THE ROMAN PERIOD

Site A: *Period 1*

Within the excavated area the earliest traces of human activity were encountered in two zones on Site A, one beneath the rampart on the west, the other between the ditches of the Period 2 defences to the east (Plan, Fig. 3; Sections A–B, C–D, H–J and J–K, Figs 4 and 5). Three phases of timber buildings and associated floor levels had survived in these zones, as well as a fourth phase from their destruction, these levels being best preserved beneath the Period 2 rampart and at the northern end of the berm between Ditches 1 and 2 (Plates 2, 4 and 6). Phases 1.1 and 1.2 were only revealed in trenches dug from the level of the phase 1.3 structures. The major features from the early phases were slots in the subsoil, presumably for timber foundations, covered by thin occupation and destruction levels which were, in turn, sealed by phase 1.3 levels. The third phase of structures was sealed by a destruction layer and a spread of burnt debris, here termed phase 1.4. On Site B no comparable early occupation was recognised, although only a little of the pre-Roman ground surface was exposed beneath the deep gravel makeup to either side of Ditch 4 (Section L–M–N, Fig. 8).

The earliest phase, Phase 1.1, in the western zone of Site A comprised an east-west foundation slot (179) and a small pit (180), both filled with and sealed by a layer of pebbly silt and charcoal (174) (Plan, Fig. 3; Section A–B, Fig. 4; Table 2). Two small stake-holes were noted 2m south of (179) and a group of five lay 0.5m–lm north of (180). The occupation deposit (174) petered out and was not visible in the limited exposures of the early deposits south of Section C–D. In the eastern zone six slots (162), (164), (512–515) were identified cut into the natural, associated with a thin occupation deposit (105) and (163) (Plan, Fig. 3; Section H–J, Fig. 5). To the south, two trenches, 3m and 7m south of (162), revealed slight platforms in the natural but no recognisable structure. A third trench 15m to the south revealed no features, neither did any survive in the severely eroded ground surface between Ditches 2, 3 and 6a–b to the east in Section G–H (Fig. 5). Dateable finds, principally from (163) and (174), included pottery and glass of Flavian to Trajanic date but also a brooch of late first or early second century date (coarse ware 1–5; samian 1–6; mortaria 7 and 8; glass 2, 22, 24a, 26, 26b, 26d, 26f and 29b; brooch 1). A *terminus post quem* for this material should lie in the early Trajanic period.

Phase 1.2 showed major structural reorganisation in both zones. On the west a more substantial timber building was erected, the south wall of which was represented by the slot 178 (Plan, Fig. 3; Section A–B, Fig. 4). To the north was a marl floor (177) that overlapped the edge of the trench, presumably abutting the now vanished timber wall uprights, and extended north for a distance of 4.5m before petering out. Impressions of an interrupted timber sill beam (516) on the surface of this floor suggest subdivision of this floor, but the extent and plan of the whole building is unknown from the limited area surviving between later disturbances. On the south, an area metalled with up to 0.2m of limestone pebbles (175) abutted the buildings, this surface overlapping the south edge of (178) and extending at least 4m to south and 5m to the west. Isolated exposures of

metalling between later features showed the surface had extended for a distance of at least 11m to the south. However, in Section E–F to the south-west, patches of marl floor (101) suggested another building had existed beyond that point.

In the eastern strip the primary features were sealed by an extensive area of limestone pebbles (98) and (104), sealed at the northern end by sandy layers (97), (100), (113), (Plan, Fig. 3; Section H–J and J–K, Fig. 5). Although not so substantial this surface was probably equivalent to the metalling (175) on the west, and was traced over a distance of 25m from the northern limit of excavation and eastward for 14m from the southernmost exposure of (175). No structures can be assigned with any certainty to this phase, but a series of irregular stone blocks resting on this metalling but underlying the Period 1.3 slot (136 A and B) could have served to support a timber structure raised above this surface. Several other stone blocks lay on this surface to the south but had been displaced by later disturbance. Alternatively, these blocks may have been inserted as foundations for the phase 3 structure but as no cuts for them were seen a Period 2 date is more likely. Finds from the metalling included samian of the late first and early second century, and a much worn mortarium of that date trodden into its surface, suggesting its use in the latter part of the dating range (coarse ware 6–12 and 23; samian 7–9; mortarium 1). A brooch and glass of similar date were also recovered (brooch 2; glass 15, 24b).

Phase 1.3 produced building remains and occupation debris, sealed by destruction levels of Phase 1.4. These two phases were not always clearly distinguished but survived best in the western zone where they had been sealed and protected by the Period 2 rampart. The eastern zone was also partly sealed by burnt debris but had been subject to later truncation and disturbance in Periods 6–9. Elements of a timber building were recognised in the former zone, the southern end or south-western corner of a building of least two rooms surviving there. At the northern end, truncated on the east by the Period 4 wall trench and extending beyond the limits of excavation, was a red marl floor (170) forming part of a room bounded on the west and south by foundation slot (517) (Plan, Fig. 3; Sections A–B, Fig. 4 and J–K, Fig. 5; Table 3). The remaining sections of (517) consisted of a vertically sided and flat bottomed trench 0.20–0.30m wide and up to 0.15m deep containing much burnt timber. The floor surface was well trodden and incorporated a raised bench or foundation aligned north-south, the top of which had been destroyed. The overlying burnt debris, (168) and (169), sealed several sherds of a globular amphora which appeared to have been set in a slight recess in the eastern side of this feature, the sherds coated with a carbonised deposit. At the south end of the room a burnt timber structure separated two slighter platforms, each 0.15m above the general floor level and abutting the western and southern wall trenches. The remaining charred timber consisted of two horizontals 0.80m long by 0.10m wide set 0.50m apart at floor level. One or possibly two verticals had been placed symmetrically at the junction of these with the wall. The purpose of this structure is uncertain; it may have flanked a rather narrow doorway leading to the adjoining room or it may have been some fixed item of furniture against the wall.

The room to the south was more complete, lacking only its eastern limit and measuring 3.8m north-south by at least 2.7m east-west. In its original state it may have been floored with red marl, traces of which survived around its perimeter. The surviving floor consisted of 0.50m of cream sandy mortar (172) overlying 0.10m of pitched gritstone rubble (Plate 1). The surface dipped slightly from each side to the centre and was

interrupted only by one cavity for a rectangular vertical timber 0.15 × 0.50m in section which had been set near the north wall of the room. Traces of burnt timbers in a 0.50m deep foundation trench (518 and 519) were visible along the western side of the room. A gap of approximately 0.50m in the centre of this side, flanked by traces of two verticals, one set in a slot 0.15m deep, could mark a rather narrow entrance. No obvious foundation trench existed on the south, the regular edge to (172) suggesting that it had here rested against a now vanished sleeper beam resting on the earlier metalled layer (175), 0.20m below (Section A–B, Fig. 4). Immediately south of (172) were two groupings of three or four blocks of gritstone rubble (526 and 527), open to the south but delimiting an area of metalling 2m by 2.5m, the top surfaces of the stones being level with that of (172). No sign of flooring existed within this area but a quantity of carbonised, sprouted grain rested on the metalling and between the stones (archaeobotanical evidence, below, p. 300). As noted above, the presence of structural remains to the east suggests that by this stage at least the building had extended a further 5m on that side.

Period	Date	Major Changes in Activity
1.1	Trajanic Late first to early second century	Site A: military/civil settlement
1.2	Hadrianic/Early Antinine Early second century	Site A: military/civil settlement
1.3	Mid to late Antonine Mid second century	Site A: military/civil settlement
1.4	Mid to later Antonine	Site A: military/civil settlement, destruction levels
2	Late Antonine Late second century	Site A: earth defences of fort, Ditch 1 Site B: open area, Well 2
3	Early to mid third century	Site A: earth defences of fort: Ditch 2 Site B: open area
4.1	Mid third century	Site A: stone wall added to earth defences Ditch 2A Site B: Ditch 4, timber buildings
4.2	Later third to early fourth century	Site A: silting of Ditch 2a Site B: colonnaded building
5.1	Early to mid fourth century	Site A: Ditch 3 Site B: Ditch 3 and Well 1
5.2	Mid to late fourth century	Site A: silting Ditch 3 Site B: silting Ditch 3, dereliction of buildings
5/6	Fifth to sixth centuries	Site A: no activity Site B: possible re-use of colonnaded building
6	Early to mid Anglo-Saxon Sixth to seventh centuries	Site A: inhumantion burial Site B: inhumation cemetery
7	Mid to late Anglo-Saxon Ninth to tenth centuries	Site A: re-defence of fort, occupation on berm Site B: no activity
8	Medieval Eleventh to twelfth centuries	Site A: cultivated soil Site B: occupation
9	Later medieval to Post-medieval	Site A: cultivated soil, forth wall demolition Site B: cultivated soil

Table 1: Little Chester: context phasing and dated finds, Roman Periods 1–5.

Context	Coarse Pottery		Samian		Mortaria		Coins	Brooches		Glass		Notes
	Date followed by catalogue no.											
Phase 1.1												
Timber buildings												
105	c1-ec2	4	ec2	1,2				mc1-lc1	1	69-96	22,26d	
162	-		69-117	3								
163	c1-mc2	5	ec2	4								
174	c1-mc2									lc1-ec3	26a,26f	
174a	c1-mc2	1,3	c2	5	65-150	7,8				mc1-lc1	2,24a,26b	
174b	c1-ec2	2	54-80	6								
512-515	-											
Phase 1.2												
Metalled surfaces and occ. levels												
97	2/4-4/4 c2	6,8,10	ec2	7						lc1-ec3	24b	
98	RB		69-96	8								
104	c1-ec2	9,11,12	ec2	9	70-110	1						
140	-	23										
175	RB							lc1-mc2	2	lc1-lc2	15	
177	c2	7										
178	RB											
Phase 1.3												
Timber buildings and occ. levels												
69	c2	14,15, 19,22, 26-28, 31-34, 36,39, 42	ec2	10				c2-c3	3	lc1-c2	7a,20	
81	2/4-4/4 c2											
95	-		69-96	11								
102	e-lc2											
108	2/4-4/4 c2	24								m-lc1	3	
116	c1-2											
119	2/4-4/4 c2											
120	RB		80-100	12								
121												
124	c2-ec3											
125	c2											
126												
135	c2											
136	2/4-4/4 c2	16,17, 29,35, 37	138-196	13,14						c2-3	26c	
137	Prob c2											
138	m-lc2									lc1-ec3	27i	
156	2/4-4/4 c2											
160	69-mc2	30	ec2	15								
171	2/4-4/4 c2	13,25, 40,41	160-190	16,17								

Context	Coarse Pottery		Samian		Mortaria		Coins		Brooches	Glass		Notes
				Date followed by catalogue no.								
Phase 1.4												
Destruction levels												
83	c2											
84	c2-ec3	45	150-192	18-21						Flav-ec3	25e,27h	
133	2/4c2-ec3		ec2	22			Trajan	8				
145	2/4c2-ec3		150-170	23,24			Nerva Trajan x 2 c2	7 9+11 20				
158	2/4c2-ec3											
168	2/4c2-ec3	43	150-170	25								
169	2/4-4/4 c2	44	138-196	26			Domitian	6		70-170	10	
Phase 2												
Rampart and redeposited burnt debris												
6	m-lc2		120-145	27								
22	c3?	80-85	160-190	28	130-170	4,5,9						
23	mc4 sherd intrusive	79	lc2	29						c2-ec3	25	
40	2/4c2-ec3	48,54, 56,57, 61,63, 65-67, 70,71	150-190	30-32						70-150	19,27a, 27b	
41			145-175	33								
165	mc2-ec3	46,47, 49-53, 55,58-60,62, 64,68, 72,76, 77	(155-175) lc2-mc3	35	150-170	2,3,10	Faustina I 141-161	16				
176	m-lc2	69	125-150	36								Metalling
132	m-lc2		120-145	34								
Phase 3												
Ditch 1 fill												
61	c2-ec3		117-145	40,41								
68	c2-ec3	89,93, 97	150-180	43,43	e-mc2	13				70-150	11	
70	c2-c3		lc2-mc3	44								
71	c2-c3				ec2	11						
76	(c3-c4) intrusive		c2	45-47								
80	c2-ec3		117-192	48								
85	c2-ec3	87-88, 95	lc2-mc3	49-50	130-170	6						Base
99	c1-c3		c2	51								
106	c2-ec3		96-138	52								

Context	Coarse Pottery		Samian		Mortaria		Coins		Brooches		Glass	Notes
				Date followed by catalogue no.								
107	c2-c3		117-161	53								
123												
127	c2-c3		14-85	55	100-120	12						Ditch 1fill
131	c2-ec3	86,94, 96	138-196	56					mc1-mc2	4		Ditch 1fill
134	c2-c3		138-196	57								Ditch 1 lower fill
165												
166	c1-c2											Upper fill Ditch 1
39	c2-ec3	92	lc2-mc3	37,38								Ditch 2 Base fill
159	c1-c2											Mixed fill Ditch 2
39(a)	c2-ec3											Ditch 2 Base fill
46	c3	90,91	14-85	39			Barb. Rad.	54				Metalling over Ditch 1
74							Titus	5				
123	c1-c2	98	70-85	54								
256	RB											

Phase 4.1

14	c3-c4	114	135-165	58			Caracalla	22				Layer on berm
26	c2-ec3				ec2	16						Wall footing
36	c2-c3											Bulk fill, Ditch 2 (c.f. 78)
44	c2-ec3											
54	c2-c3						Tetricus 1 270-273	37				Uppermost layer on beam over 14
67	c2-c3	115	lc2-mc3	59					lc1-ec2	5		Deposit on berm
78	c1-mc2						Gallienus	26				Clay fill Ditch 2 (=36)
204	c3-4	113	lc2-mc3	60,61	190-230	14						
217	mc2-c3	99-101	c2	62								
253	c4 ?Intrusive sherd	102-10-9, 111,112	lc2 160-196	63	220-280	15						Ditch 4, Base
255	c3-c4	110	lc2	64								Ditch 4, E fill
258	c2-ec3						Vespasian	2				Interface with (256)
417	mc2-c3		c2	65			Ant. Pius	co.14				
422		167										
426	c3											

Context	Coarse Pottery		Samian		Mortaria		Coins		Brooches		Glass		Notes
		Date followed by catalogue no											
Phase 4.2													
35	c3-c4?	142-144	lc2-mc3	66-67	230-350	M20	Barb. Rad.	46					Ditch 2a, Main fill
37	c2-c3	141	lc1	68			Gallienus	24					Ditch 2a, Main fill
103	c3-4	145,146	117-150	70									Ditch 2a, Main fill
59	c1-c2	147-148	138-196	71									Ditch 7
202	c3-4		160-196	72									
212	c3-4		lc2	73	c3	25							
216	c2-ec3	149	160-196	74									Below metall. of road 204
219	c4	154	lc2-mc3	75-77	c3	26	Barb. Rad.	43	ec3	6	lc1-ec3	27e-f	Bldg. int.
221	mc3-c4	116,117, 121-123, 125-127, 130-140	lc2-mc3	86-89	240-350	17,18, 31-35							Ditch 4, Mid fill
225	c3-c4	165	lc2-mc3	78									Occ. colonnaded bldg.
227	c3-4												
229	c3-c4		c2	79									
241	c3-4	118,124, 128,129	lc2-mc3	90,91	c3	19							Ditch 4, Mid fill
244			lc2-mc3	80	170-230	24							Structure
254	c4?	119,120	lc2 160-196	92,93			L. Verus	18					Ditch 4, Mid fill
260	c3-c4		lc2	81									Makeup col. bldg.
305	c3-c4		lc2-mc3	83-85			Vespasian	1	lc1-c2	7			
303	c4		lc2-mc3	82	240-350	27,28					lc1-c3	27k	Col. bldg.
403	lc3-c4	155-158, 166	lc2	94									Occupation levels
404	lc3-c4	159-162, 167	lc2-mc3	96,97	c3-c4	29	c2-3 Vespasian Ant. Pius Faustina	21 4 13 17					
403a			lc2	95									
405			lc2-mc3	98									
410/411	c3-c4		lc2-mc3	99							lc1-mc2	17	Metalled surface
414	c3-c4	163	lc2 160-190	100									Timber bldgs.
416	lc3-c4	164	lc2-ec3	101	190-250	30							
421	lc3-c4		lc2	102									

