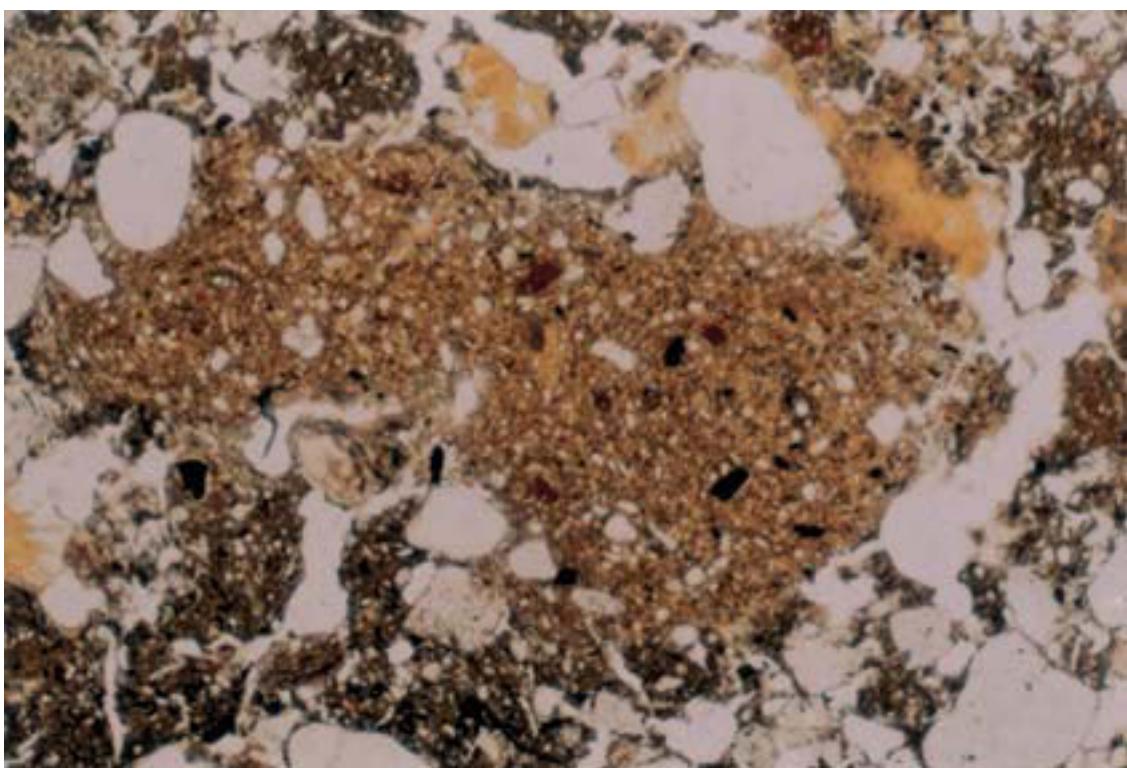


Figure 320 Site 1; sample E; relic fragment of Roman clay floor? in biologically open 'dark earth'/mull brown soil horizon. Later yellow amorphous infills probably relate to post grassland soil contamination from late Saxon and later cess pits. PPL, frame length is 5.6mm

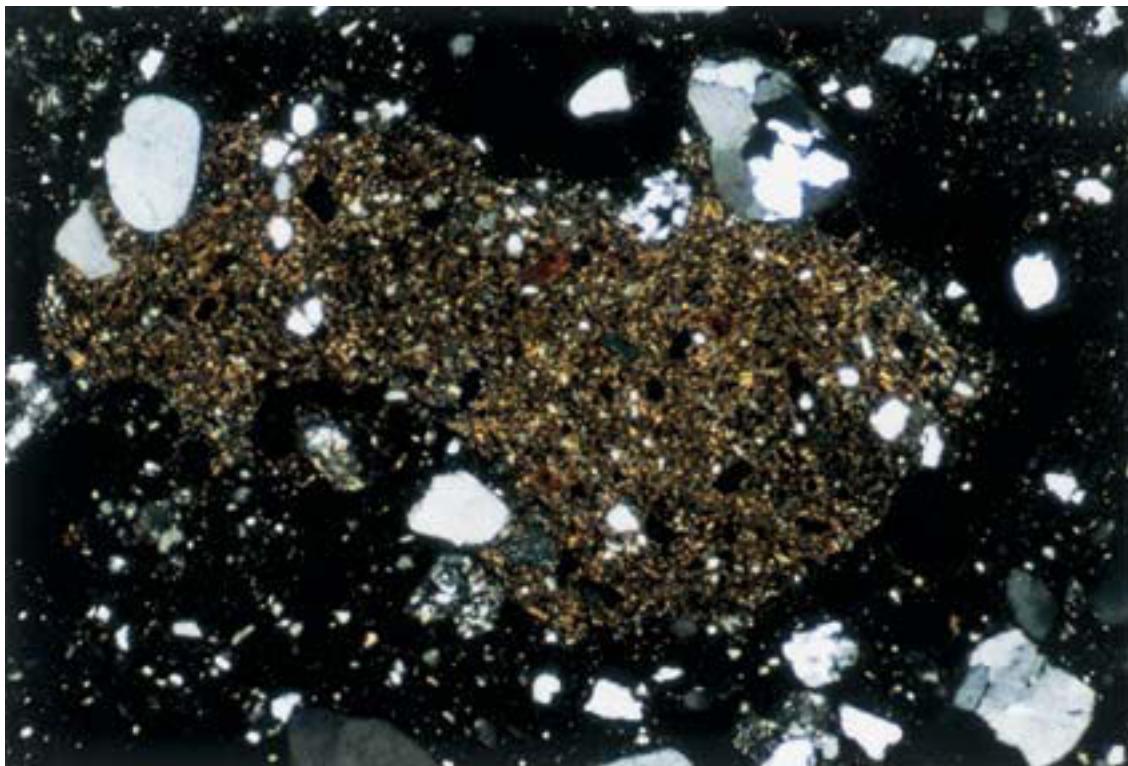


Figure 321 As Figure 320, but XPL; note moderate birefringence of clay floor? fragment in comparison to fine charcoal rich 'dark earth'/mull, and non-birefringent amorphous features

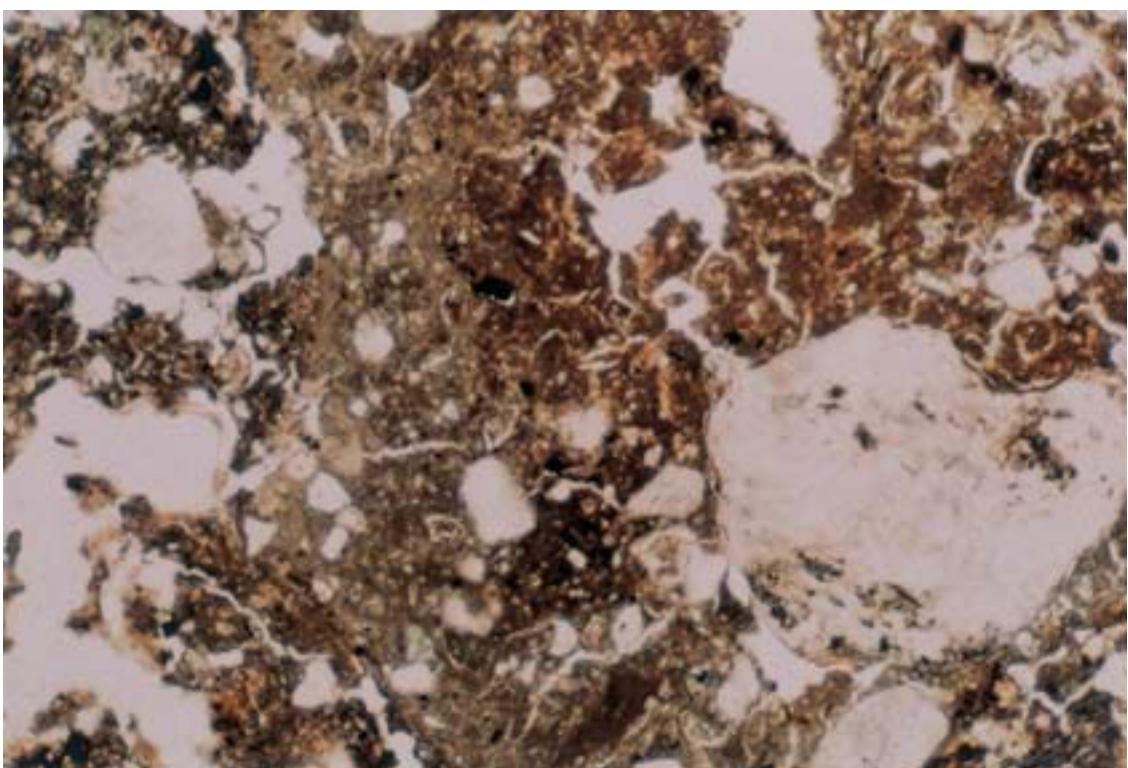


Figure 322 Site 1; sample F; edge of 10mm size inclusion within 'dark earth'/mull soil; inclusion is relic fragment of probably herbivore-ingested mixture of silty, phytolith and diatom-rich fen peat/amorphous organic matter, which also contains some sand size quartz. PPL, frame length is 5.6mm