Context	Coarse Pottery		Samian		Mortaria		Coins		Brooches	Glass		Notes
				Date followed by catalogue no.								
Phase 5.1												
29	c3-c4	168					Constantius 324-26	60				Ditch 2a, Top fill
							Barb. Rad.	41				
55	m-lc4	169-172	69-96	69	250-350	21-23						Ditch 2a, Top fill
64												Ditch 3, Lower fill
65	m-lc4	173-174	lc2-mc3	103-4	c3-c4	39	Carausius	58				Ditch 3, Lower fill
												Bead Bl.66
66												
205	c3		lc2	105								Well 1, Constr. fill
222	c4	183-191, 196	lc2-mc3	106-108	240-350	37,40				c3	27	Ditch 4, Top fill
223	c3-c4	192-195, 197	lc2-mc3	109	230-300	36,38, 41						Ditch 4, Top fill
224	lc3-c4		lc2-mc3	110	240-350	42						Intrusive med pot
242	lc3-c4	181,182	lc2	111			Barb. Rad.	co.48				Fill Well 1, Base
252	m-lc4	212										Ditch3, Mid fill
257	c3-c4		lc2-mc3	112								Well 1, Constr. fill
259	c3-c4		138-160	113								Well 1, Constr. fill
261	c3-4	211										Ditch 3, Lower silt
330	lc3-c4		69-96	114								Well 2
401	lc3-c4	175-180	lc2	115-117			Salonina	29		lc1-mc2	16	Occ level
							Sev. Alexander	23			27j	
							Constantinan	65				
412	c3-c4		lc2	118,119								Occ level
Phase 5.2												
200	c4	204-206	lc2-mc3	120-122	240-350	47,48	Trajan	12				Late occupation
214	c4	213-215	lc2-mc3	125	c3	43						Well 1, Mid fill
215	m-lc4	216-222	lc2-mc3	126	lc3-c4	44						Well 1, Mid fill
218			lc2	127	250-340	49						Columned bldg robber trench
226	c4		lc2-mc3	128,129	200-260	45						Metalling E of columned bldg
312							Barb. Rad.	49				Rubble in columned bldg
314	m-lc4	198,207-210	lc2-mc3	130	230-300+	46						Rubble in col. bldg
317	c4	199-203	lc2	131			Constantius II	61				Well 2, Top
325							Constantius II	62				
318			lc2	132								Col. bldg robbed

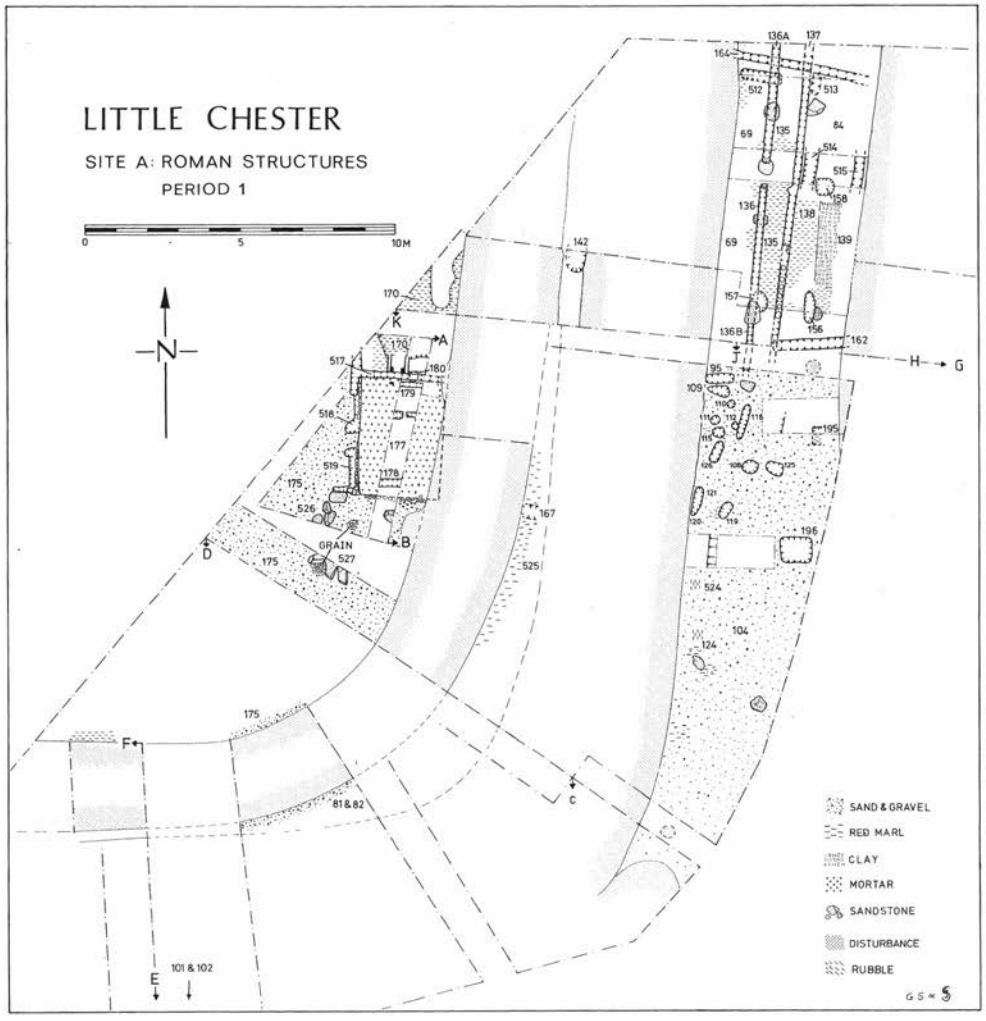

Fig. 3: Little Chester: plan, Site A, Period I, Roman structures and key.

To the west and south of these structures the metalled surface (175) continued in use. In the vicinity of the structure it had certainly been re-metalled to a depth of 0.10–0.15m, this abutting the structure (518), (519), (526), and (527). The stratigraphy of this area was best seen on the western side of the robber trench (Plate 6). No trace of the eastern wall survived but the rising floor level towards its damaged eastern edge mirrored that on the western side and suggested that the former had lain along the western side of the Period 3 wall trench. Structural remains did, however, extend eastwards since the narrow strip of ground surviving between this 3m wide disturbance and Ditch 1 retained traces of structure visible in section. On a line produced from the south edge of (172) to post-holes (119) and (120) was a small vertically sided pit (167), filled with painted plaster and brown loam, south of which was a red burnt clay floor the full extent of which to the south is unknown. To the north of (167) and opposite the marl floor (170), an oval pit

Period · Phase	Context	Width	Length	Depth	Fill	Type
I.1	179	0.3	0.75 +	0.2		F.S.
	180	0.25	0.5	0.3	B.T.	P.H.
	162	0.35	2.25+	0.15		F.S.
	164	0.25	4.0+	0.1		F.S.
	512	0.35	1.4	0.02		F.S.
	513	0.3	c.0.60			F.S.
	514	0.5	1.0+	0.08		F.S.
	515	0.3	1.0+	0.06		F.S.
I.2	178	0.5	0.7	0.4		F.S.

Key to Tables 2–8.

P.	Pit	P.H.	Post Hole
F.S.	Foundation Slot	B.	Burnt Debris
R.	Recent	B.D.	Building Debris
S.P.	Stone Packing	W.P.	Wall Plaster
S.F.	Stone Foundation		

N.B. All measurements are in metres

Table 2: Little Chester: dimensions and fills of post-holes, Roman structures, Site A, Period 1, Phase 1–2. Key to tables.

(142) containing grey clay, marl, and sand and a gritstone block may have been another structural feature from this phase (Section J–K, Fig. 5). Both may have been part of the revetment to the Period 2 rampart but (142) at least appeared to be cut by the inner lip of Ditch 1.

To the east, fragmentary structural remains survived within an area 4.5m wide and approximately 14m long on the berm between the later Ditches 1 and 2 (Plan, Fig. 3; Section H–J, Fig. 5; Plate 2). Within this area stratigraphy of Phases 1.2 and 1.3 survived, although increasingly truncated by later erosion to the south. Phase 1.2 was represented by an extensive area of thin metalling (104) and an occupation level (97), structural remains consisting of un-worked blocks of millstone grit set at irregular intervals in two approximate rows. In the case of (156), (157) and (511) these seemed to have replaced irregular hollows, possibly for timber uprights. The most complete row of five such blocks underlay the Phase 3 foundation slot (136).

The main structural elements of Phase 1.3 were the traces of two timber foundations aligned north-south and a complex of post-holes to their south. The former, (136A), (136B) and (137), were soil-filled voids of U-shaped cross-section and approximately 0.15m wide by 0.1m deep. They were at least 10m long and between 0.75m and lm apart, extending beyond the excavation limits on the north but eroded away in the post-hole complex to the south. Both contained dark silt, charcoal and flecks of marl, debris similar to that in the overlying layers of Phase 1.4 and presumably derived from the burnt superstructure. The upper fill of (136A) also contained a number of freshly broken fragments of querns which had presumably been in use in the building (stone objects 2–6). This foundation had an interruption of a metre, as if for a doorway. The parallel foundation (137), was a continuous trench with the exception of one possible post-hole opposite the south edge of the presumed doorway in (136) while towards its south end it

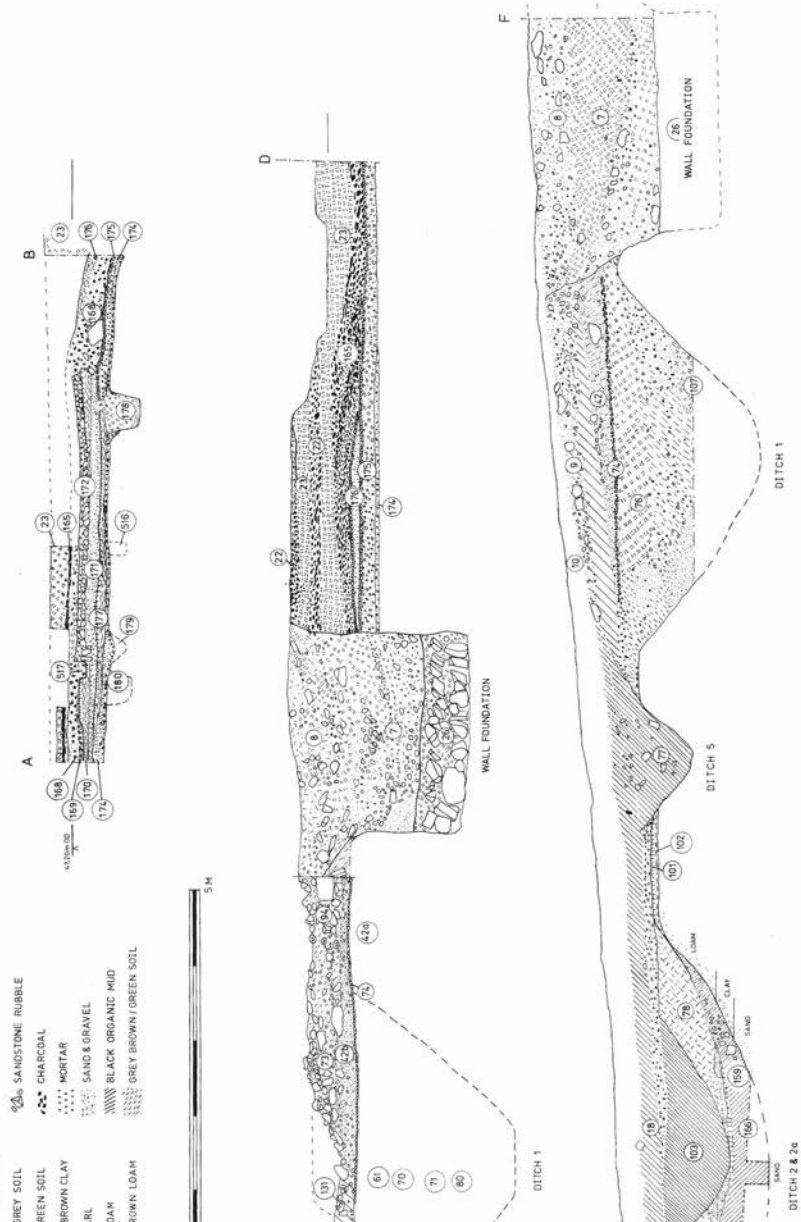

Fig. 4: Little Chester: sections, Site A, corner of defences, Sections A–B, C–D, E–F and key.

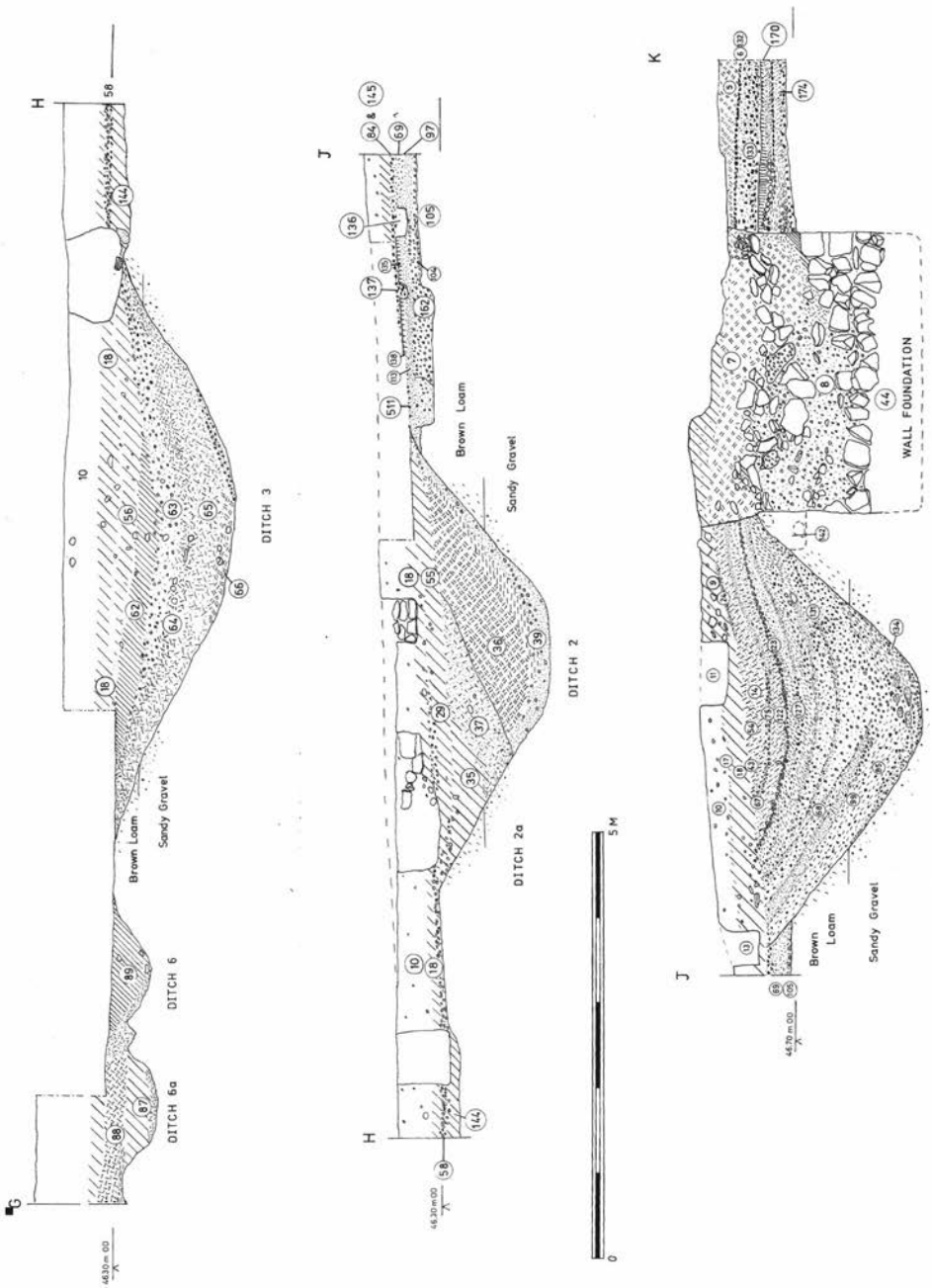

Fig. 5: Little Chester: sections, Site A, defences cast aside, Section G–H–J–K.

Period · Phase	Context	Width	Length	Depth	Fill	Type
I.3	95	0.3	0.95	0.1	B	F.S.
	108	0.5	0.68	0.26	B / B.D.	P.H.
	109	0.4	0.8	0.08	B	P.H.
	110	0.17	0.2	?		P.H.
	111	0.3	0.35	0.1		P.H.
	115	0.35	0.4	0.1	B	P.H.
	116	0.25	1.2	0.03–0.08		P.H.
	119	0.35	0.6	0.1	B.D.	P.H.
	120 /121	0.3	1.0	0.07	B	P.H. / F.S.
	125	0.45	0.6	0.1–0.17	B / S.P.	P.H.
	126	0.25	0.75	0.05	B / B.D.	2 x P.H.
	136 A	0.2	3.75	0.15	B / B.D.	F.S.
	136 B	0.2	6	0.15	B / B.D.	F.S.
	137	0.15	9.25	0.16	B / B.D.	F.S.
	142	0.75	0.75	0.55	S.P.	?P.H.
	156	0.2	0.95	0.1	B / B.D.	?P.H.
	157	0.55	0.7	0.15	B / B.D.	?P.H.
	158	0.6	0.6	0.15	B / B.D.	?P.H.
	167	0.55	?	0.5	W.P.	?P. / P.H.
	195	0.6	.3+	?	B.D.	?P.H.
	196	0.85	1	0.2	?	?P
	511	0.55	0.15+	0.25		P. / P.H.
	517	0.2	2.5	0.15	B.	F.S.
	518	0.2	1.2	?		F.S.
	519	0.2	1.5	.05 - 0.15		F.S.
	520	0.3	0.35	0.1		P.H.

Table 3: Little Chester: dimensions and fills of post-holes, Roman structures, Site A, Period 1, Phase 3.

retained definite voids from six uprights 0.20–0.40m and one larger post-hole (160). In contrast to (136), no gritstone blocks of Phase 1.2 underlay it. The foundations were defined by zones of red clay, marl, and purple and white clay (135), (138), and (139), these surfaces overlapping the gritstone blocks below (136) and presumably serving as areas of flooring laid within an existing structure set on these foundation stones. To the west of (136) only patches of marl floor existed, the main deposit here being a fine dark silt (69) which contained fragments of quernstone, nails, and charcoal in its surface. To the north-east the floors were increasingly eroded away to reveal the Phase 1.2 levels. South of the baulk H–J similar truncation revealed a complex of fifteen post-holes and short slots in an area 4m by 6m, cutting into the phase 1.2 metalling. Only small patches of marl floor and one gritstone block on the line of (136) survived. No obvious plan can be recovered from these and the date of some features is uncertain, four features (108), (111), (125) and (520), possibly belonging to the Period 7 are thus shown both on Figs 3 and 12. Those features of certainly Period 1 do, however, suggest that the linear structure to the north had terminated at some more complex structure, mirroring the better preserved room beneath the rampart, 12m to the west. Scattered gritstone blocks and patches of marl, (124) and (524), to the south may be the last traces of structure in that

area, perhaps associated with (167) and (525) to the west. Eastwards, in Section J–K, the ground was considerably disturbed by the later defences for a distance of 20m and any early levels in the intervening ground had been eroded away (Plan, Fig. 3).

The final phase, 1.4, consisted of the deposits overlying these structures on the berm and sealed by the Period 2 rampart. These destruction levels were best preserved in the latter area, the major constituent being burnt building debris, charred thatch and timber (169), concentrated over floor (170), and burnt clay (133) and (168), which sealed floor (172) and part of the gravel surface beyond Section A–B and J–K (Figs 4 and 5). Some plain painted wall plaster also occurred in (168). This material appeared to lie *in situ* over the floors but was sealed by a separate deposit of mixed and redeposited burnt debris, forming the base of the rampart. To the east the *in situ* destruction levels comprised layers (84) and (145), mixed deposits of dark grey silt containing burnt clay daub and charcoal.

Considerable quantities of occupation material came from both the construction and destruction levels of these structures. From the former, a group of finds from (171), beneath floor (170) in the western zone, included pottery of the mid to later second century (coarse ware 25, 40 and 41; samian 16–17). The fill of post-holes and slots in the eastern zone also produced samian and glass of this date and the occupation levels (69, 136, 145) yielded second-century samian and a brooch of the second or third century (coarse ware 13–24, 26–39 and 42; samian 10–15; glass 3, 26c and 27i; brooch 3). The coins in the Period 1.4 destruction may have derived from a small hoard laid down in the early second century within the building superstructure (coins 6–9, 11 and 20).

Discussion

Features of Period 1 on Site A had been seriously truncated by the later defences but were traced over an area of at least 36m north-south by 25m east-west and could have extended beyond the limits of the site to east and south. To the north-east, however, on Site B a further strip 20m by 3m produced no obvious sign of stratigraphy or major earthwork sealed beneath the later metalled surfaces. To the south, earthworks observed on Site C are undated but one ditch there might relate to this period (Fig. 2).

No coherent building plans were recovered but the structures represented in phase 1.1 seemed to have few correspondences with those of 1.2 and 1.3, the last of which represented a re-construction in more substantial materials. The earliest features of phase 1.1 revealed the presence of rectilinear structures on the approximate axis of the later fort, the eastern group suggesting a building plan consisting of two divergent foundations (162) and (164) 9m apart, possibly linked by two more on a north-south alignment (513, 514 and 515) and 1.5m apart. Another structure, the south end of which was represented by (179), lay in the western zone; the ground to the south for at least 15m was devoid of major features or occupation levels.

Phase 1.2 was most apparent in the western zone where the marl floor (516) and foundation (178) may have formed a predecessor for the Phase 1.3 building, this structure extending at least 7m north-south and 5m east-west. Whether this was linked with the structure on the east is uncertain but the latter was apparently of somewhat different pattern, its structure raised on stone boulders set on an extensive metalled surface. The presence of displaced blocks to the south suggests that these structures had extended for at least 20m, although the plan of the structure is not recoverable.

The structural remains of Period 1.3 on Site A were the most complete but were not recognisable as a distinct building of civilian or military type. In the western zone two rectangular rooms can be recognised aligned north-south with an ancillary structure on the south and internal fittings within the more northerly room. In the eastern zone the two parallel north-south trenches are perhaps too close to form a corridor or verandah, although they bounded clay floors on the east. At the south end the plan of some complex post-hole structure had been too badly eroded to be reconstructed. Any relationship between the structures had been destroyed by Period 2 features but they could have formed two buildings separated by a north-south road along the line of Ditch 1, the silted layer (69) having accumulated along the exterior western side of the structure represented by the two parallel trenches.

The superstructure of the building was probably of clay and wattle and timber with a thatched roof, burnt remains of these materials coming from the debris above Floor (170) (burnt clay daub 1–4). The wooden framework of the walls had rested on stone blocks in the case of (136), and in this and other cases the superstructure may have originated in phase 1.2 as a frame set on such blocks on the existing surface, the line of these wooden sills becoming fossilised in phase 1.3 by the building up of the internal and external ground surface and the laying of floors against them. In the western structure the groups of stone blocks (526) and (527) may thus also have supported a structure of which no trace survived, the presence of carbonised sprouted grain suggesting this had served as a small raised grain store or perhaps a stall for an animal. However, other elements of the complex certainly consisted of earth-fast timber construction, witnessed by the complex of post-holes south of (136) and (137). This use of blocks as a form of 'staddle stone' to support a building may pre-figure later construction methods on the site and is discussed further in connection with the building on Site B (below p. 289).

Finds from Period 1, and from later levels, included material of the later first century AD, suggesting some activity of that date but the first phase of structure cannot be dated before the Trajanic period. The second phase must have fallen not long after but the third phase could have been built, or at least provided with a floor, as late as the mid second century on the basis of the samian from beneath floor (170). These finds provided a *terminus post quem* of AD 160 for the laying of this floor, although this and other surfaces here may have been laid within a standing building of earlier date. The destruction levels also produced samian, glass, and coarse wares dating to the mid second century, which suggests only a short time elapsed between the laying of the floors and the burning of the building; it is noteworthy that the mortar floor bore no signs of wear. The group of six coins spanning the reigns of Domitian to Trajan from the adjacent structure are problematic in view of their earlier date but the fire damage to one and their context in the burnt debris suggests that they had been secreted in the wooden superstructure, perhaps at an earlier stage in its life.

Whatever the exact plan of this building complex, it adjoined an open metalled area on the south-west, beyond which lay traces of further structures seriously truncated by the southern defences.

The ditches on Site C 30 to 40m to the south were undated and cannot be linked directly to this period (Fig. 2). To the north-east, on Site B, occupation and destruction deposits of Period 1 were not visible in the few exposures of the lower levels, suggesting that the built-up area did not extend in that direction. On the Pickford's Garage site,

however, 45m to the north, building remains were encountered which represent the most substantial yet identified in the early phases of Little Chester (Langley and Drage 2000, 131–45). Dateable finds from the earliest excavated levels of this building suggest that the first phase would equate with Phase 1.3 on the present site, the building sealing levels which would equate to the earlier deposits. The deeper Section 3 in Area 33 on the Pickford's site also suggests that metalling at a similar level and of a broadly similar date to Phase 1.2 on the present site extended south to a point 20m north-west of the buildings on Site A. The interpretation of these structures and their wider context will be discussed below, but in the absence of any definite remains of contemporary earthworks these structures cannot be set within the wider context of an early defensive circuit, whether of a regular fort or annex.

Period 2

Period 2 comprises deposits from the relatively short time during which the remains of burnt buildings levelled in Period 1 were superseded by the first phase of defensive structures within the site limits. Above the collapsed burnt debris of the early buildings belonging to Phase 1.4, a further mixed deposit of burnt debris probably related to site levelling operations immediately prior to construction work. The main activity assigned to this period is the digging of Ditch 1 and the construction of the rampart over this levelled destruction deposit. Any rampart revetment had been removed by the later construction of the Period 4 wall.

The *in situ* building debris (168) of Phase 1.4 in some places included a thin scatter of pebbles in its upper surface, while south of the mortar floor (172) a distinct layer of grey sandy soil (176) sealed (168) (Section A–B, Fig. 4). Further north, a pebbly deposit (6) and (132) also occurred above the building debris (133) (Section J–K, Fig. 5). Above these destruction levels a homogenous layer (165) of grey-black ash, charcoal and coal, up to 0.4m deep, had been laid over the whole of the area exposed. The greatest thickness occurred over the metalled surface to the south, raising the level there to that of the destroyed building. Building debris was not an obvious component of these deposits but much coarse ware and samian of the mid or late second to early third century was recovered as well as a coin of the deified Faustina (coarse ware 46, 47, 49–53, 55, 58–60, 62, 64, 68, 69, 72, 76, 77; samian 34–36; mortaria 2, 3 and 10; coin 16; glass 19, 25, 27a, 27b; coal p.199).

Deposit (165) was sealed by the main surviving body of the rampart (22) and (23), the upper part of which had been truncated by the railway construction in the nineteenth century and survived only to a height of 0.8m at the corner, the highest point being at 47.60m OD (Plan, Fig. 6). The surviving front face of the rampart, as cut back by the later wall trench, followed an approximately straight north-south line for at least 13m before turning through an angle of approximately 100 degrees, describing a curve with radius of approximately 8m, to continue west for at least 5m. The bank was at least 6.5m wide, the tail of the earthwork lying beyond the north-western limit of the site. At this point the rampart base comprised two layers up to 0.5m thick of grey clay silt (23) alternating with bands, 0.1–0.2m thick of mixed charcoal, burnt clay, coal and occupation debris (22). The latter was similar to (165) which should perhaps be seen as the basal layer of the rampart; both (22) and (23) produced pottery and glass of a similar late second century date (coarse ware 80–82, 84 and 85; samian 28 and 29; mortaria 4,5

Plate 1: The mortar floor (172) of the Period 1.3 Roman building beneath the rampart on Site A, seen from the south-west. Burnt timber structure in the foreground, external metalling (175) beyond to the right. (All scales are 2m)

Plate 2: Foundation slots and clay floors of timber buildings of Period 1.3 surviving on the berm between Ditches 1 and 2, looking south-east. To the left is the section of Ditch 2, to the right is Ditch 1.

Plate 3: Section J–K from the north-west. In the foreground the surviving pitched foundation of the Period 4 wall and, beyond, Ditch 1.

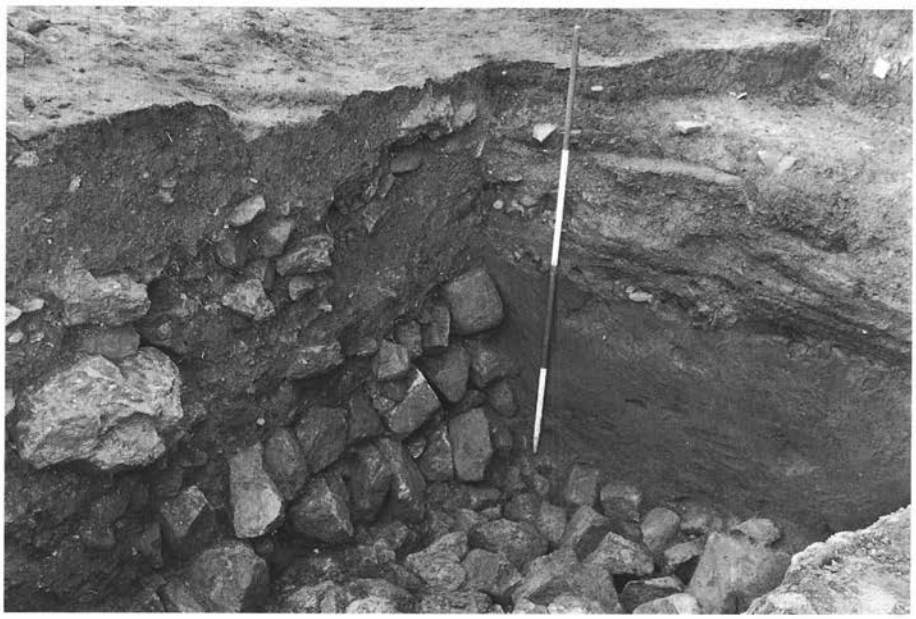

Plate 4: West end of section J–K looking south-west. The pitched wall footings here survived in part to a higher level, the robber trench containing a block of destroyed wall core in section on left. Period 1 levels survive to the right beneath the destroyed rampart.

Plate 5: Detail of surviving wall footing in section C–D, showing gang-junction in construction on corner.

Plate 6: Composite view of Period 1 levels visible in inner face of robber trench on the corner of the fort, looking west, section C–D to left. Gravel metalling (175) on left, mortar floor (172) with pitched stone footing on right, both sealed by ash deposits and base of rampart.

and 9; glass 25). The sherd of later Nene Valley Ware included here derived from the initial cleaning of the surface of (23) and is almost certainly contamination (coarse ware 79).

No stratigraphic links existed between the rampart and ditches but, on its location and the date of its early fill, Ditch 1 can be assigned to this first stage in the development of the defences. This ditch followed the general line of the rampart but the radius of its curve at the south-east corner measured approximately 6.5m, somewhat sharper than the line of the wall. A strip of ground up to 2m wide had thus survived between the inner edge of the ditch and the outer edge of the wall trench at this point and the front of the rampart had presumably here been particularly heavily truncated.

No structural features such as vertical posts from a corner tower or from a front revetment were identified in the surviving rampart, post-holes such as (142) and (167) which lay close to the presumed line of the rampart front being more likely to have formed part of the preceding structures. The rampart front can thus not be identified and it is likely, from the relationship of Ditch 1 to the later wall trench, that any trace of the original revetment and of a corner tower had been removed in the cutting back for the more gentle curve of the wall trench.

Just as the rampart had been truncated so the ditches had been affected by later activity, although in this case the damage was the result of later re-modelling of the ditch system rather than medieval and later cultivation scouring out the silted hollow of the latest Roman ditch. Indeed, if the old ground surface and Period 1 deposits continued at the same level over those parts of the site later occupied by the ditch system then up to 0.8m of deposit has been eroded away. This is most obvious between ditches 2 and 3 in Section G–H and H–J (Fig. 5) where the surface of the natural is some 0.40m below the level to the west and is sealed by medieval deposits; all Period 1 deposits had been eroded away at this point. Ditch 1 was sectioned in two places, Section J–K on the eastern and E–F on the southern side of the corner of the defences; the outer edge was also exposed in a small trench on the corner (Plan, Fig. 6; Sections, Figs 4 and 5; Plate 3). In both the major sections the upper fill of the ditch survived to its full depth but in Section J–K later erosion had truncated the uppermost deposits on the more exposed eastern side, away from the line of the rampart. The inner lip had been partially truncated by the later wall trench, the outer had been affected by the later agricultural erosion. This ditch lay some 3m in front of the surviving rampart and was of a regular V-cut profile with rounded base at the one point in Section J–K where it was sectioned to its base. The dimensions of the surviving portion were 4.9m wide and 2m deep, the original measurements being perhaps 5.5m and 2.2m, respectively. This ditch was traced in plan continuing northwards for 10m to the limit of excavation and south to the corner. Here the outer lip and upper fill was exposed in a limited trench, the full width not being established, but the position of the edge suggested the line of the ditch described a tighter radius than that of the later wall trench, projecting further from the rampart than it did to the north and west. On the south side the ditch was not bottomed but measured 5.1m wide and at least 0.9m deep. Allowing for erosion it may here have been originally 6m wide and slightly deeper than on the east. In Section J–K the ditch had been cut through the Period 1 occupation layers into grey-brown clay silt over beds of gravel and sand.