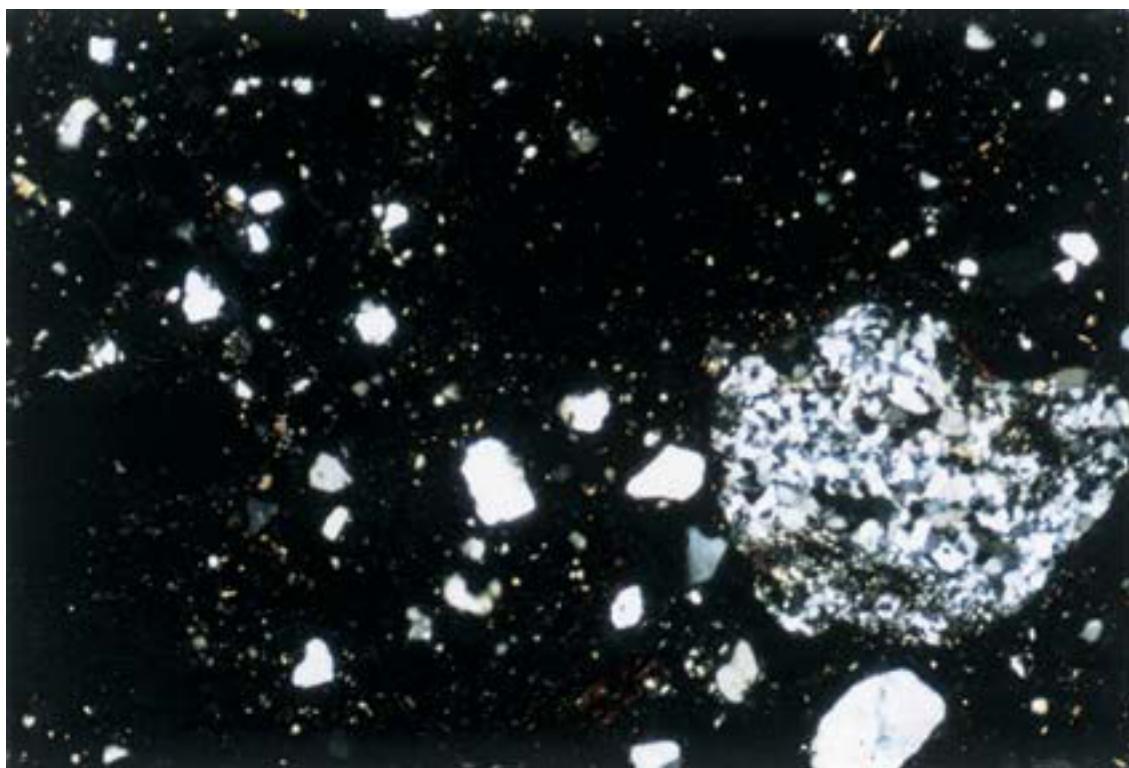


Figure 323 As Figure 322, but XPL; fine organic fabric is totally non-birefringent

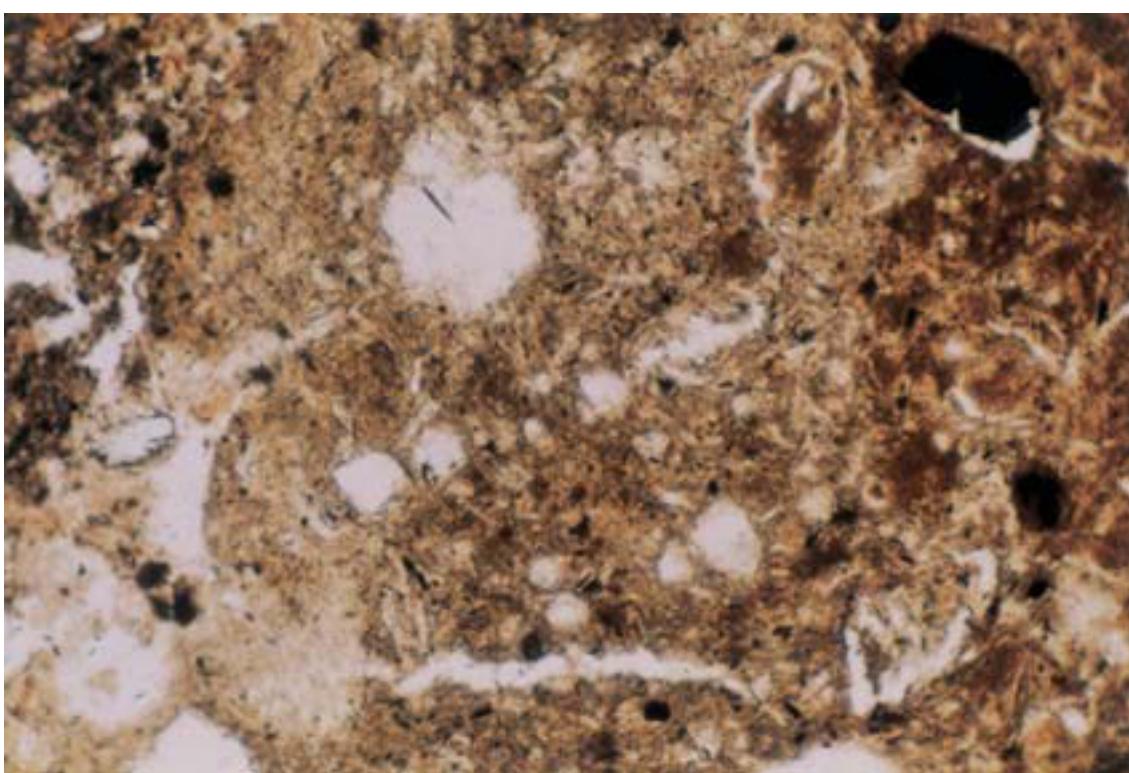


Figure 324 As Figure 322; detail of edge of coprolite showing pale outer margin and brown, strongly organic inner zone. PPL, frame length is 0.3mm

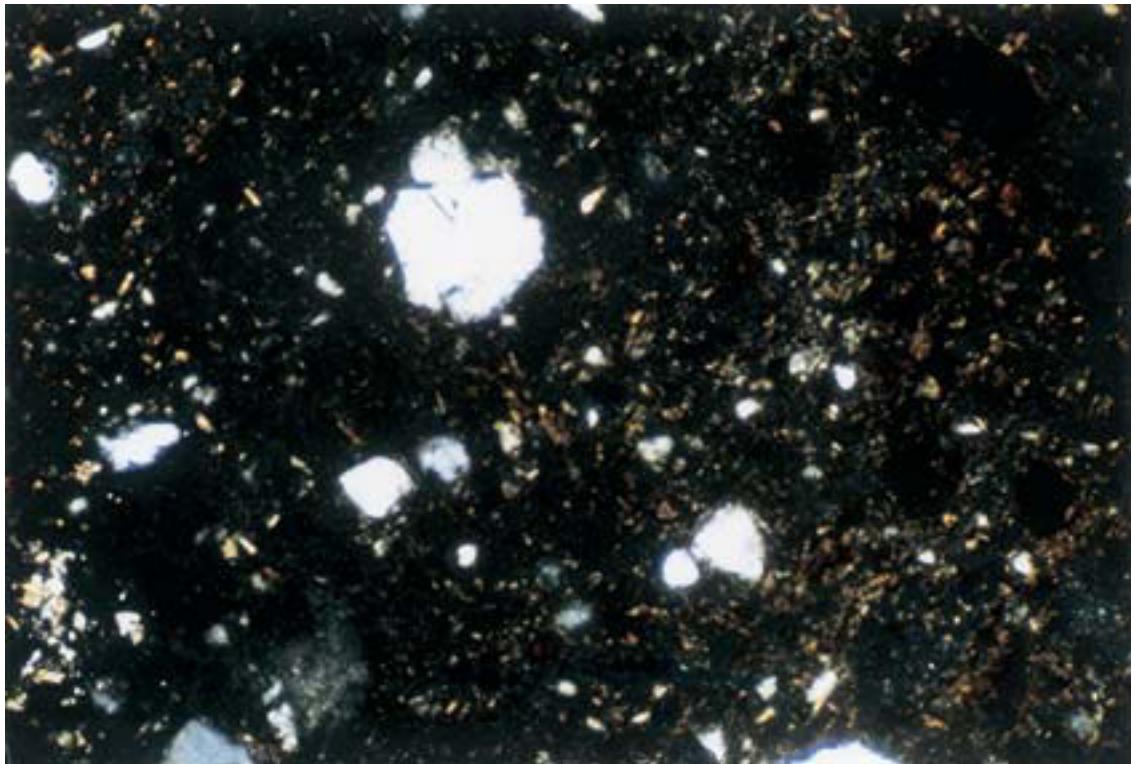


Figure 325 As Figure 324, but XPL, showing high content of silt; note also the remains of a few highly birefringent calcite ash crystals (lower left) as remains of the combusted outer margin (hence lack of organic matter) of the coprolite (manure burning?)