Little silt was present in the base of Ditch 1 in Section J–K but some grey brown clay silt (134) had slumped from the uppermost side into the base; samian of the mid to late

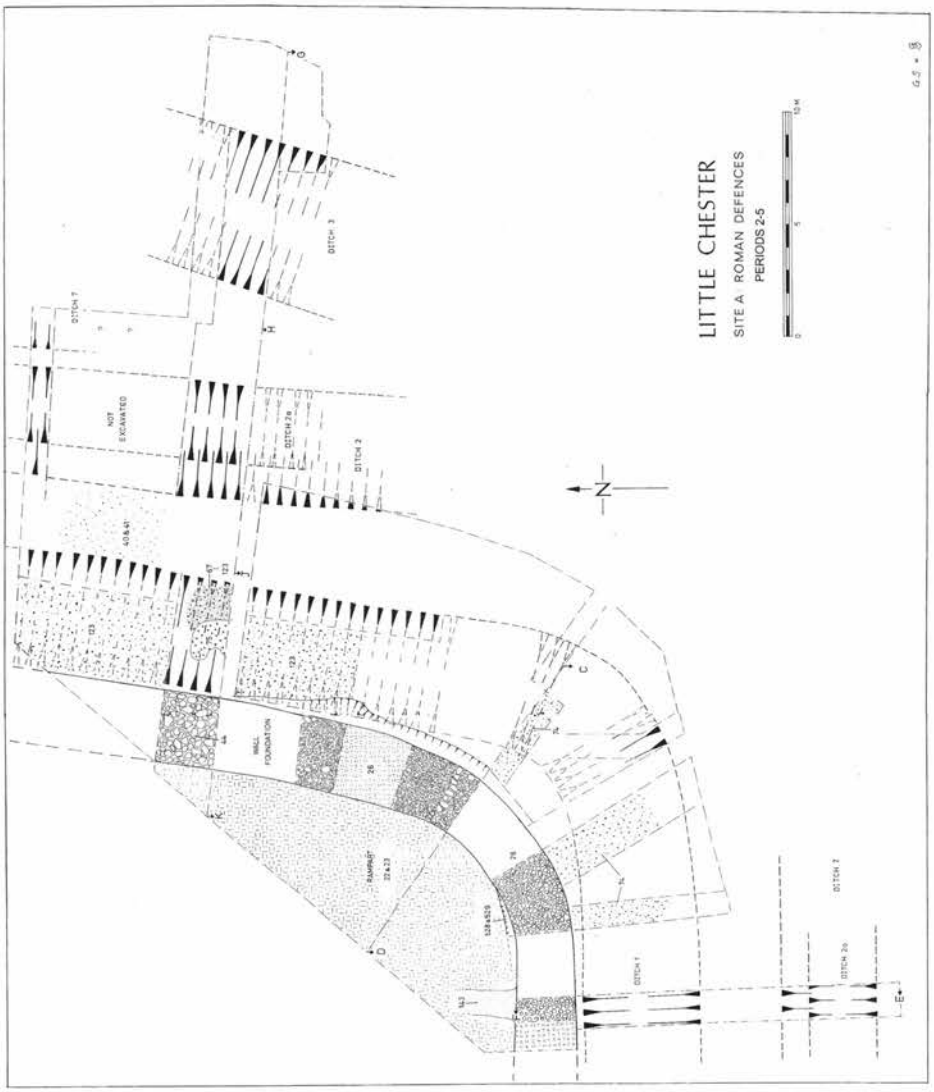

Fig. 6: Little Chester: plan, Site A, Periods 2–5, Roman structures.

second century was recovered from this (samian 57). The bulk of the fill can be assigned to the filling of this ditch at the time of the remodelling of the defences in Period 3.

To the east, in the strip of ground between Ditch 1 and Ditch 2, a thin spread of gravel and sand, (40) and (41), sealed the destruction levels of Period 1 (Plan, Fig. 6). Pottery and glass of the mid to late second century was included in this layer which may have been equivalent to the post-fire surface (132) and (176) identified beneath the rampart, or debris spread from the digging of Ditch 1 (coarse ware 48, 54, 56, 57, 61, 63, 65–67, 70–71, 73–75 and 78; samian 30–33; glass 19 and 27a and 27b).

Discussion

The defences of Period 2 were erected within a zone of burnt and levelled buildings, the only relationship between the two being their common alignment. Little time need have elapsed between the two events, the trampled surface over Period 1 resulting simply from traffic during the construction phase. Details of the rampart construction and the form of its revetment are almost wholly lacking but the alternating layers of burnt debris and clay silt were presumably to give it stability and can be paralleled on the neighbouring Pickfords site, although there more frequent lenses of gravel were recorded (Langley and Drage 2000, 149). The darker ashy layers appeared dissimilar to the underlying Period 1 destruction on account of the quantity of coal they contained and were presumably imported from other areas of the site. There can be no certainty as to the source of the bulk of the rampart material since the clay silt was not closely comparable to the subsoil in the sides of the Ditch 1 on the east, the nearest obvious contemporary excavation. The rampart clay was more comparable to the natural on the west side of Ditch 2 and perhaps represents a mixture of varied subsoil deposits (soil samples, p. 299). There is no stratigraphic evidence to link the rampart with any particular ditch and the lowest fill of Ditch 1 contained too little material to provide close dating of its use. There seems little difference in the relative dating of the deliberate fill of Ditches 1 and 2, but the former is, from ease of access, more likely to be associated with the initial construction of the rampart, despite the contrary evidence of the soil samples. The cutting of Ditch 2 might have occurred in this period but the lowest silt contained pottery of the later second to mid third century so the cutting of this ditch has been treated as contemporary with the filling of Ditch 1 and placed in Period 3. A distance of only 3.25m separated the lip of Ditch 1 from the surviving body of the rampart, which implies a very narrow berm between its front revetment and ditch. Signs of slippage from the inner face were observed in Section J–K, such erosion of a narrow berm might provide a context for the deliberate filling of this ditch and its replacement by Ditch 2, perhaps within the fairly short life of a timber-fronted clay rampart.

A *terminus post quem* in the mid to late second century for construction of the rampart is suggested by the large quantity of material in the destruction and levelling beneath it and the finds within the structure itself. This would accord with evidence elsewhere for the construction of the initial earthen defences of the second century, although in the most recent exposure of Period 2 of the Pickfords site immediately to the north a date in the late second century is preferred, a date not precluded by evidence from the present site (Langley and Drage 2000, 147–150). The wider context and development of these defences will be discussed below.

Period 3

This period is characterised on Site A by changes in the defences, comprising the cutting of Ditch 2 and the filling of Ditch 1. No stratigraphic relationship between these two ditches survived nor, indeed, for their association with the rampart structure, but what little dateable material was recovered suggested these events were contemporary.

The profile and course of Ditch 1 have already been described; its lower fill gave little indication of the length of time it remained in use or the extent to which it had been recut or cleaned out. The bulk of the lower fill in Section J–K consisted of approximately 1m of grey silt and gravel containing coal, marl, and burnt debris (68), (85), (99) and (131) (Fig. 5). A similar deposit, (71) and (80), was exposed on the outer edge of the ditch at the corner but in Section E–F on the south these deposits were not penetrated (Fig. 4). Above this, in J–K, was 0.6m of light brown loam (127) containing lenses of burnt clay, charcoal, and marl. Similar deposits, (61) and (70), were encountered in the ditch fill at the corner and in Section E–F (76), (106) and (107), but in the latter there was a larger component of grey-green clayey silt. Tip lines within the fill were clearest in the eastern section where the bulk of the material lay on the eastern side but at least one deposit (131) was concentrated on the western face as if introduced from the rampart side. Similarly, on the south, (106) and (107) could have been introduced from the northern edge.

The occupation debris and burnt material in the lower fill yielded much redeposited pottery of the late second to mid third century and a brooch of similar date (coarse ware 86–89, 93–97; samian 40–53, 55 and 56 ; mortaria 6, 11–13; glass 11; brooch 4). The origin of this fill cannot be certainly identified but the stratigraphy in Section J–K suggests that first occupation material of Period 1 was thrown in, followed by cleaner deposits of natural clay silt, the sequence to be expected if the ditch was being filled from some nearby excavation. Although some of the redeposited occupation levels had been introduced from the rampart side it is unlikely that this excavation represents the cutting of the wall trench which did, moreover, cut the very western edge of the dumped fill. Some alteration or rebuilding of the rampart front may have taken place but the bulk of the dumped fill is more likely to have originated from the cutting of Ditch 2 further out from the rampart.

The levelled Ditch 1 was sealed by a distinct metalled surface (123) which was exposed along much of the eastern side but was also identified on the south side of the corner where it was equivalent to (46) and (74) in Section E–F. This surface consisted of 0.5–0.10m of hard packed pebbles which in Section J–K had slumped slightly with the settling of the ditch fill but had remained level in E–F. This metalling produced further pottery of the early to mid third century, but (74) produced a coin of Titus and (46) a barbarous radiate of the later third century (coarse ware 90, 91, 98; samian 39, 54; coins 5 and 54). Unless coin 54 is intrusive this would place at least the use, if not the construction, of the surface in the later third century. Such a date would not be problematic in terms of the stratigraphy, and would merely place the metalled surface of the berm in Period 4.1, later in the sequence and sealed by (42) from Period 7 or 8.

Ditch 2 was sectioned in three places, twice on the east side and once on the south side of the fort corner. Of the eastern sections, the first was a trial trench to confirm the ditch's existence on the north edge of the excavation, the fullest details of its profile and fill being

obtained from Section J–H, 10m to its south (Plan, Fig. 6; Section, Fig. 5). On the south side of the defences Section E–F revealed only the northern half of the profile (Fig. 4). The centre line of the ditch lay approximately 9m from that of Ditch 1. At all three points the upper fill of the ditch had been truncated by later erosion. On the eastern side it measured 5.3m wide by 1.5m deep with gently sloping sides and a flat base 1.2m wide, the original width perhaps 7.25m and the depth 2.2m. On the south the cut was at least 5m wide and possibly 7m overall, the depth 1.6m and possibly over 2m originally. The profile here was somewhat more rounded than on the east. In both areas the ditch had been cut through deposits of buff-coloured sandy clay silt into a layer of pebbles and lenses of sand, the latter more prominent on the south.

Where bottomed on the east side there were no obvious waterborne silts in the base, mixed debris up to 0.4m thick sealing the floor and lower sides of the eastern cut. The first of these deposits (39b) consisted of up to 0.2m of grey green sandy clay, pebbles and frequent coal and charcoal, concentrated against the lower eastern face. The western base fill (39c) was similar but lacked any burnt debris and was up to 0.4m thick, extending further up the ditch side. Both these primary deposits were sealed by (39) and (39a), a red-brown sandy silt up to 0.lm thick containing pebbles, Keuper Marl, burnt clay and charcoal flecks.

On the south side, in Section E–F, the full profile was not exposed because of the depth of overburden and the waterlogged lower fill. The northern inner face was slightly concave, sloping gently to the base which was only exposed in a sondage. The primary fill was 0.5m of homogeneous waterlogged grey silt (166) in which was preserved a wooden plank (wood object 1). On the northern face was a lens of grey silt, pebbles, marl and coal fragments (159) which merged with this deposit.

There were few dateable finds from these primary levels of Ditch 2 but Section H–J (39) produced samian of the late second to mid third century, which suggests a *terminus post quem* in the late second century for this ditch (coarse ware 92; samian 37 and 38). Deposits such as (39), (39a), (39c) and (159) contained a range of material similar to that encountered in the Period 1 levels and probably derived from the erosion of these levels into the ditch; in both sections these levels had partially survived *in situ* on the inner edge of the cut.

Discussion

As already noted, the place of these ditches within the defensive sequence cannot be fixed with certainty. The stratigraphy within Ditch 1, however, with the marked tip lines visible on the eastern side, suggests its filling from that side, the closest source of the mixed clay silt and occupation debris being the line of Ditch 2. Although of a different form to Ditch 1, the latter could have acted as a replacement to it, the little dating evidence suggesting the filling of the one and the initial silting in the other were of roughly similar date. The filling of Ditch 1 could have accompanied efforts to consolidate the rampart front with, perhaps, the provision of a strengthened timber revetment and wider berm between this and Ditch 2. An alternative hypothesis, effectively combining Periods 2 and 3 is proposed below, in discussion concerning the wall.

Period 4

This period is defined by evidence for a change in the rampart, the front of which was now revetted with a stone wall. No new ditch system can be associated with this event although it is probably now that Ditch 2 was filled with clay and re-cut as 2a. This period has been sub-divided into phases 4.1 and 4.2 on Site B but here the division is less clearly defined, the wall foundation and its construction levels falling in the earlier phase, as well as the cut of Ditch 2a. The filling of Ditch 2a could belong mostly to 4.2 but its uppermost levels belong to the succeeding Period 5.1. The excavation of another discontinuous feature, Ditch 7, immediately to its east, may also belong in this phase.

Evidence for the wall was limited, the whole structure having been robbed in this sector leaving only a robber trench visible at ground level as a curving strip of rubble fill (Plan, Fig.6; Sections C–D, E–F and J–K, Figs 4 and 5; Plates 3–5). This was sectioned at four points round the arc of the fort corner, a filling of clay and rubble (7) and (8) sealing the surviving basal courses of the foundation (26) and (44). The former layers were undoubtedly the debris from rampart and wall rubble introduced to level the ground after the bulk of the standing wall had been destroyed in the eighteenth century, as recorded by Stukeley. Of the superstructure, all that remained was a displaced block of wall core immediately south of Section J–K and consisting of a mass of rubble cemented with cream sandy mortar. Where best preserved in Section C–D the foundation trench consisted of a vertically-sided cut with a flat base, the upper edge eroded back into the rampart on the one side and the post-Roman deposits on the berm. Beyond the northern end of Section E–F this was particularly noticeable, a ramp having been cut through the rampart base to gain access to the trench probably at a late date as part of the process of robbing (143) (Plan, Fig. 6). The original construction trench varied from 3.2m wide in Section J–K to 2.6m in C–D, the full depth in C–D being 2.4m to the top of the surviving rampart or 1.4m to the contemporary ground level on the berm (74).

The surviving foundations were exposed in plan at five points but only sectioned on the corner in Section C–D. Elsewhere in each cutting the uppermost intact layer was cleaned to reveal the nature of the rubble foundation beneath. This was of two different characters, the foundation to the north of the corner (44) consisting of a superficial layer of mixed sandy soil, stone chips and clay trampled into the layer of pitched gritstone rubble below. The spaces between the larger blocks had been filled with smaller sandstone rubble. West of the corner the foundation (26) comprised a superficial layer of grey clay below which was larger, angular rubble held in a matrix of grey clay, some of the larger blocks being re-used or rejected worked blocks (stone 11, 12). The only dateable find from the foundations was a fragment of mortarium of second to fourth century date from (26) (mortarium 16).

At the corner, immediately north of Section C–D, a particularly large row of boulders marked the junction between the two types of foundation, presumably the marker set between two different work-gangs (Plate 5). Where dismantled in C–D the southern foundation (26) consisted of 0.6m of large angular gritstone blocks in two roughly pitched courses held in a matrix of grey clay, the top surface at 45.8m OD. In J–K the top of the uppermost course lay at 46.65m OD, traces of at least three courses being exposed without penetrating to the base of the wall-cut. Assuming this had been cut to a

similar level as on the south, approximately 45.2m OD, then two more courses remained below, implying an original total of at least five.

Although none of the wall survived on the present site some features which may have been associated with its construction could be recognised. In the section of robber trench immediately east of the north end of Section E–F, a feature (528) and (529) distinct from the rampart and the underlying occupation debris, survived between the robber debris of the wall-trench and the rampart (22) and (23) (Plan, Fig. 6). This feature, at most 0.20m wide and 0.54m deep, was a step-like cut in the front of the rampart with a vertical face and level base and was visible for a distance of 2m along the north side of the robber trench before petering out. The fill consisted of a grey clay silt containing a few pebbles and flecks of red marl and a thin layer of yellow mortar and pebbles in the base. No dateable finds were recovered from this feature which was probably a remnant of the construction trench at the back of the wall.

More definite and dated evidence for construction activity in the vicinity of the wall came from the berm in Section J–K. Here, because of the slumping of the Ditch 1 fill, a series of deposits overlying it had survived, sealed by debris from the wall's decay. Above the metalled surface (123), sealing the fill of Ditch 1, a layer of grey loam, sand and flecks of marl (122) 0.2m deep lay in conformity with the slumped metalling (Plan, Fig. 6). Above this two adjacent deposits were identified in Section J–K, (67) concentrated near the outer edge of the ditch and (75) on the centre line. The former was a loosely-packed metalling of pebbles and sand up to 0.1m thick, thinning out towards the centre line of the ditch, while the latter was an irregular patch of yellow sandy mortar approximately 1.5m in diameter and 0.05m thick. These layers were sealed by two similar deposits of brown sandy silt (14) and (54), also lying in conformity with the slumped ditch fill. Layer (14) contained some chips of gritstone in its upper part and also a band of sandy fill approximately 0.50m from the edge of the robber trench. The few finds recovered from these two layers comprised pottery of the third or fourth century and two coins, one, from (14) of early third century date, immediately overlying the mortar floor (75), the other, of the late third century, occurring higher up in (54) (coarse ware 114–115; samian 58–59; coins 22, 37).

This sequence could not be exactly paralleled in the other major sections and may have resulted from a localised slumping of the ditch fill since, to the north, the metalling (123) was a relatively level surface over the ditch fill. On the corner, in Section C–D and in trenches along the south side as already noted, a single phase of metalling (74) sealed the Period 3 ditch fill, this surface in use if not laid down in the later third century (Plan, Fig. 6; Section C–D, Fig. 4). This single metalled surface was sealed by (42), (42a) and (42b), a similar deposit to (14) and (54) but contaminated by material of late Anglo-Saxon date and thus assigned to Period 7 (Section C–D, Fig. 4; below p. 65).