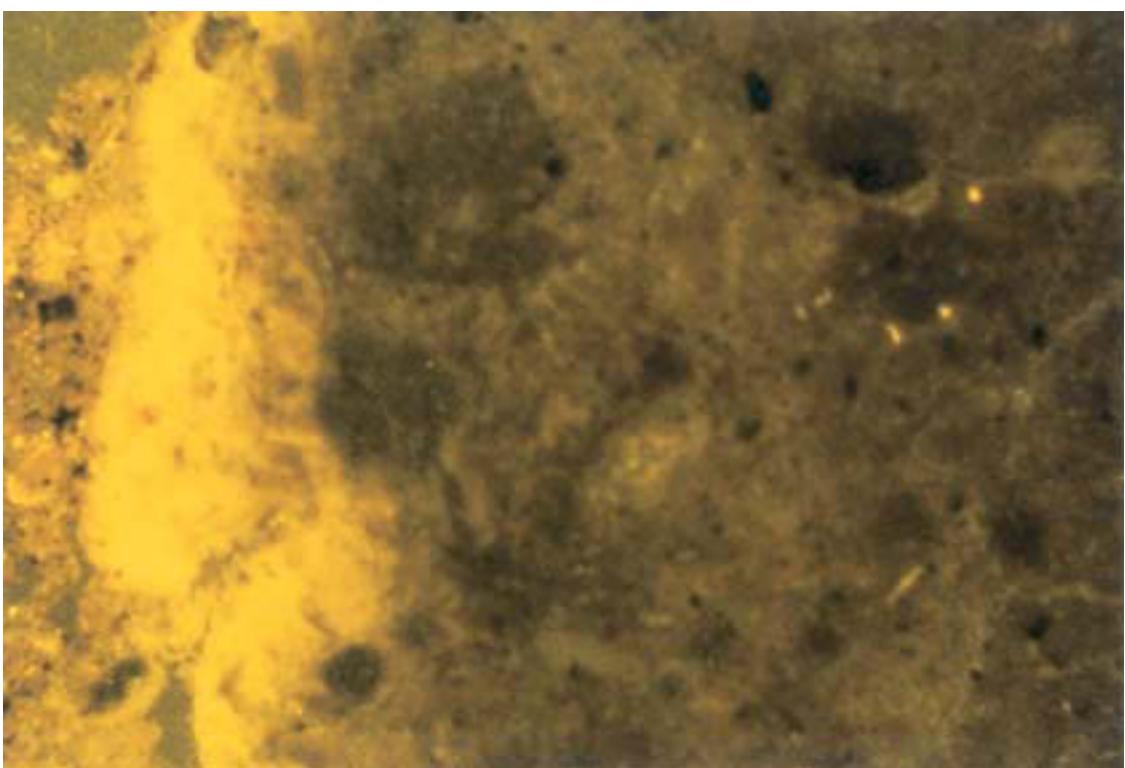


Figure 326 As Figure 324, but UV, showing detail of fluorescent (phosphatised) margin of ingested material (coprolite)

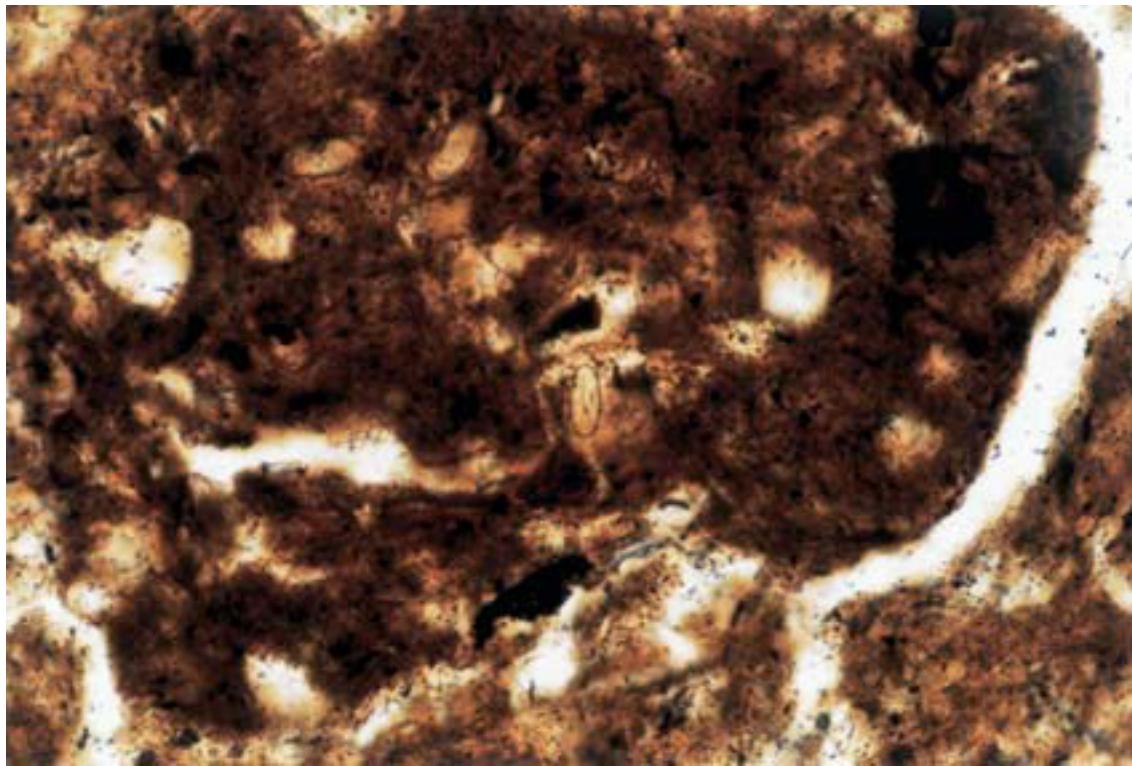


Figure 327 As Figure 322; detail illustrating presence of diatoms in poorly digested amorphous organic matter fabric; diatoms were probably ingested during drinking by the herbivore. PPL, frame length is 0.16mm

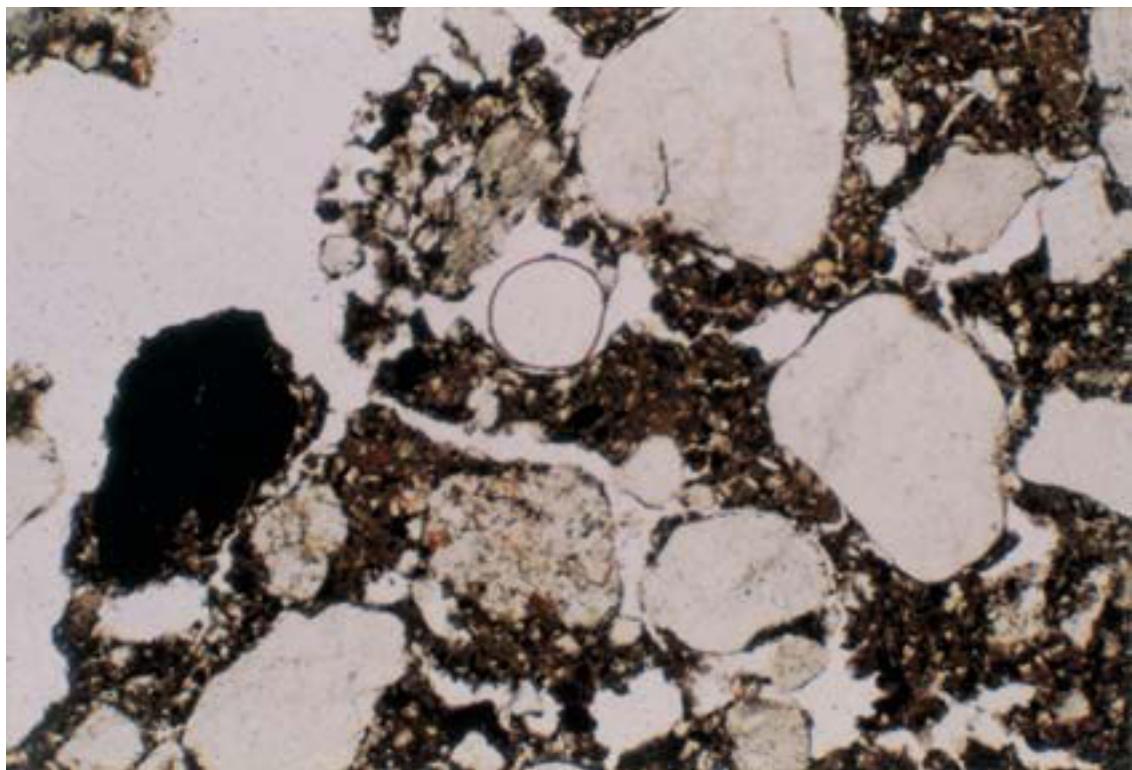


Figure 328 Site 2; sample B; probable spore case of vesicular arbuscular mycorrhizae in 'dark earth'/mull grassland soil; their presence may be associated with roots of plants under stress (Wiltshire pers comm.). In addition, spore cases of this size range (c 130µm) may infer the presence of sheep (Romans and Robertson 1983). PPL, frame length is 3.3 mm