Although the stratigraphic relationship between the deposits on the berm and the wall had been destroyed by its robbing, the sequence of deposits in Section J–K may provide some record of the construction sequence not apparent at other points on the excavated section of the south-east defences. The metalled layer (123) marked the levelling of Ditch 1 and its replacement by an external access route, the overlying soil (122) being spoil from the initial cutting of the wall trench. The mortar layer (75) could then be a remnant of a mixing floor from construction since analysis of the grades of aggregate from samples in the robber trench and from the floor are fairly similar (mortar and plaster,

below p. 296). These levels had then slumped with the settling of the ditch fill. The overlying sandy silts (14) and (54) might then be a slower accumulation, derived in part at least from the erosion of the stone and mortar face. Dateable material in these construction levels was generally of the third century, the most significant being the late third century coin from (54) overlying it. This would suggest the construction debris, whatever its origin, was of the late third or early fourth century.

As already noted, changes to the ditch system are not closely dateable but the replacement of Ditch 2 by 2a would appear to fall in this period from the relative dates of their contents. Ditch 2 appeared to have been deliberately back-filled but with a cleaner soil than that used in Ditch 1. Above the primary silt (39) in Section H–J, Ditch 2 was filled with grey-brown clay (36), to a depth of at least 0.70m deep and possibly originally one metre when allowance is made for recutting and later truncation. This homogeneous fill was paralleled on the south side in Section E–F by (78), a similar grey-green gley soil with traces of iron panning. Neither deposit contained any finds.

Ditch 2a was examined on the east in Section H–J and on the south in E–F. It coincided with Ditch 2 and was, effectively, a recut on the same line but to shallower depth. On both the east and south sides the cut was 3.0m wide and 0.9m deep, perhaps originally 5.0m in width and 1.5m deep. On the east it had been cut to a V-cut profile while on the south it was more rounded. The fill on the east side was 0.70m of grey-green clay silt and some pebbles, (35) and (37). The uppermost fill (29) and (55) contained material of significantly later date and is treated as a later accumulation in Period 5.1. On the south side of the defences Ditch 2a contained a homogeneous dark grey clay silt (103), a little charcoal, yellow mortar and stone rubble occurring in this deposit. Finds from this ditch included coins of the mid and late third century and pottery of similar or possibly later date (coarse ware 141–146; samian 66–68, 70; mortarium 20; coins 24 and 46). A complete horse skull also occurred in (35) and the hobnails of a shoe in (103) (iron object 13).

Investigation of Ditch 7, within the very north-east corner of the excavations, was limited by the need to avoid the proposed site of a building in the development. Only the western lip was exposed of a feature with sloping side at least 2m wide, filled with a dark grey-brown soil (59) containing pottery of the mid or late second century and a band of gritstone rubble along the western lip. This feature did not reappear to the south in Section G–H and H–J, between Ditches 2a and 3, and must have terminated in the intervening space.

Discussion

Within the limits of this site the remains of the substantial defensive wall, undoubtedly that which was observed by Stukeley, had been robbed below foundation level, leaving only rubble and collapsed sections of wall core, as previously noted by Webster on the south side (Webster, 1961, 86.) It would seem that, on the corner and south side, not only the mortared wall superstructure but also the upper courses of the pitched foundation had been removed. On the eastern side, however, robbing had been less severe since some foundation survived to the level of the natural subsoil in Section J–K. On the Pickford's Garage site to the north, the wall itself had partially survived but only the uppermost level of the pitched foundations was exposed (Langley and Drage 2000, 154 and fig. 10, section 7). From the latter it would appear that the top of the pitched foundation

occurred at 47.30m OD, some 0.70m above the highest surviving portion of footing in Section J–K, 25m to the south. The better preserved remains at this point imply that the pitched foundations normally filled the foundation trench up to the contemporary ground level and the metalled surface on the berm. The dimensions of the foundations on the present site can thus be reconstructed as between 2.7 and 3.2m wide, the narrower gauge occurring on the corner and the south side beyond the junction in construction noted in Section C–D. The original depth of the pitched stone footing on the eastern side can be estimated, by comparison between the more recent work on that side and the earlier cross-section, as approximately 2.2m. Within the surviving area of rampart on the present site there was no trace of any internal structure associated with the wall but such could have existed elsewhere, an aspect of the site discussed below.

With the thorough demolition of the standing structure, features associated with the construction of the wall had largely been destroyed on the present site. Direct evidence for the date of the wall's construction was thus lacking and the few sherds from the foundation levels and from the construction trench (528) and (529) were of little assistance. Dated levels on the berm, however, did provide evidence for the association of the wall construction with the filling of Ditch 2 and the cutting of Ditch 2a in Period 4. The building of the curtain cannot be dated exactly but construction debris, such as levels of stone chips, sand and mortar on the berm, was deposited in the late third or early fourth century; the obvious time for this material to have accumulated is during the construction of the wall, although repair work could account for such activity. The earlier levels of Period 2 or 3 did not produce building stone and mortar debris whereas such material did occur in (103), the fill of Ditch 2a, suggesting that masonry construction work had now taken place in the area.

There was no indication from which side Ditch 2 was filled, the apparent assymetry of the clay dump results simply from the recutting of Ditch 2a. The fill of Ditch 2 would be consistent with the date of the wall construction since its homogeneous clay fill, so different to that in Ditch 1, could represent the relatively clean material cut from the rampart front, the first spoil needing to be disposed of in the sequence of operations leading up to the wall construction. Material of the late third century in the primary fill of 2a, cutting this deposit, would accord with its deposition in the mid to late third century. The sequence of filling of one ditch followed by re-cutting on the same line seems illogical but could simply reflect bad planning, change of plan or mere accident.

How long elapsed between the filling of Ditch 1, the laying of a metalled surface above it and the deposition of building debris on that surface is uncertain. Although in the phasing proposed here considerable time is presumed to have elapsed between the filling of Ditch 1 in Period 3 and the wall construction in 4, the slumping of not only the fill but the metalling and the overlying layers, including the mortar layer (75), rather suggests a short period of time. The early date of the fills in Ditches 1 and 2 would perhaps be problematic but it is possible that both ditches, rather than being sequential, could have had origins in Period 2 and continued in use together, with regular cleaning, for almost a century from the later second century, only to be filled immediately before the wall construction with spoil containing only rubbish survivals and nothing contemporary with the construction period. The two ditches, with their centres 9m apart, would have been separated by a berm approximately 4m wide on which the Period 1 occupation levels partly survived. The differing characters of the ditch fills would need explanation

but it is possible that Ditch 1 was first filled with material excavated from the early levels and then Ditch 2 was levelled with the cleaner sub-soil beneath, this spoil being carried out across the site of the now-filled Ditch 1. Both ditches could then have been associated with the earlier, presumably timber-fronted, rampart and then been levelled in Period 4 at the time of the construction of the wall.

Ditch 7 is problematic and may be an interrupted or localised feature since it did not extend south into Section G–I nor as far as the corner of the defences. The line of Ditch 3, however, as extrapolated between Sites A and B, suggests that the latter did not run parallel to the defences on the former site, cutting across the projected southward continuation of 7. This ditch might have pre-existed 3, being an un-finished replacement to Ditch 2a, or it could have served as a partial strengthening of the eastern defences, added to the rear of Ditch 3. In the latter case it would belong in the post-Roman period, a possibility discussed below.

Period 5

This period has been sub-divided into phases 5.1 and 5.2, although little evidence for the latter could be identified on Site A, this latest Roman activity being mainly characterised by evidence for building destruction on Site B. On Site A phase 5.1 is marked by the cutting and initial silting of Ditch 3, beyond the now heavily silted Ditch 2a. Ditch 3 is important to the understanding of the site as the only element of the eastern ditch system to be identified on both Sites A and B, providing a link to the outer limit of the defences and the area of extra-mural settlement. Period 5 also saw the accumulation of silt on the berm although in the vicinity of the corner this deposit had been contaminated by Anglo-Saxon and medieval material. On the corner itself this deposit was sealed by a rubble foundation which appears to be of later and Anglo-Saxon date (below, post-Roman Period 7, Site A).

On the eastern side of the defences Ditch 2a was by this stage a shallow silted hollow containing 0.20m of grey brown silt (55) sealed by a pebbly dark grey silt (29) which was concentrated on the outer eastern edge. Layer (55) produced coarse ware of the mid or late fourth century while the pebbly layer above this (29) included coins of the late third and early fourth century, the latter being an issue of Constantius dated to AD 324–26 (coarse ware 168–172; samian 69; mortaria 21–23; coins 41 and 60).

On Site A Ditch 3 was exposed in Section G–H, the centre-line approximately 10m east of Ditch 2a, but on an alignment which here seemed more to the north-east of that followed by 2a (Plan, Fig. 6). The surviving cut on Site A was 6.7m wide by 1.3m deep which, allowing for erosion, may originally have been nearer 8m wide and 2m deep. The profile was a rounded V-shape, both inner and outer lips truncated by medieval levels which also filled the upper levels. The primary fill (66) was 0.15m of dark grey clay which produced no finds. Above this was 0.35m of grey sandy clay silt (65) with signs of iron panning. This produced coarse ware of the mid to late fourth century as well as a coin of the late third century (coarse ware 173,174; samian 103, 104; mortarium 39; coin 58). On the outer, eastern, edge a further layer (64) could be assigned to this latest Roman fill, this being a dark grey clay silt which produced a fragment of slate and some charcoal. The upper fill, (62), (63) and (56) dated to the medieval period.

Layers of silt on the berm in front of the wall had accumulated during Period 4 but, as already noted, had been subject to some contamination by post-Roman material.

Discussion

This final identifiable activity of Roman date on Site A is characterised by the cutting and initial silting of Ditch 3. This ditch was the widest in the system and the latest on the eastern defences, its silted hollow remaining as a feature into the post-Roman period. On Site A the date of its lowest fill places it in the mid or late fourth century, later than the uppermost fill of Ditches 2a or 7 immediately to its west. It was identified also on Site B where its lowest silting also dated to the late fourth century.

Ditch 7 had apparently terminated before reaching the south-east corner, Ditch 3 crossing its projected line, presumably to replace it and describe a more gently curving path around the corner. This is to presume its continuation southwards beyond the limit of excavation; it was not possible to investigate this ditch south of the defences on Site A but its line may have been observed on Site C as a silted-up hollow in the ground surface beneath the railway embankment on that side (below, p. 62).

The uppermost levels to either side of this ditch had suffered erosion in the post-Roman period and no securely stratified deposits of Period 5 were identified on the berm and the ground surface adjacent to the latest ditches. As noted above, a limited area of deposits (14) and (54) had slumped into Ditch 1 immediately outside the wall and can be assigned to the construction phase of the wall in the previous period. Other deposits, (42), (42a) and (42b), on the inner berm close to the curtain contained similarly dated finds but also a significant quantity of later Anglo-Saxon pottery, enough to suggest contamination of these surface deposits through traffic in Period 7. The dating of these levels dictates that the most significant overlying feature, the enigmatic rubble structure on the corner of the defences (73), must, despite its similarity to the foundation of a bastion of late Roman type, be placed in Period 7 (below, p. 65).

Site B

The different character and physical separation of the sites hinders the phasing of Site B according to the same dated periods as Site A. Despite the few stratigraphical links between the sites the period divisions are, however, adhered to as far as possible, using dated finds to equate elements of the sequence on the two sites. The earliest Roman levels on Site B are not closely dateable and of a very different character to those on Site A to the south-west, so the phasing of these levels in particular has to remain tentative and based on little dated material. The main link is provided by the late Roman and early post-Roman levels in Ditch 3.

Investigation of the deep levels was curtailed by time and the need to maintain ground stability for the projected construction work. Within the two areas cleared on Site B the earlier levels were recorded at four points. The main observations were made in the trench on the south of the site, at the eastern end of Section L–M (Plan, Fig. 7; Section, Fig. 8). Further exposures of the early levels were obtained in the side of pit (315), 3m to the north and in the collapsed shaft for Well 2, 15m to the east. The latter provided the best section, revealing three metalled surfaces equivalent in composition and level to those in Section L–M. In the separate area cleared in the far north-eastern corner of the site, 25m north-east from the end of Section L–M, the upper occupation and structures were investigated down to the early metallings but the latter were not penetrated.

Observations from these deeper excavations on Site B form the basis for the cross section in Fig. 27.

Periods 2–3

The earliest activity is represented by only limited exposures of metalled surfaces, gravel make-up layers and by the shaft of Well 2. From the limited dating evidence and their stratigraphical relationship these levels were seen as equivalent to Periods 2–3 on Site A.

The surface of the natural was observed at only three points on Site B, in sondages on both sides of Ditch 4 and the east side of Ditch 3 (Section L–M, M–N, Fig. 8); at no point was it exposed near the Old Chester Road to the north. The upper level in the recorded section varied between 45.9m OD on the west and 45.75m OD on the east, the top 1.45m of the natural deposits here consisting of light grey-brown sandy clay silt with iron panning, the very base of Ditch 4 exposing a dark grey clay silt at 44.3m OD.

No weathered or old ground surface was visible, nor any early occupation deposits. The primary deposit (277), assigned to Period 2, was exposed in a trench on the east side of Ditch 4, and consisted of 0.25m of sand and pebbles sealed by a layer of larger pebbles at a level of 45.96m OD. At the eastern end of the exposure a layer of rounded gritstone blocks protruded from this surface but to the west of Ditch 4 the deposit was a somewhat thinner layer of pebbles. On the east side of Ditch 3 the natural appeared to have risen by approximately 0.20m and this layer was not identified there. No finds were recovered from the small sondages in the sides of Ditches 3 and 4.

The overlying deposit (256), placed in Period 3, was likewise cut by Ditch 4, being visible in Section L–M to east and west of that ditch, as well as the eastern side of Ditch 3. The level of Well 2 suggested it was associated with this period, even if not stratigraphically linked. Layer (256) consisted of 0.3m of brown sandy gravel and a lens of light grey brown sandy clay silt, the surface composed of a distinct layer of loosely compacted small pebbles, at a level of approximately 46.30m OD. This made surface survived on the strip of ground between Ditches 3 and 4 and was traced to a point 4.7m east of Ditch 4 beyond which point no excavation was deep enough to encounter this layer. This layer produced a little indeterminate pottery, and, from the interface with (258), a worn coin of Vespasian, the date of loss perhaps in the second or early third century (coin 2).

Well 2 consisted of a square shaft 0.55m wide internally, lined with gritstone slabs and originally 2.25m deep. As excavated, the top of the well structure lay in the base of a later irregular oval pit (317), filled with dark soil and building debris (Section, Fig. 10; Plate 8; see below, Period 5.2, p. 60). The top of the uppermost blocks of the well lining lay at 46.40m OD, some 0.90m below the latest metalled surface (308) and approximately level with the metalled surface (256). At this point in the side of the well shaft a layer of metalling approximately 0.10–0.15m thick was visible sealed by 0.40m of grey sandy clay silt. The lining of the well shaft consisted of 12 square blocks of gritstone each approximately 0.7m square and 0.15m thick, with mitred corners to form a box section shaft. Two blocks had shifted downwards on the eastern side but otherwise the structure was intact; there were no displaced blocks in the fill. Hollowing of the middle of the inner faces on each side suggested abrasion from containers used to haul water from the well. A packing of gritstone rubble was visible behind the slabs, filling a construction pit 1.35m wide at the upper edge; time and safety considerations did not allow its investigation.