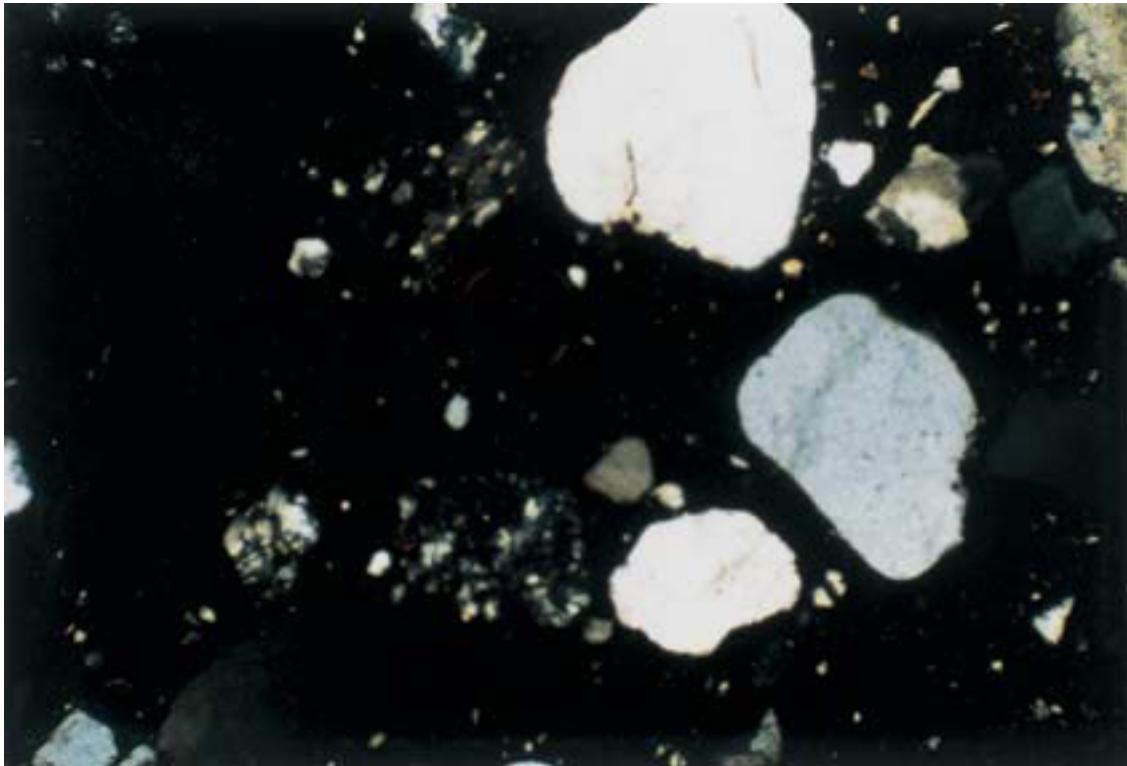


Figure 329 As Figure 328, XPL showing birefringence of spore case, an indicator of the spore case being >900 years old (Romans and Robertson 1983)

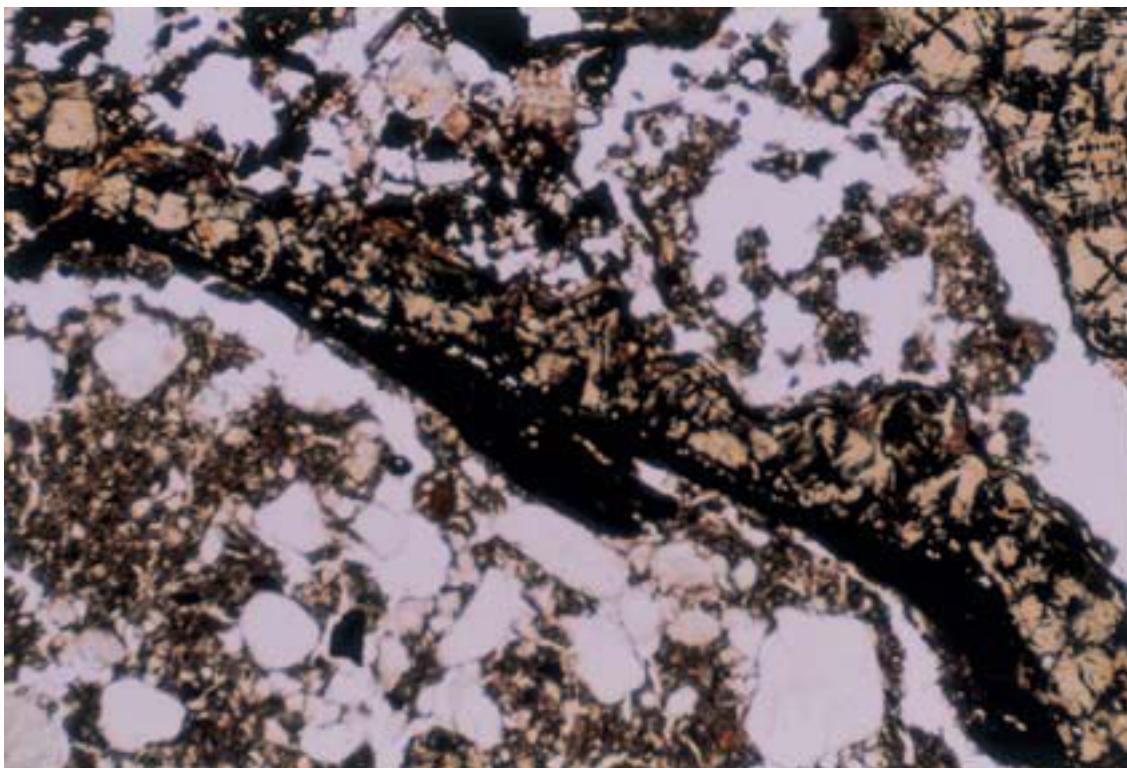


Figure 330 Site 1; sample E: large relic fragment of Roman slag in 'dark earth' / mull soil. Porosity within the slag (top) is characterised by the fine organo-mineral micro-aggregate excrements of Enchytraeids, whereas outside the slag the less dark, more mineral and coarse excrements of earthworms are present; both are indicators of the very high levels of biological activity in this mull grassland soil. PPL, frame length is 5.6mm

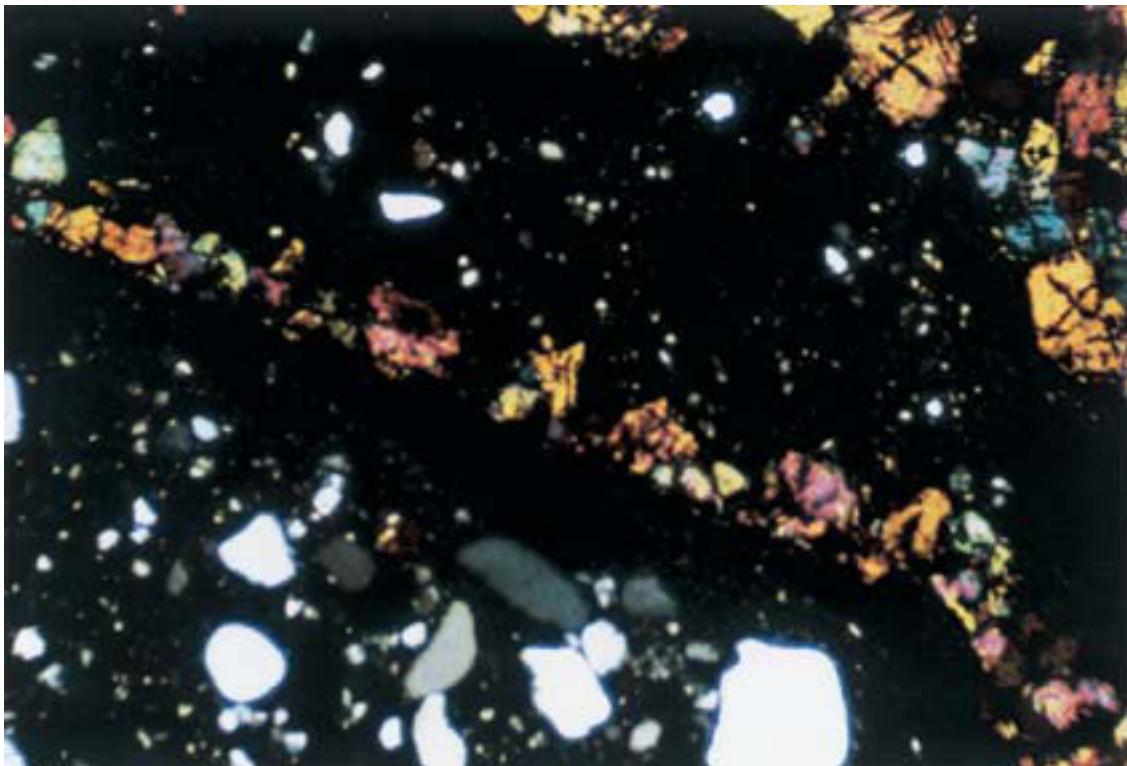


Figure 331 As Figure 330, but XPL showing distinctive birefringent pattern of this slag fragment



Figure 332 As Figure 331, but oblique incident light (OIL) showing iron-rich nature of the slag and the rusting edge