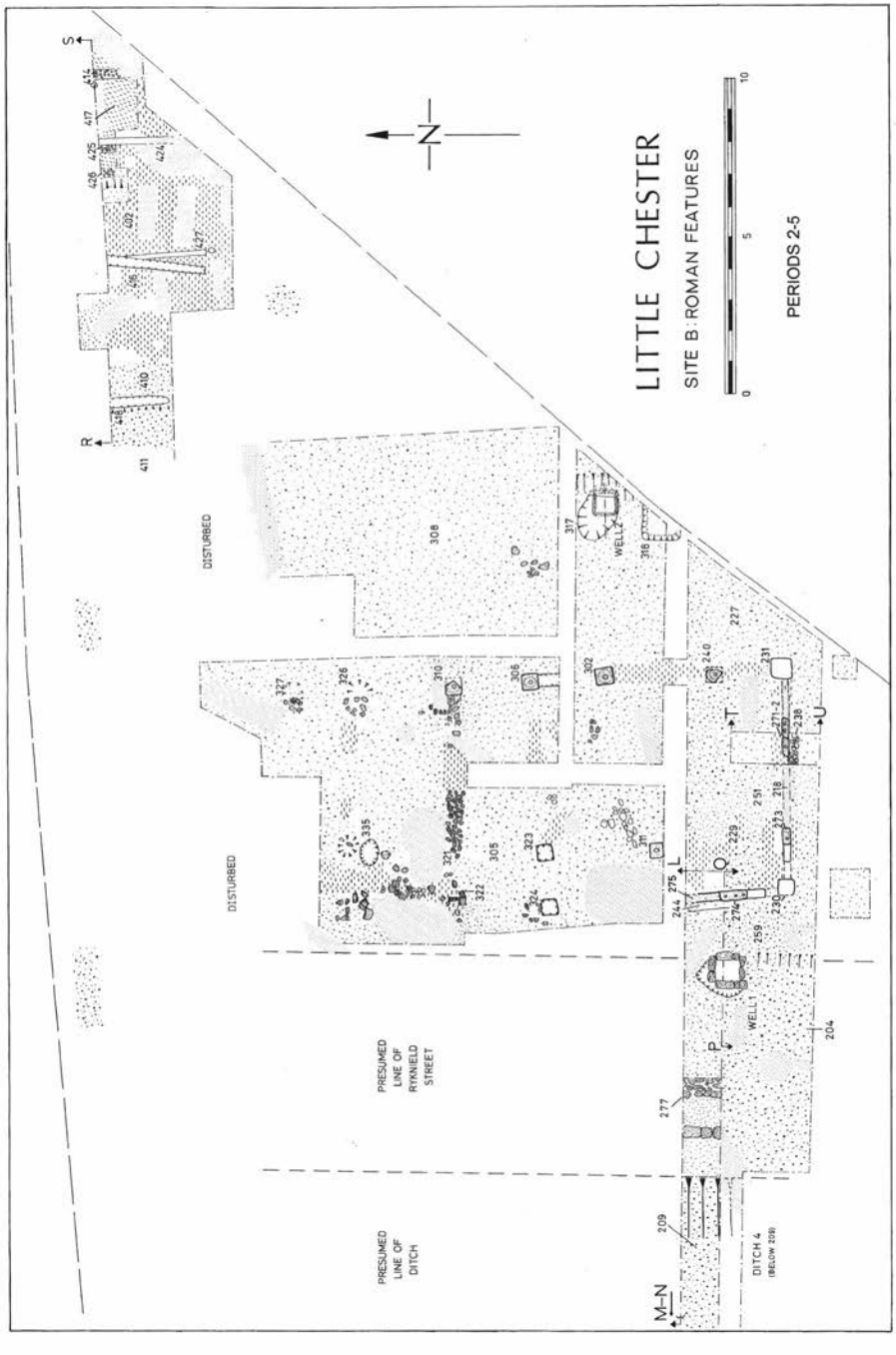

Fig. 7: Little Chester: plan, Site B, Periods 2–5, Roman structures.

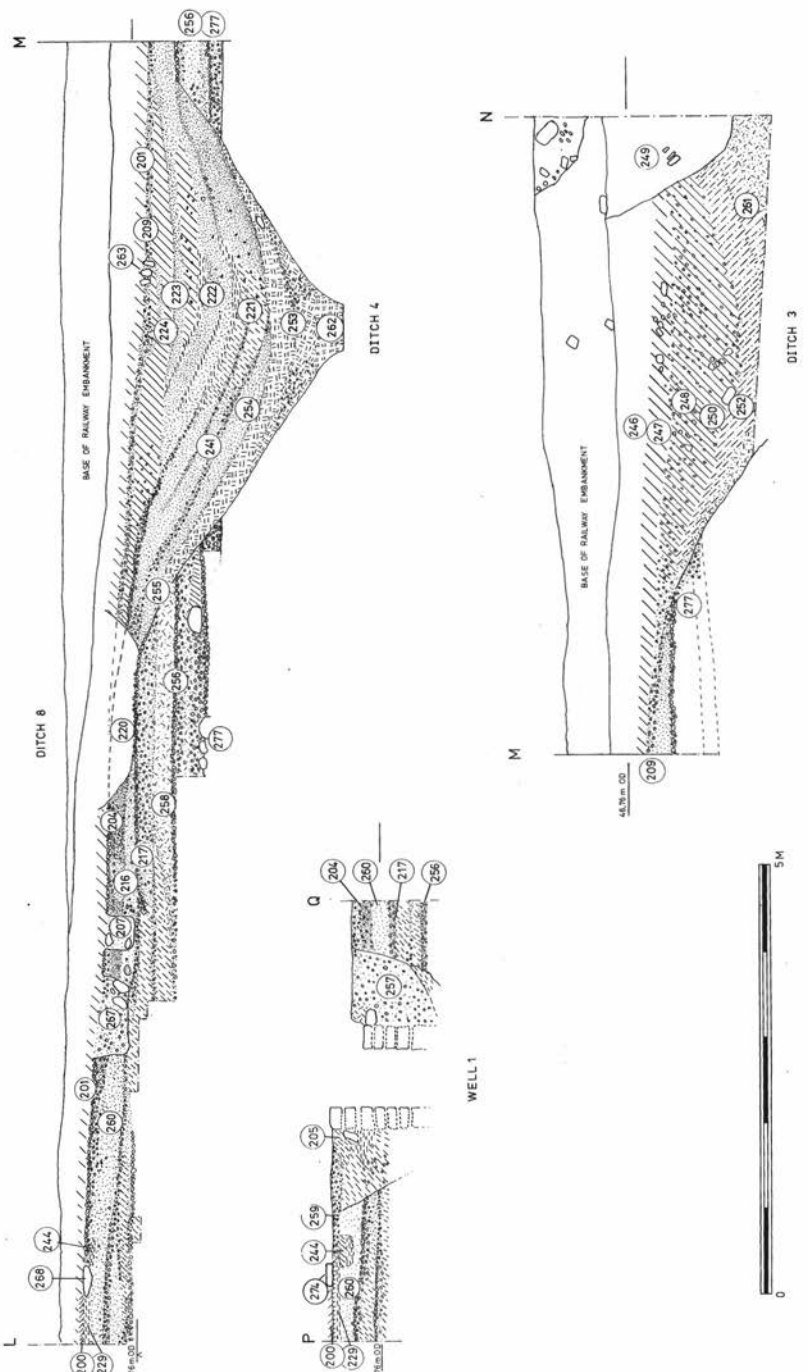

Fig. 8: Little Chester: sections of road and outer ditches, Site B, Sections L–M–N, P–Q.

On the eastern side of the pit, above the lining slabs of Well 2, the upper metalled surfaces and make-up overhung the stone slab lining of the well, suggesting that it had not continued upwards and had originally been sealed by these deposits of Periods 4.1 and 4.2. The fill of the well contained late material and is seen as the result of later collapse into a void; no deposits contemporary with the construction or early use were identified.

Phase 4.1

The cutting of Ditch 4 and the construction of the earliest phases of timber building in the north-eastern area can be assigned to Phase 4.1. A cambered metalled surface adjoining Ditch 4 on the east may represent the first road surface of Ryknield Street.

In Section L–M a third major metalling (217) and underlying deposit (258) were observed on the east side of Ditch 4. Deposit (258) consisted of 0.4m of loosely packed grey-brown sandy gravel which merged with a grey clay silt to the east where it was observed in the cut for Well 2. Above this lay a metalled surface (217) approximately 0.05m thick and 3m wide with a slightly cambered surface, its highest point at approximately 46.85m OD. To the east this surface became less distinct, merging with various lenses of gravel and grey sandy clay silt overlying (258). To the north-east, the collapse of Well 2 revealed a metalled surface in section at 46.92m above 0.40m of silt, these deposits perhaps marking the continuation in that direction of deposits equivalent to (217) and (258). On the west, the metalled surface appeared to peter out on the lip of Ditch 4, as if contemporary with it; this surface did not exist on the opposite side of the ditch. Pottery from (217) included samian of the late second or early third century, the first dateable material in the sequence on Site B (coarse ware 99–101; samian 62).

Ditch 4 was of V-cut profile, 6.4m wide and 2.2m deep from the surface of (217), the rounded profile of the eastern lip suggesting this was its original profile. The sides had been cut at a steep angle becoming steeper to an almost square-cut base, 0.5m wide. The primary silt (262) was a light brown clay silt containing no archaeological material and, above this, a similar gleyed soil (253). On the eastern side (253) merged with (255), a greyish sandy silt which extended up to seal the lip of the ditch. A considerable amount of pottery of the late third or fourth century was derived from these layers, the *terminus post quem* for the group being provided by some Nene Valley colour coated wares and a mortarium of the late third century (coarse ware 102–112; samian 63–64; mortarium 15). Above these deposits a distinct horizon may have marked a stabilisation of the fill after initial silting to a depth of 0.80m, this horizon marking the division between phases 4.1 and 4.2.

In the north-eastern corner of Site B, approximately 25m north-east of Section L–M, the earliest levels exposed in a small sondage comprised two gravel surfaces, (438) on the west and, at a lower level, (439) to the east (Plan, Fig.7; Section R–S, Fig. 11). Neither was stratigraphically linked with the main area of excavation but their character and level allow them to be equated with the phases of surface exposed in Section L–M. (439) was a level surface of small pebbles at 46.55m OD, approximately on the same level as (217). This surface was sealed by two deposits, firstly (422), a make-up level and, secondly (417), a floor overlying it. The former consisted of a brown sandy silt 0.50m thick, the floor being made of a hard packed layer of iron-stained grey clay silt. The earth floor extended for 4m to the east, the only features in its surface being a coarse ware jar

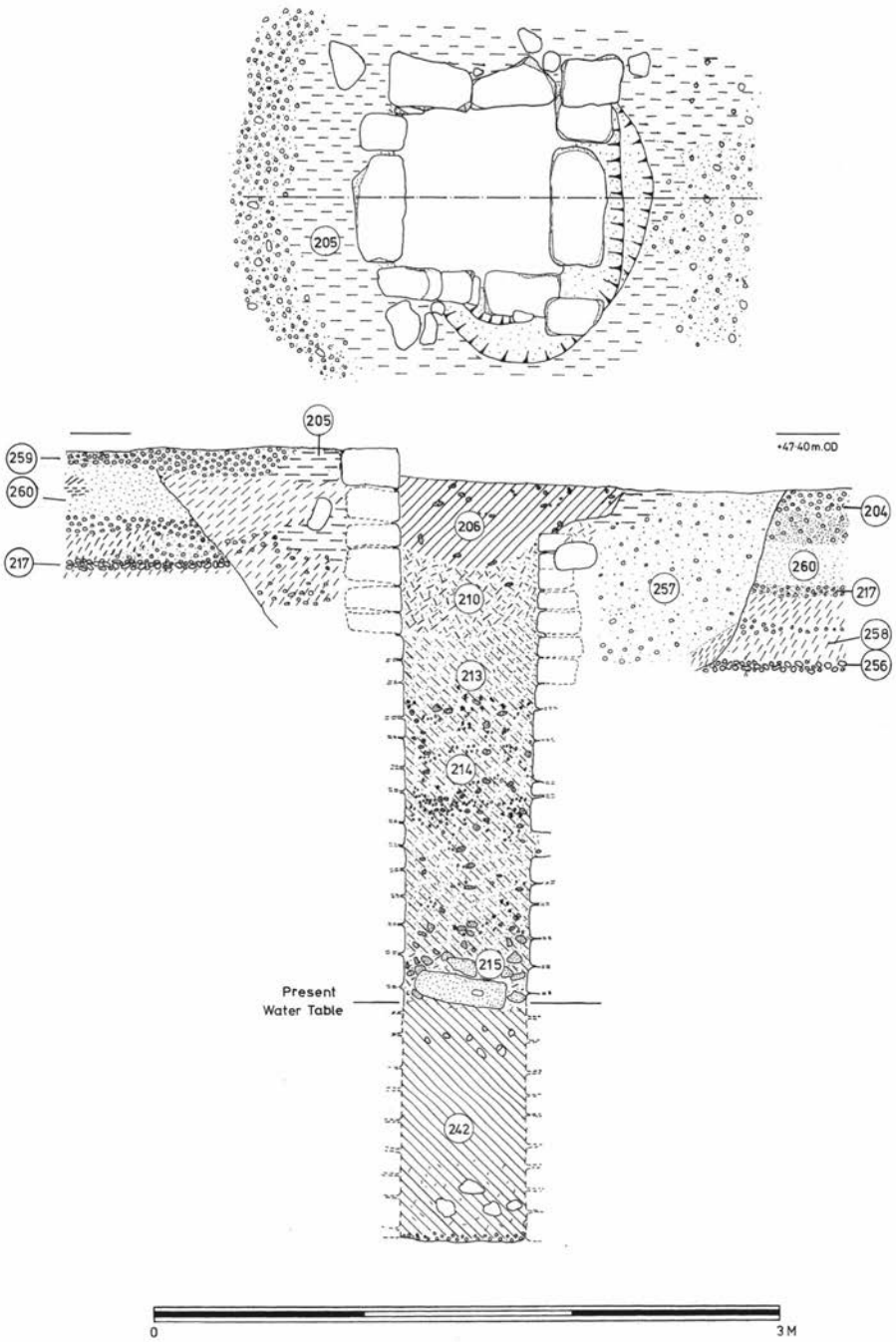

Fig. 9: Little Chester: plan and Section, Well 1.

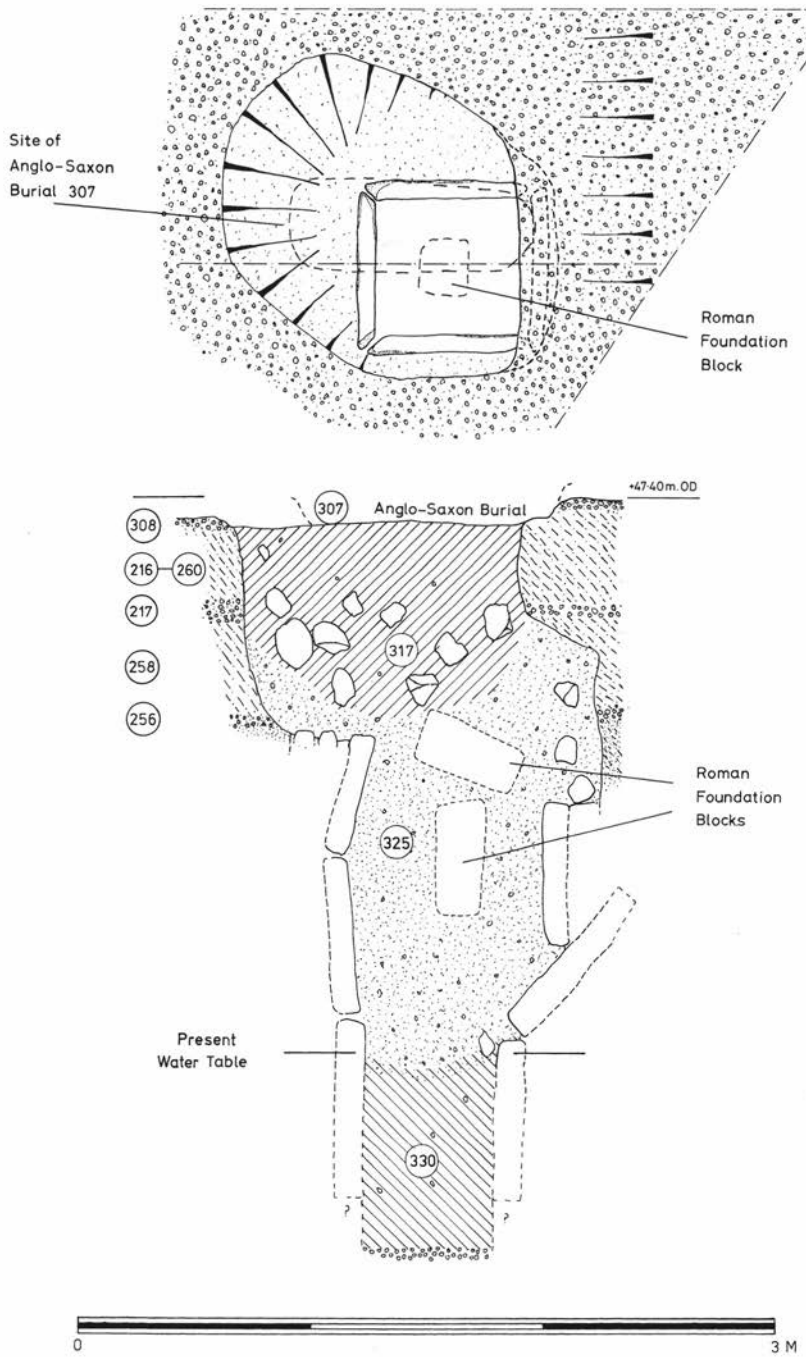

Fig. 10: Little Chester: plan and Section, Well 2.

Plate 7: Well 1 on Site B looking south-east, grave 2 to right, grave 3 to left, with stone footings of Roman building and Period 5/6 features beyond.

Plate 8: Well 2 from the north-west, as revealed in the base of pit (317). The stone slab lining survives beneath the overhanging metalling (256), (258), (217) and (308).