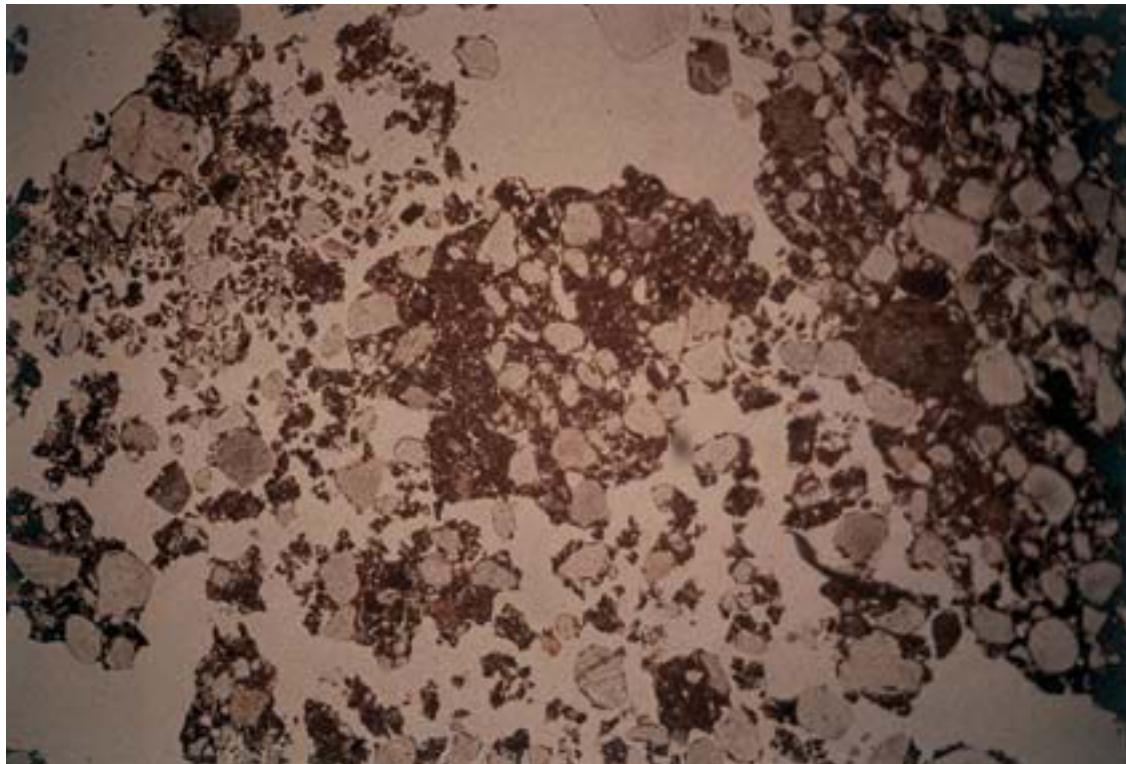


Figure 333 Site 4; sample N; very open fabric of earthworm and Enchytraeid worked mull grassland soil ('dark earth'). Microfiche reader image, frame length is c 1.6 cm.

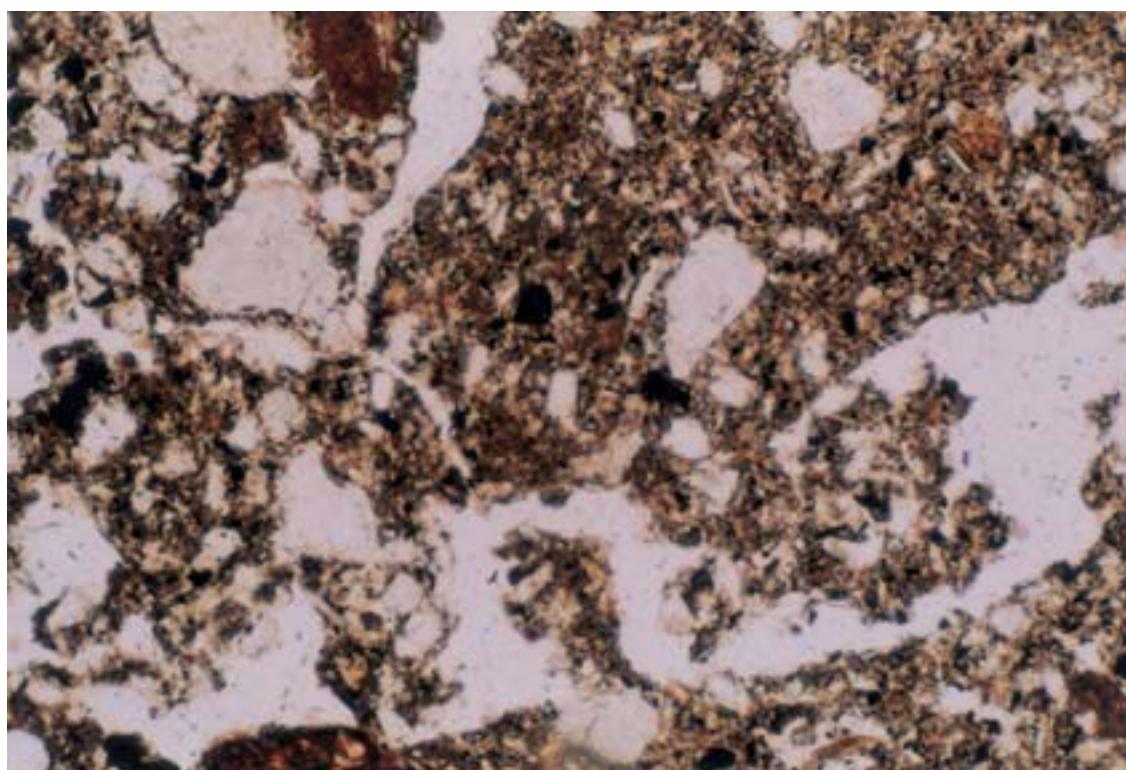


Figure 334 As Figure 333; detail of coarse earthworm excrement and surrounding finer Enchytraeid excrements; note inclusion of silty clay soil fragments probably relic from Roman herbivore coprolitic deposits. PPL, frame length is 0.3mm

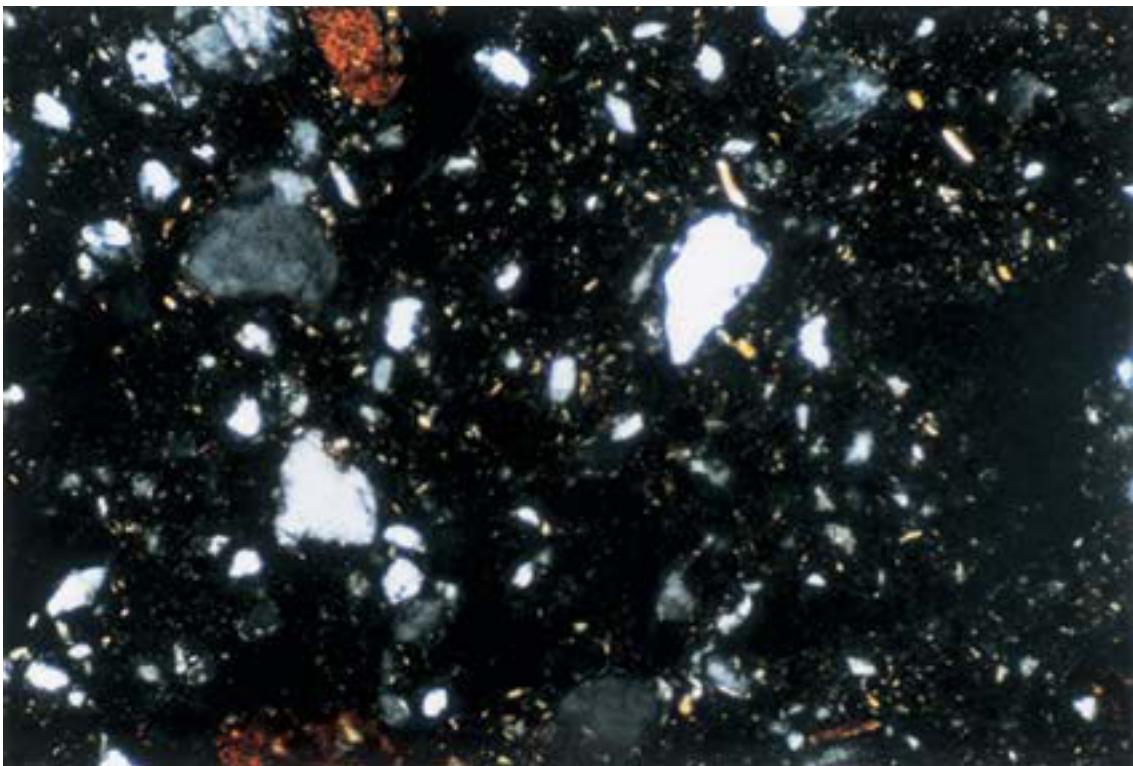


Figure 335 As Figure 334, but XPL

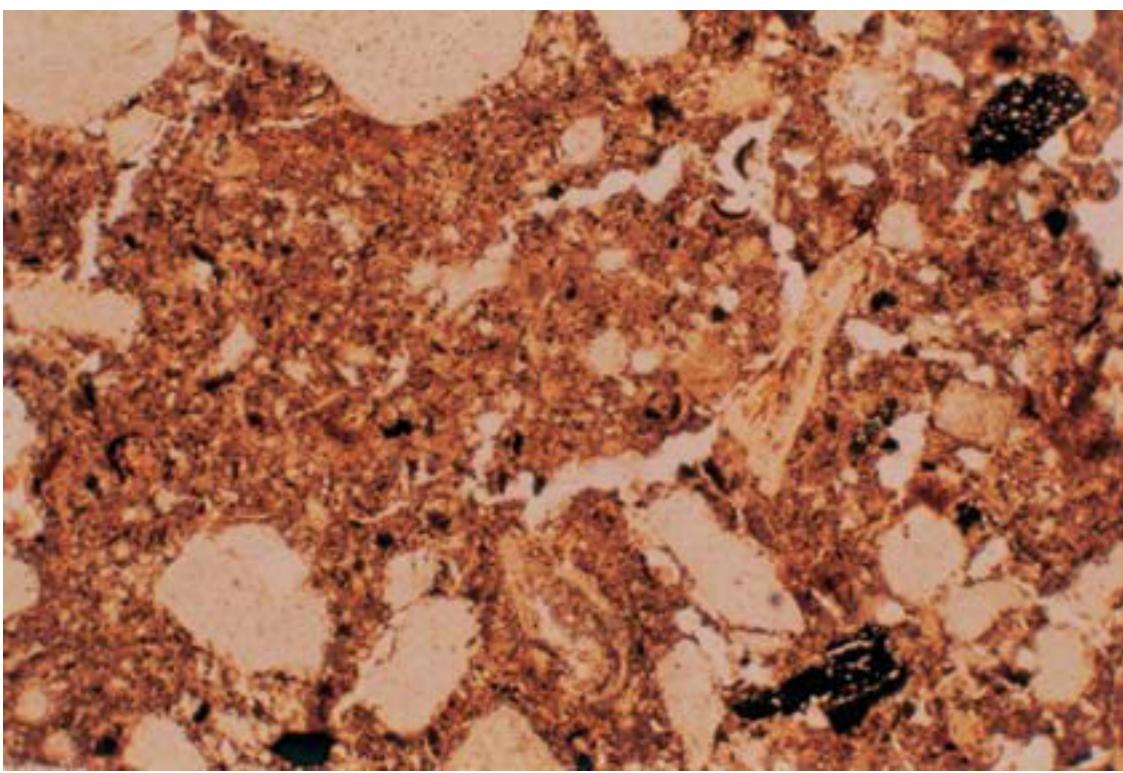


Figure 336 Site 2; sample L; late Saxon midden spreads containing fine and coarse charcoal, bone fragments (centre right) and human coprolitic fragments (eg centre bottom). PPL, frame length is 3.3mm

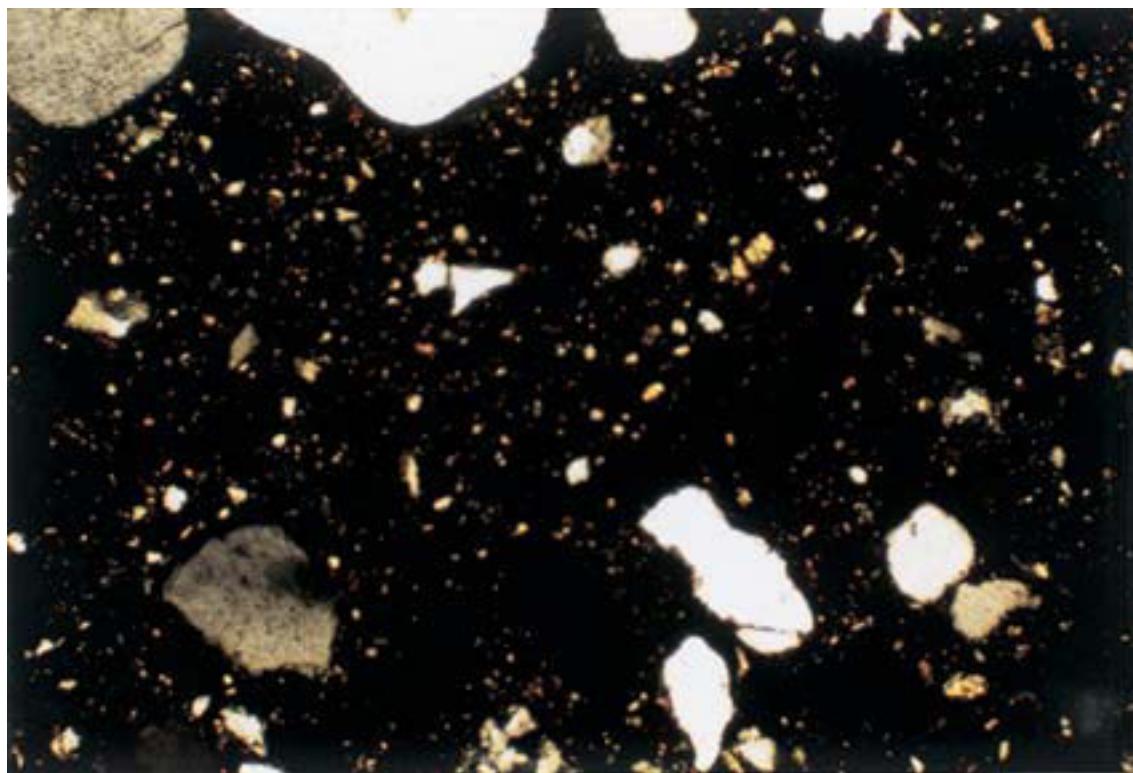


Figure 337 As Figure 335, but XPL; note very poor birefringence of probably phosphatised (coprolitic) bone fragment, and non-birefringence of human coprolitic remains

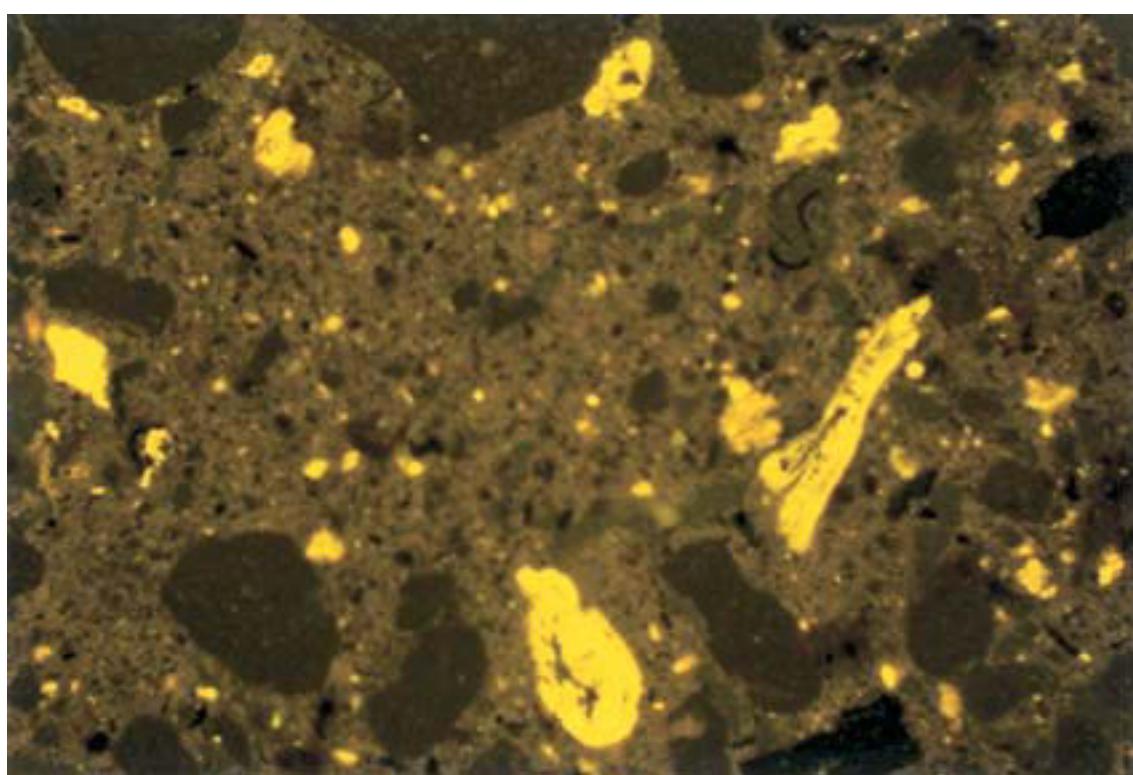


Figure 338 As Figure 337, UV, showing highly fluorescent (phosphatised) bone and coprolitic remains

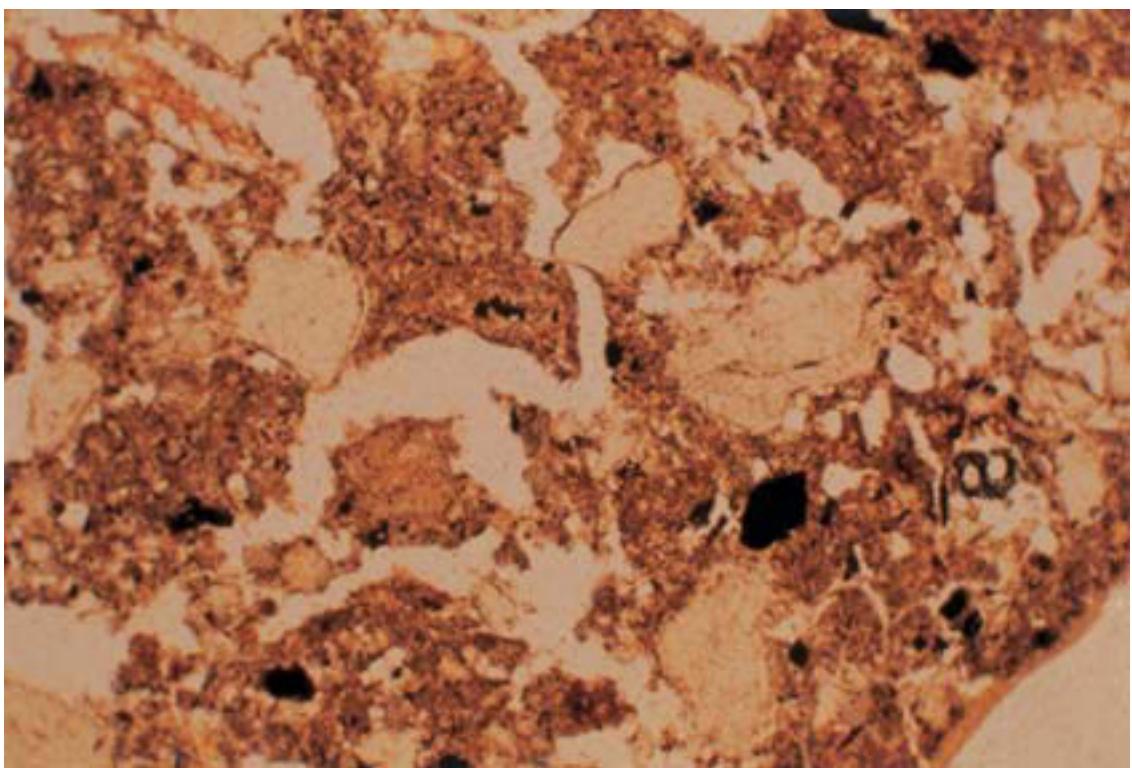


Figure 339 Site 2; sample L; grass and wood ash-rich late Saxon midden layer. PPL, frame length is 3.3 mm