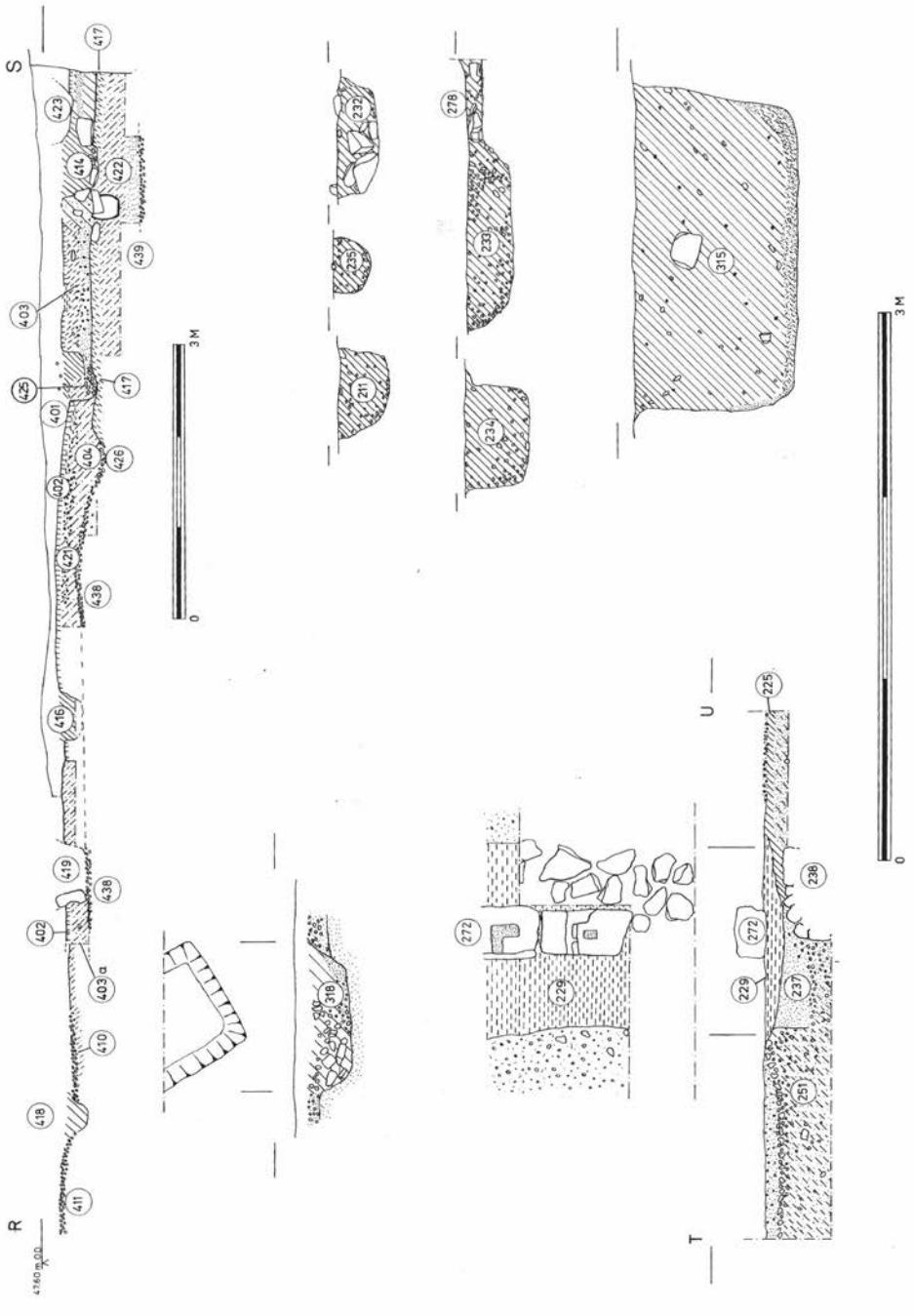

Fig. 11: Little Chester: sections of Roman and Anglo-Saxon features, Site B, Sections R–S, T–U.

set below floor level, the top covered by a rubbing stone (coarse ware 167; stone object 22). The floor surface contained pottery of the later second or third century and a coin of the late second century (samian 65; coin 14). In the small area investigated little of the structure was exposed but, on the west, the surface (417) was bounded by a foundation of pebbles (426), 0.35m wide, which separated it from the metalling (438). This higher metalled surface was exposed at two points 5m apart at a level of 47.10–47.25 m OD, the higher point lying on the peak of a cambered surface at least 1.6m wide. From the relative level of this surface it could have been related to surface (217) of Period 4.1.

Phase 4.2

The main feature of this phase was the laying of a fourth and uppermost metalled or clay surface which, on the west, overlapped the partially filled Ditch 4. Into this surface were set the foundations for a substantial building furnished with internal clay or gravel surfaces and with at least one side marked by an open colonnade. On the west side of the building a metalled surface perhaps served as a road running alongside the partially filled Ditch 4. To the north-east, the slighter timber building of the previous period was replaced and extended.

The various components of the surface and its foundation should be described before the building. Metalled and red clay marl surfaces of this period were traced over a wide area from Ditch 4 eastwards and northwards as far as the structures in the north-eastern corner of Site B. The northern side of the site was considerably disturbed by the recent bridge foundations but even here traces of a metalled surface were seen close to the Old Chester Road (Plan, Fig. 7). In the southern trench, between Ditch 4 and the colonnaded building, the surface (204) was sectioned for a distance of 10m and found to overlie (216) and (260), a make-up layer of lenses of grey or grey brown sandy silt up to 0.35m thick (Section L–M, Fig. 8). The surface here consisted of a layer of up to 0.10m of yellow sand and gravel which extended from the western foundation of the building as far as the eastern side of Ditch 4, a distance of 8m. The surface sloped gently from 47.36m OD on the east to 46.90m OD at the lip of Ditch 4 on the west, beyond which the surface dropped sharply into the silted hollow. A step of 0.25m was created beside the head of Well 1 which had been set towards the eastern side of the surface; if this obstruction is taken into account the useable metalled surface between it and the camber into the ditch was approximately 5m. A little pottery from the make-up of the metalled surface was of the third and or fourth century (coarse ware 149; samian 74, 81). This deposit also contained coal (below p. 282).

To the west the metalling overlay three major deposits, (216), (241) and (254), the latter two major layers in the middle filling of Ditch 4. The lower deposit (254), consisted of brown sandy silt and lenses of iron stained gravel, the upper, (241), of grey sandy silt. Both deposits extended up the eastern side of the ditch and merged with (216), a similar silt which extended beneath the road. In the hollow of the ditch these merged with (221), a yellow brown to grey sandy silt; a silt similar to (241) extended up the western side of the ditch. Above (221) was a lens of red clay or marl while the layer itself contained flecks of charcoal and a few fragments of tile with pink concrete attached. These deposits contained considerable quantities of pottery of the later second and third centuries but also other wares of the later third and fourth centuries (coarse ware 116–140; samian 86–93; mortaria 17–19, 31–35). Much of this material must have been rubbish survival;

a *terminus post quem* is provided by some sherds, including Oxfordshire imitation samian, of fourth century date (coarse ware 125). Only one coin, of the late second century, was retrieved from these deposits (coin 18).

Immediately to the north-east of Section L–M, within the area of the colonnaded building, a similar make-up was exposed in the section of pit (315), the surface (305) here consisting of brown sandy gravel, not as substantial or compacted as (204). Within the south end of the building a foundation was revealed of up to 0.40m of grey-green sandy silt and iron-stained gravel (251) sealed by a thin layer of gravel (Section T–U, Fig. 11). Outside, at the south end of the section, a similar but poorer surface (225) was revealed, extending along the south side of the structure. The latter produced pottery of the third or fourth century (coarse ware 165; samian 78).

On the east of the building the surface consisted of two main deposits, (227) and (308), their foundation only being exposed in section in the side of Well 2. These were essentially similar deposits, the former consisting of grey-green sandy silt and gravel, the latter of coarse sand and pebbles, extending at least 10m north to the north-eastern corner of the site. (227) contained some pottery of the third or fourth century. In the zone between the building and the site of Well 2 the surface lay at approximately 47.45m OD, slightly higher than within the building. On the east side of pit (317) there was a slight step up to a level of 47.50m. The section of this pit revealed the metalling to be 0.10m deep and to overlie 0.40m of make-up, these deposits overhanging the edge of the well shaft, some 0.50m deeper. As already noted, this suggests that this well had been covered by Period 4.2 and that the metalled surface had originally extended over its top. The presence of foundation blocks in the collapsed shaft also suggests that part of a later structure overlay it.

Within the area of the main structure a gravel surface (305), essentially similar to (308), was traced to the northern limits of the excavation, to a point 18m north of the south end of the building. This survived, however, only in an attenuated form, having been severely damaged in this northern area by demolition of the railway bridge. A similar but better preserved metalling (411) did, however, survive to the northeast, overlapped by the western edge of the timber and clay buildings in that area (Plan, Fig.7, Section R–S, Fig. 11). The full extent of this final surface was at least 25m square, potentially extending both north and south but bounded by Ditch 4 on the west and the clay and timber buildings on the north-east.

The Colonnaded Building (Plates 9 and 10)

The colonnaded building comprised perhaps five elements, three of which were readily identifiable, the other two less well defined. The first comprised a row of column bases or sockets from robbed bases along the eastern side of the main structure, the second and third being linear foundations lying to their west and linked to them to form the south, west and, possibly, part of the northern end. The fourth component was some small features within the interior, while the fifth was those external features on the east which may or may not be related.

The row of seven column bases or empty sockets for bases comprised four bases (240), (302), (306) and (310) and three sockets (231), (326) and (327). The better preserved bases (302) and (306) were 0.48m square and set with their upper surface at 47.53 and 47.46m OD respectively, approximately 0.10m above the surrounding surface. Their

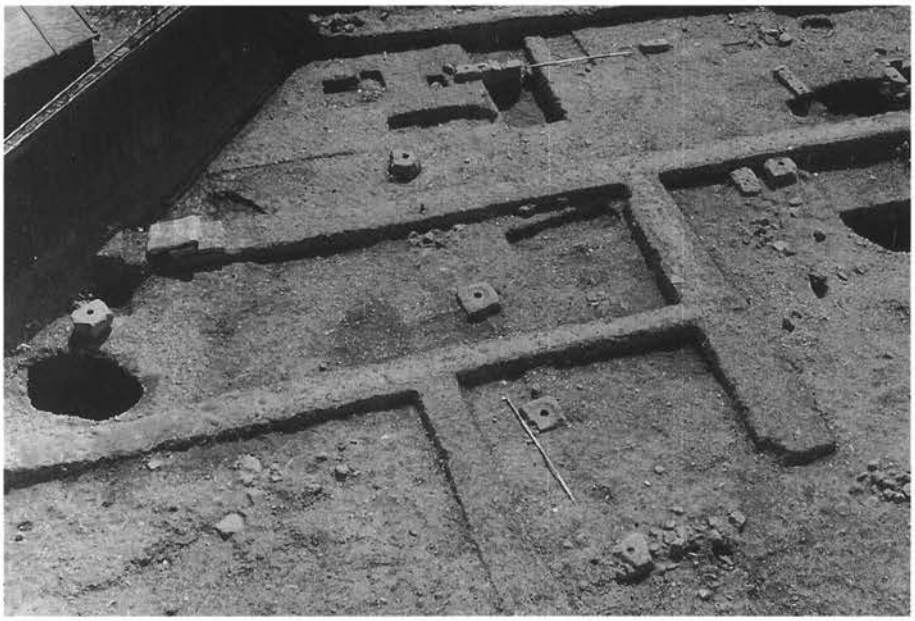

Plate 9: Aerial view of column bases in colonnaded building Site B, looking south. Pit (317) and Well 2 are visible to the left adjoined by the stone slabs and stone column base retrieved from the well fill.

Plate 10: Detail of foundation block (271–2) from Roman colonnaded building on Site B, looking north.

upper surface bore traces of a slight circular rebate approximately 0.33m wide with a central circular dowel hole 0.10m wide. Base (310) had been damaged by machining and base (240) had been displaced west of its true position by 0.10m. Of the empty sockets (231), at the south-east corner, was the most convincing, surviving as a pit 0.67 by 0.60m and filled with dark soil; as a robber pit this feature has been included in Period 5.2. Features (326) and (327) survived only as groups of gritstone rubble set in the eroded surface and adjoining slight hollows on the east.

The total length of this row of features was 15.75m, the more certain bases extending over a length of 10.5m. The distances between the centres of these features varied between 2.16 and 3.52m. The three best preserved bases had intervals of 2.38 and 2.46m. No clear sign of foundations linking these blocks was seen although a layer of red marl (301), either a foundation or remnant of flooring, survived between (231), (240) and (302). On the south side of (306) was a slight trace of a shallow hollow but this may have been only a localised variation in floor surface. The sub-structure or foundation of these bases was not investigated but further north truncation of the late Roman surface (305) revealed rubble features which may have served as foundations for the more damaged sections of the building (see (321) and (322) below).

The linear foundation at the south end and along the west side close to Well 1 defined the southern end of the structure. The main element in the south wall was an intermittent series of rectangular blocks with small rectangular insets. Block (272) had a single square inset and an L-shaped slot while (229) and (273) each had a single square hole. These rested on a bed of red marl (229) which extended northwards into the structure as if serving as an internal floor. Traces of a shallow slot (218) suggest that a continuous line of blocks had originally existed but had been robbed. This robber trench terminated at the south-west corner at a square pit (230), like (231) the presumed site of a square base. Section T–U (Fig. 11) revealed an underlying foundation (238), off-set slightly to the south and sealed by the marl, as if it had served some earlier structure rather than as an additional foundation. The west side at the south-west corner was marked by a single rectangular block with three square insets (274), with possible robber trenches between it and (230) and (275) to the north. Beneath (274) and on its west side, a shallow trench (244) contained mixed sandy soil, ox jaw bones and human infant bones, presumably from an infant burial. Pottery from this dated to the third century (samian 80 and mortarium 24). Further north along the west side lay the later pit (315) which had removed all traces for a distance of 3m but beyond that a square depression (324), only 0.02m deep, may have marked the site of another square block.

The upper levels at the northern end of the structure had been considerably eroded by recent demolition operations, the main surviving element being a roughly L-shaped foundation of gritstone rubble and red marl (321) and (322). The former was a roughly straight line of rubble 0.50m wide and approximately 5m long, set in (305) and extending west from the northernmost base (310). A gap of 1.3m, surfaced in red marl, may mark a doorway close to its mid-point. Foundation (322) was an area of irregular gritstone rubble and red marl approximately 3.5m by 1.5m, aligned north-south at right angles to (321). It had been cut away by later pits on east and west so its true shape and dimensions are unknown. To the north its line may have continued as a strip of red marl.

Within this outline further features could be identified. A stone base (311), measuring 0.48m square, with circular dowel hole and roughly chiselled upper surface, was probably

reused and not in its original position. A shallow square hollow (323) 3.5 m to the north suggests, however, that another parallel line of bases had existed. This base corresponds with a gap of approximately 0.7m between (321) and (322), 3m to the north, while an oval hollow (335) 3m beyond might have held another block. Irregular patches of gritstone rubble set in the underlying (305) were noted near (302), (311) and (324) but their significance is unclear. Irregular areas of red marl on the surface within the south-west corner of the structure, between (323) and (306) and between (326) and (335) may be patches of an original internal floor.

Occupation levels or trampled surfaces within the southern end of the building comprised (202), (212), (219) and (303). These layers consisted of greenish grey sandy soil or loam with pebbles and lenses of red marl, these deposits overlying the possible floor remains (229). Pottery of the third and fourth century was contained in these layers as well as one coin of the late third century (coarse ware 154; samian 72, 75–77, 82; mortarium 25–28; coin 43). Roof tiles of fired clay and Swithland slate, the latter including several complete or near complete examples of varying size, were also recovered besides fragments of coal (stone objects 23 and 24; coal p. 284).

To the east of the colonnaded structure two features may also have been foundations, separated from the main structure by an area of open gravel 4m wide. On the north, the lower fill of Well 2 (325) contained two foundation blocks of the Period 4 building, one a rectangular morticed block, the other a rough base with circular dowel hole. The stratigraphy above and adjacent to the well suggested it had been sealed over prior to the laying of the Period 4 metalling and that these foundations had entered the well as a result of collapse and settlement, rather than deliberate shifting of the stones from elsewhere. Immediately to the south, a rectangular feature (318), measuring 0.9m by at least 0.8m and 0.25m deep, contained much gritstone rubble, perhaps from a destroyed foundation block. A further linear block with square inserts noted to the south, close to (231), appeared to have been recently displaced from this area.

North-eastern Structure

In the north-east corner of the site two or possibly three sub-phases of clay and timber structures adjoined the eastern edge of the metalled surface, replacing the earlier structure of Period 4.1 (Plan, Fig. 7; Section R–S, Fig. 11). The main elements of this building comprised three or four parallel north-south foundation slots, (418), (416), (424) set 4–4.5m apart. Each of these was a steep sided trench approximately 0.30m wide and 0.25m deep, filled with dark soil. In the case of (416) this replaced an earlier narrower slot (427) on a slightly different alignment. Slot (418) was set into the edge of the metalled surface (411) but the others were cut into a red marl floor (402) founded on a make-up of grey ashy soil containing coal fragments, (403), (404) and (405), or sandy soil (421) (coal p. 284). These deposits contained pottery of the third and fourth century (coarse ware 155–162, 166 and 167; samian 94–99 and 102; mortarium 29; glass 17). The slot (416) produced a little pottery of the third century (coarse ware 164; samian 101; mortarium 30).