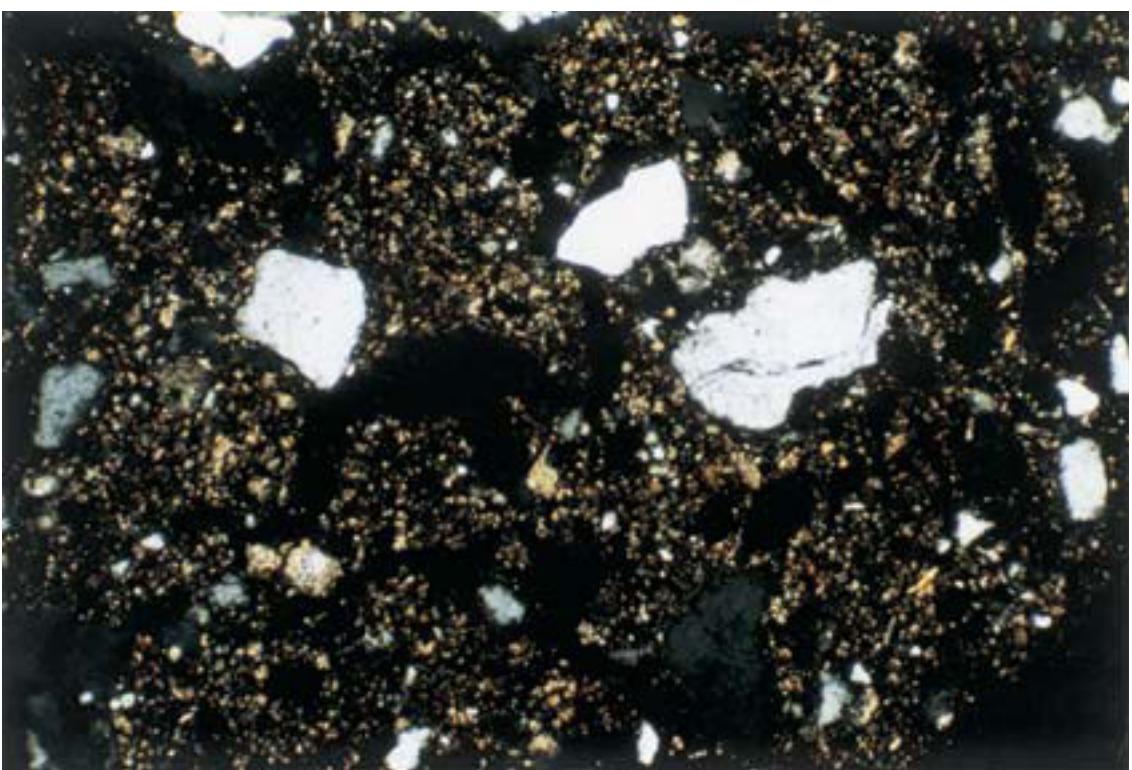


Figure 340 As Figure 339, but XPL, showing highly birefringent specks of calcite ash in this unweathered zone

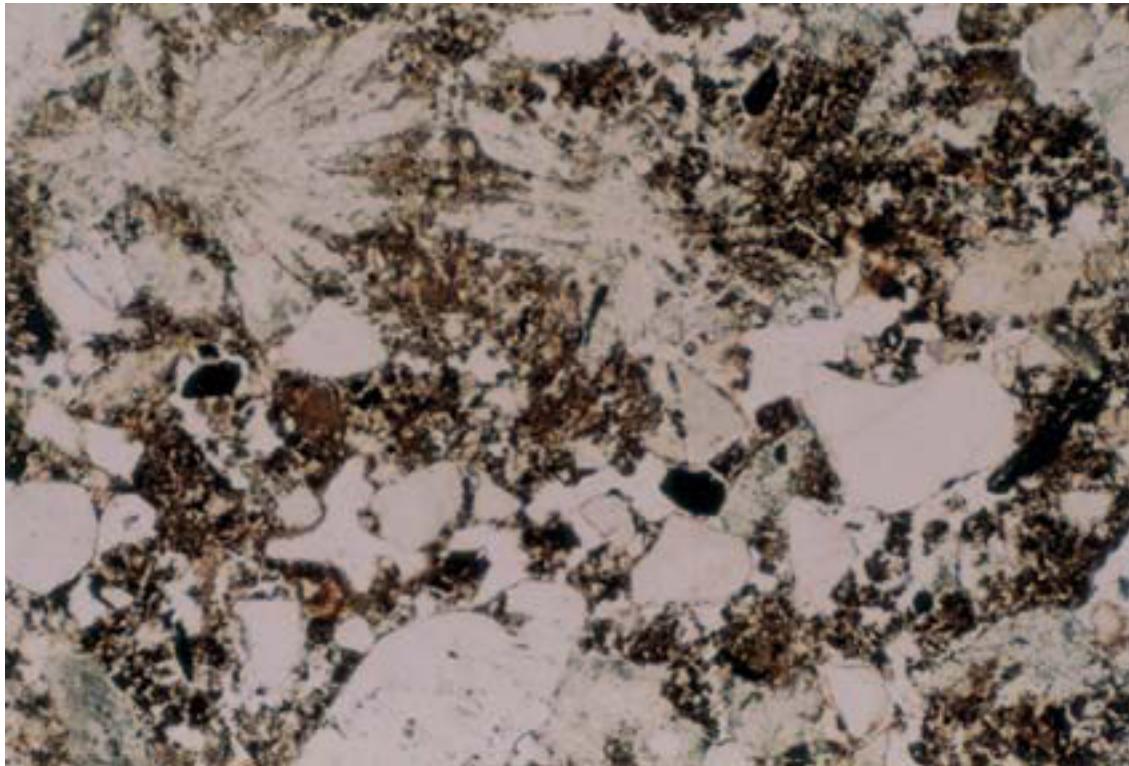


Figure 341 Site 2; sample G; possible ghosts of vivianite in dark brown charred amorphous peat of late Saxon (dumped) origin (turf fuel / walls?). PPL, frame length is 5.6mm

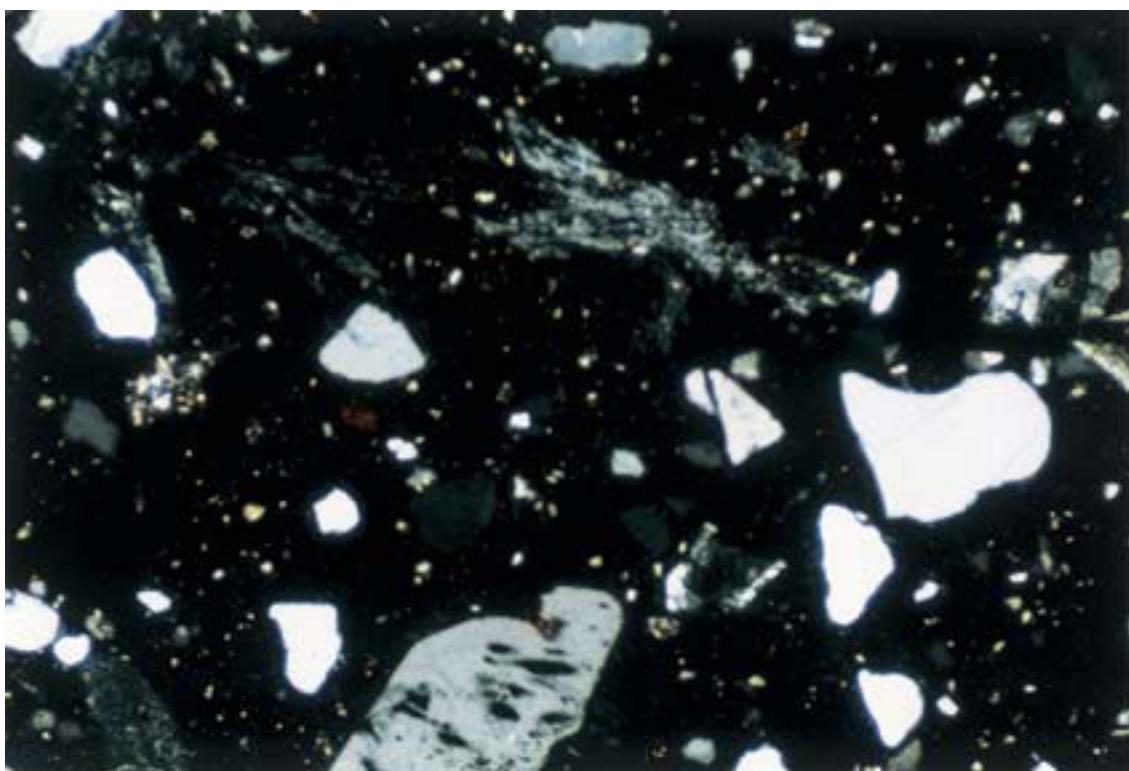


Figure 342 As Figure 341, XPL. Very weak birefringence of vivianite? may indicate acidification (ph 5.6) of deposit by solutions draining from early medieval smithing above

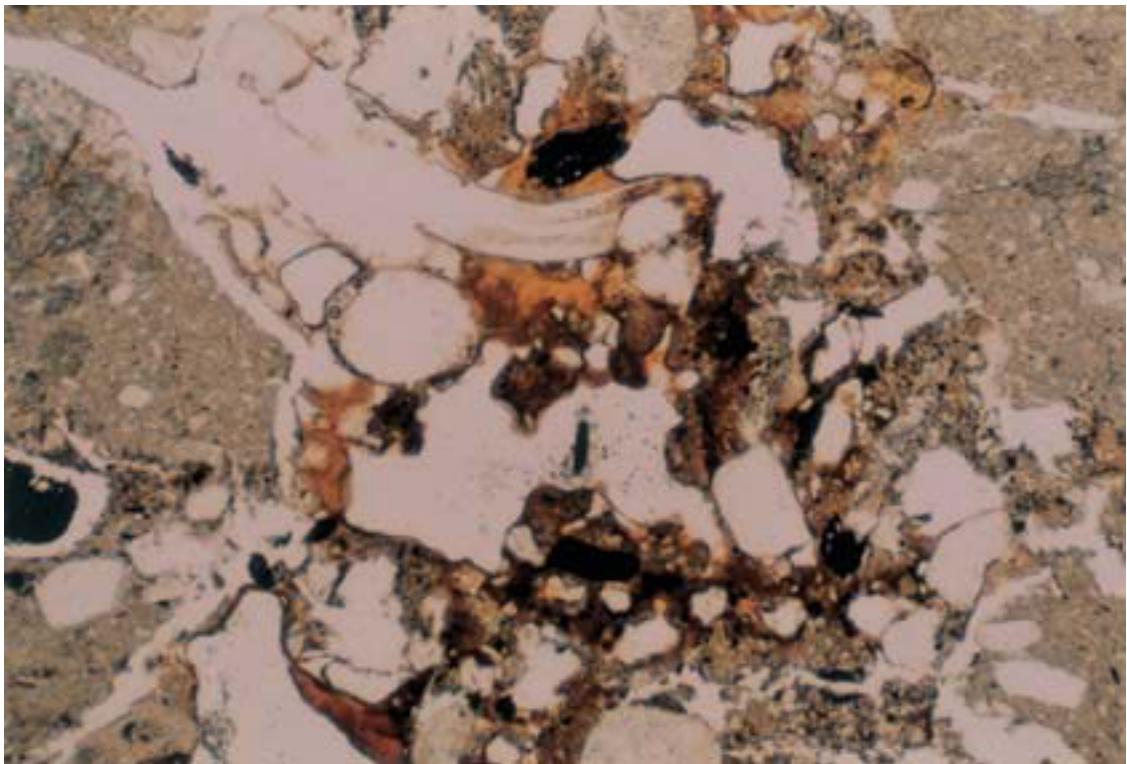


Figure 343 Site 2; sample H; crack in very coarse fragment of late Saxon dumped /swept alluvial? silty clay loam floor material, has been infilled by charcoal-rich fine fabric, which has been in turn penetrated by rooting. The last suggests a period of open vegetated ground. The root pseudomorph is preserved by amorphous iron staining. PPL, frame length is 5.6mm

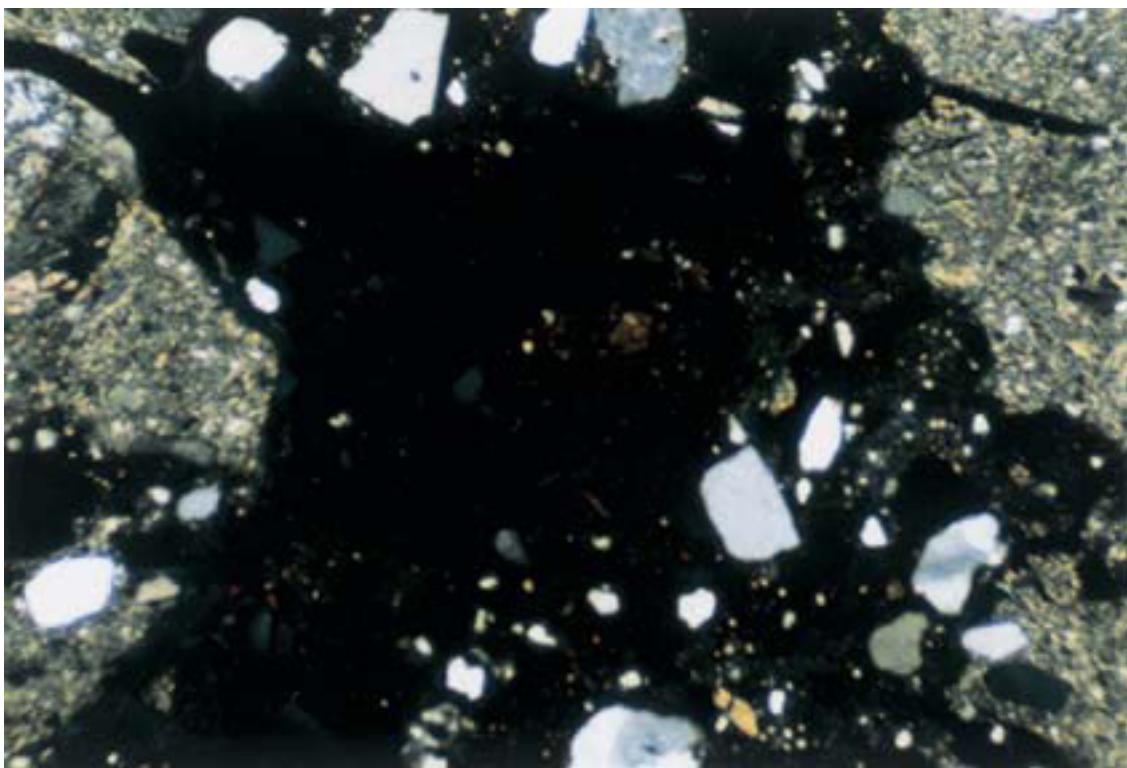


Figure 344 As Figure 343, XPL showing silty clay birefringence of floor fragments and non-birefringence of iron stained fabric

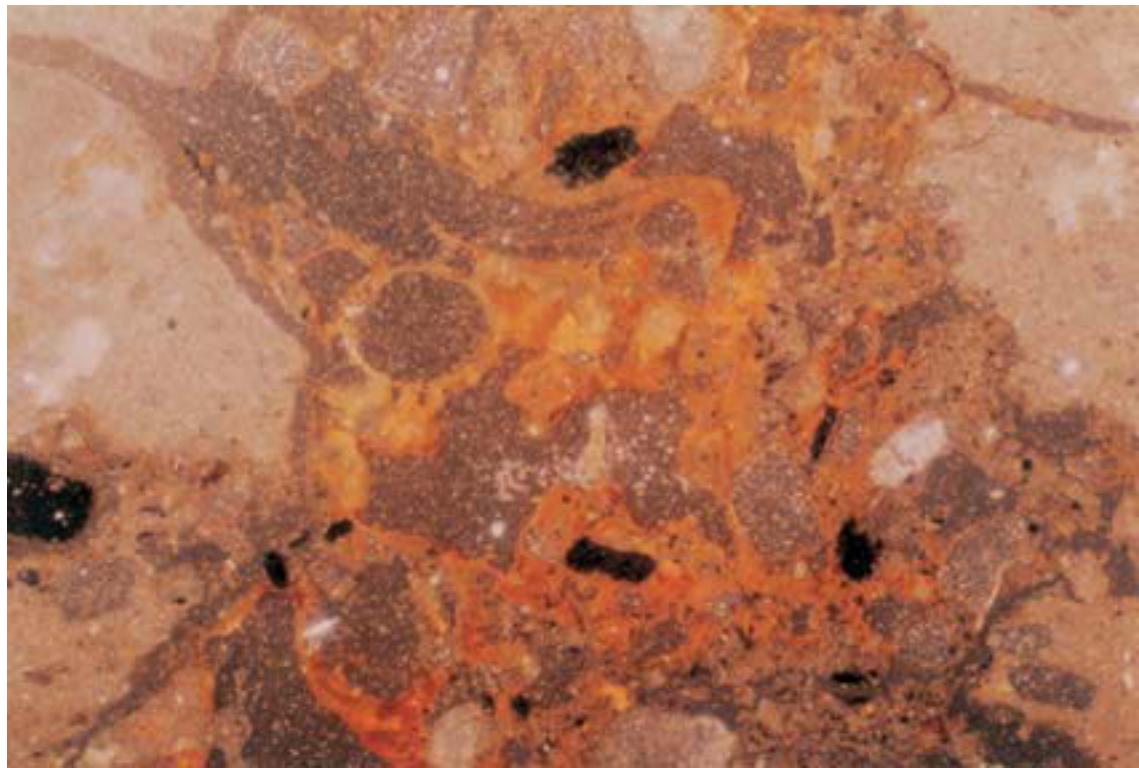


Figure 345 As Figure 343, but OIL, showing iron staining and ferruginous pseudomorphic replacement of roots, probably by iron-rich solutions draining down from medieval smithing