Traces of two other slots, (414) and (425), were exposed at a slightly deeper level, both consisting of shallow trenches 0.25m wide and 0.10m deep, filled with large pebbles beneath darker soil. These trenches appeared to cut the make-up of the floor but (425) was sealed by floor (402) (Section R–S, Fig. 11). Pottery from (414) dated to the late

second to fourth century (coarse ware 163; samian 100). Overlying floor (402), occupation levels of grey-brown sandy soil (401) and (412) contained pottery of the late third and fourth century and coins of the third century and of the second quarter of the fourth century (coarse ware 175–180; samian 115–119; coins 23, 29 and 65). Little structural debris was contained in these layers other than some fragments of clay and slate tiles; scattered fragments of coal and charcoal were also present.

Discussion

The exposure of the early levels on Site B allows an outline of the first activity to be reconstructed. Nothing akin to the occupation levels of Period 1 on Site A was observed but then no extensive exposure of the primary levels was possible here. Where exposed in Section L–M, four phases of metalling can be distinguished, the latest of which (204), can be placed in Period 5 from its dating. There can be no certainty that these deposits represent early surfaces of Ryknield Street since a full cross-section with kerbs was not obtained but its course is projected to have passed through this site in the late Roman period.

These earlier levels on Site B have here been equated with Periods 2–4 on Site A but, with the rarity of finds, this must remain only a tentative dating. Dating of the later levels is complicated by the relatively large quantities of samian of the late second to mid third century associated with colour coated wares and coarse wares of the third and fourth century. The dating of these groups has been left within a broad bracket but it is likely that many of the Period 4 contexts fall in the third century, towards the end of the currency of samian, and in the early stages of the development of the late third to fourth century styles of colour coated wares.

The first of the metalled surfaces on Site B (277), was placed in Period 2 and was only exposed within an area approximately 10m wide, to east and west of Ditch 4. Whether this formed part of some extensive surface or was part of a road is uncertain, there was no visible camber to the surface or road side ditches within this limited exposure, but on the east at least there was a layer of boulders which could have served as a foundation or boundary for such a feature. In the surviving strip west of the later Ditch 3 this surface appeared to have thinned, as if petering out in that direction.

The second surface (256), assigned to Period 3, was more extensive, being traced east and west of Ditch 4 over a distance of 13m. The surface was relatively level with no sign of camber or border but the eastern edge of the surface in Section L–M was, however, of a less compacted nature. To the east of this point, the surfaces seen in the side of Well 2 may be correlated with this surface. Although the lining of the well had settled and partially collapsed enough remained *in situ* to suggest that the original well-head had been on a similar level to a metalling at a level of approximately 46.40m OD. This is not only equivalent to the level of (256) to the west but would also correlate with (439) to the north, at a level of 46.55m OD. Allowing for a slight rise in level to the north-east, this might then indicate an extensive metalled surface at least 45m wide east-west by 20m north-south without obvious border but associated with a well near the south-eastern edge of its known extent. Whatever its extent and use the surface sectioned on the western side did not have the form of a road. There is little evidence for the date at which this earlier open metalled area was created but the worn coin of Vespasian on its surface and the material from the overlying make-up (258) would suggest a date in the second

century for its use. The well contained only later material which had slumped in following its later collapse.

The third phase is identified as 4.1 and comprised a metalled surface bounded by the original cutting of Ditch 4 on the west and by slight traces of timber buildings on the north-east. The metalling (217) was delimited on the west by a thin but well compacted metalled surface 3m wide, the highest point lying at a level of approximately 46.75m OD. Beyond that point, to the end of Section L–M, the deposits became more variable, one loose surface continuing at the approximate level of the cambered surface, but this was sealed by another rising slightly to the east. The lower surface, at a level of 46.85m OD, would approximate to a horizon above Well 2 at 46.90m OD, this surface overhanging the east side of the lining and thus later than it. On this evidence, Well 2 would seem to have been out of use by Period 4 and had presumably been covered over in some way. Although no evidence for a capping survived, the contents of the well, (325) and (330), including collapsed foundation blocks, were of later date and represented the slumping or collapse of overlying deposits into a void beneath. Beyond, to the north-east, this surface would correlate with (438), a metalled surface at a similar level but dropping away on the east, as if the margin of the surface.

From the relative positions of these exposures this third surface would have been 30m wide east-west by at least 20m north-south, too wide for a road and suggesting an extensive metalled area without obvious trace of any structure set on it. The little material beneath the cambered surface in Section L–M dated to the mid second or third century, somewhat earlier than the date of the earliest fill in Ditch 4. The western edge of this metalling did abut the lip of this ditch and should thus be associated with it. On the east the third surface adjoined a timber structure set on a pebble foundation (426), with internal earth floor (417). The latter would, stratigraphically, be the earliest building identified in this part of the site but its extent and nature are unknown. With the close proximity of the main east-west road to the north the most likely explanation is as the western side of a strip building facing north onto that road.

Ditch 4 was a substantial and well-cut feature of defensive proportions, aligned parallel to and some distance in front of the existing defences. The initial fill of Ditch 4 cannot be dated with any precision but some coarse ware vessels in (253) can be dated to the later third or fourth century, placing this ditch in Period 4.1, roughly contemporary with the later use of Ditch 2 or the cutting of Ditch 2a. Period 4 was thus marked by the creation of a substantial defensive feature set 30m out from the line of the wall and 20m east of Ditch 2a. Even allowing for erosion this ditch was more substantial than the latter and cut to greater depth. It was adjoined by a possible roadway running along its eastern edge, beyond which was a metalled surface extending for a considerable distance and terminating on the north-east at the timber structure marked by clay floor (417).

In Phase 4.2 the construction of the uppermost metalled surface marks the final raising of ground level in this extra-mural area, adjoining the outer defences south-east of the east gate of the fort. The projected line of Ryknield Street, as exposed to the north in Darley playing fields, would suggest that it continued along the western side of this area, close to the defences. The purpose of the eastern extension of this metalled area will be discussed further below but in this phase at least it had served as the foundation for the large colonnaded building.

The colonnaded building, although only partly investigated, may be recognised as of two phases, similar in dimension but increasing in complexity and the substantial nature of the foundations. The presence of groups of gritstone rubble set in the underlying platform of sand and gravel and stratigraphically earlier than the more carefully finished foundation blocks may mark the first phase of a building with an entirely timber superstructure, based on these buried rubble foundations. In this first phase slight rubble foundations formed the southern end (238) and a northern end (321) with a further extension delimited on the west by (322). The groups of stones beside (324), (326) and (327) may be supports for uprights while other groups of stone close to (311) might mark an intermediate foundation between (238) and (321), creating two units 5m wide by 7.5m long east-west.

The second phase consisted of a building of similar size but more substantial in construction and of differing internal arrangements. The most obvious element was the row of column bases on the east, the surviving bases being apparently free-standing and external, in the absence of any continuous exterior wall. The south end was marked by robber trenches suitable for bases at the corners linked by linear foundation blocks while the west side, closest to the road line, also produced evidence of the latter. The north end is problematic since the visible foundations may be part of the earlier phase and only damaged sockets for later stone foundation blocks survived. Within the interior at least two bases can be recognised which could have acted as internal roof supports. These foundations were set in the metalled surface, patches of red Keuper Marl within the interior, presumably the remnant of an internal floor.

What form of building can be reconstructed on these foundations is uncertain. The square blocks retained in four cases not only circular dowel holes in their centres but also wider, shallow concentric circular recesses. Such bases could only conceivably have been designed to support round section columns as free-standing supports for a roof. The large central sockets would have been most suited to turned timber columns with dowels left in the end rather than stone drums, evidence for which is entirely lacking from this and other sites at Little Chester. The long blocks with their smaller square dowel holes could originally have been either a more substantial form of sleeper foundation for a continuous wattle and timber framed wall or the base for a timber-framed balustrade. The former is conceivable in the case of this building's plan, forming a solid wall on the south and west sides, between the columns. The latter would also have been possible, the empty sockets at the south-east and south-west corners supporting circular columns on bases, the linear foundations taking a balustrade linking the columns. Any interpretation is further complicated by the possibility that the blocks may have been re-used, indeed the original use could have been as supports for pillars and balustrade, their re-use here then being for a simpler timber frame with wattle and daub infilling.

The fact remains, however, that the eastern row of bases was not linked by any trace of a continuous foundation on the same level as their upper surfaces. The absence also of any continuous parallel foundations to either side suggests that they formed an open exterior colonnade and argues against any interpretation as internal supports of a basilican structure. An open colonnade on that side would have given on to the gravel surface and the source of morning daylight; the metalling on the west between the building and Ditch 4 would then have formed a section of Ryknield Street passing on the western side. As to the internal space, the traces of free-standing internal pillars would,

with the eastern pillar bases, have created a space 5.5m wide and 10m long in the main part of the interior with a narrower space 1.75m down the western side of the interior. The very fragmentary western foundation could have supported a continuous wall or a balustrade between pillars, closing off the building from the road but perhaps leaving access points to it.

Whether the southern end of this building adjoined another of similar construction, set at right angles and extending beyond the site boundary, is uncertain. The foundation blocks in the fill of Well 2 could mark a particularly energetic demolition or part of a structure that had settled; the contents and regular shape of (318) did suggest the presence of another, paired base immediately to the south. The rather wide interval between these features and (302) and (331) could have been an open space, these features belonging to the north-west corner of another building continuing to the east and facing north onto the metalled area (308). The presence of slate tiles show the main building to be of some quality, commensurate with a colonnaded exterior. The interpretation of the building will be discussed further below in the light of other finds locally and other examples of such foundation blocks found elsewhere in Britain (below, p. 284).

The separate structure in the north-east corner was only partially exposed but appeared to have been of slighter nature. The western limit was marked by (418), the southern, perhaps, by the butt ends of (416) and (427) and the fragmentary (424); the northern and eastern limits lay beyond the excavation. The building was of at least two and possibly three sub-phases, the earlier structure of Period 4.1 being sealed in the late third or early fourth century by the ashy make-up and marl floor (402), raising the level to that of the final metalling (411) which abutted it on the west. Foundation trench (425), and possibly (414), preceded at least the laying of the marl floor, whereas the others post-dated it, (418) lying beyond its western limit. A possible sequence here could include (414) and (425) as part of an early timber building of Period 4.2, the slightly narrower trenchs (424) and (427) then following the laying of the upper floor and, finally, (416) and (418) replacing them. The sequence from Period 4.1 then marks the raising of floor levels to those of the contemporary metalled area to the south and the erection of three or possibly four successive timber buildings, each shifting slightly westward in its location, until the final phase actually encroached on the metalled area. Whatever the sequence, this northern structure was separate from the colonnaded building and of a completely different nature, even if of generally the same date. The foundation trenches could have been the side walls of strip buildings facing north onto the east-west Roman road to the north. The possibility exists, however, that these buildings, which did appear to be open on the south, were the northern side of a single layout, incorporating the colonnaded building on the west and the fragmentary structure on the south to form three sides of a unified scheme set around a metalled area measuring 11m north-south and at least 15m east-west.

Period 5

Period 5 comprises those levels and structures which appear to belong with the latest Roman period activity on the site. Although separated into two phases the sub-division can only be loosely applied to many features. The main elements of Phase 5.1 on Site B were the final filling of Ditch 4, the cutting of Ditch 3 and the construction of Well 1; some late surfaces within the colonnaded building may also belong to this phase or the

succeeding 5.2. The latter encompasses the partial robbing and adaptation of this structure, also the primary filling of Well 1 and the collapse of the stratigraphy over Well 2. Post-holes in the north-eastern corner of the site might also date to this late or sub-Roman phase but are treated as more likely to have been associated with the later post-Roman or medieval period.

Phase 5.1

The context of the uppermost filling of Ditch 4 is provided by the extension of the metalling (204) westwards into the ditch, sealing the deposits of Period 4.2 (Plan, Fig. 7; Section L–N, Fig. 8). Up to a metre of fill existed in the centre of the ditch above this layer, the three deposits extending beyond the western lip of the ditch. This upper fill comprised (222) and (223) sealed by a dark soil (224) and a metalled surface (209) of uncertain date. The first two of these layers consisted of yellow brown sandy silt containing some gravel, Keuper marl and frequent lenses of coal and charcoal. A considerable quantity of pottery, including samian, coarse ware and Oxfordshire imitation samian ware of the third and fourth century, was recovered from these layers, the *terminus post quem* of the latest finds falling in the fourth century (coarse ware 183–197; samian 106–109; mortaria 36–38, 40–41; glass 27; coal p. 284). The uppermost layers over the ditch, (224) and (209), both contained significant quantities of mediaeval pottery as well as late Roman material and thus are best treated as post-Roman accumulations (samian 110; mortarium 42; post-Roman pottery 42–49).

Ditch 3 immediately to the west was only partially investigated, the majority of its fill being removed by mechanical means. It was not bottomed but the estimated dimensions and the observed fill corresponded well with the ditch as excavated to the south (Section G–H, Fig. 5). The cut for the ditch was at least 5.5m wide and at least 1.1m deep, the angle of the eastern side corresponding with the profile to the south. The two lowest deposits, (252) and (261), were of greyish green silt, the former containing some slate roof tile debris, the latter iron stained. Pottery from these layers was of the third and fourth century, (252) including some coarse ware of the mid to late fourth century (coarse ware 211–212). Immediately above, at the interface with (250), an iron knife of later Anglo-Saxon pattern was recovered (iron object 38). The upper fill, (248) and (250), was a darker grey pebbly silt containing some Roman pottery but probably represented a post-Roman soil development. The primary fill was largely un-examined but the recorded levels must be assigned to Periods 5.2–8.

Well 1 was situated in the metalled area east of these ditches and immediately west of the south end of the colonnaded building (Plan, Fig. 7; Section P–Q, Fig. 9; Plate 7). It lay 1m from the building and coincided with a slight terrace or step of 0.20m in the metalling (204), perhaps marking the eastern edge of this presumed roadway. A distance of approximately 3.5m separated it from the western edge of the latest metalling where it dipped into the silted hollow of Ditch 4. The well structure can be placed late in the Roman sequence on the basis of its relationship with the road surface, the construction pit cutting (204). The lining of this well was of approximately square plan, 0.65m by 0.75m, and composed of un-mortared, squared gritstone blocks which extended to a depth of 3.7m where it gave onto natural gravel. This structure was set within a cone-shaped construction pit of which only the upper metre was investigated. This pit was of roughly circular plan and 3m wide, the sides sloping in to meet with the top of the lower

shaft. This pit was filled with a mixed deposit of grey-brown sandy soil with lenses of pebbles and red marl (257). In the top of the pit was a packing of heavy clay (205) and, on the eastern side, a thin deposit of metalling (259) which extended beyond the edge of the pit up to the building wall (274). The lower construction shaft was not investigated, but was presumably at least 1.5m wide to accommodate the stone lining. No trace of a well head structure was noted, the lining stones being flush with (259) on the east, while on the west the top two courses appeared to be missing. The surface of the uppermost stone lay at a level of 47.35m OD. Material from the construction trench and the metalling included coarse ware of the third and fourth century (samian 105, 112 and 113). The metalling also produced some slate roof tile debris, suggesting the building was already in existence or under construction at the time of the well's construction.

The primary fill of the well shaft was a waterlogged grey silt with iron staining (242). In the very base of the well lay the complete skeleton of a dog, above which were many waterlogged twigs and pieces of worked wood from a variety of common deciduous species (wood object 2; unworked wood p. 298; animal bones, p. 308). A coin of the late third century was recovered from this fill but the majority of the pottery from (242) occurred in the very top of this layer and dated to the late third or fourth century (coarse ware 181–182; samian 111; coin 48). A slate roof tile at this level may be a stray from the colonnaded building (stone object 24).

The latest occupation levels in the colonnaded building were shallow and had been compacted and disturbed by later activity. At the south end of the structure a dark grey pebbly soil (200) covered the uppermost floor at the level of the stone foundations, this deposit containing flecks of Keuper marl, coal and charcoal besides pottery of the second to fourth century and some post-Roman sherds. Scattered human bones were noted, these presumably derived from disturbed Anglo-Saxon graves rather than scattered remains from a late Roman destruction. To the north, (314) was a similar soil which yielded several complete leaf shaped roof-tiles of Charnwood slate, debris presumably from the roof fall. Pottery here included coarse ware, some with a *terminus post quem* in the mid or late fourth century but also including some earlier survivals and a little post-Roman material, probably contamination (coarse ware 198, 204–210; samian 120–122, 130; mortaria 46–48; coins 12 and 49).

Period 5.2

As already noted, the final phases of adaptation or the earliest dereliction of the Roman structures is placed in this phase. Late fills were identified within Wells 1 and 2 while the colonnaded structure appears to have been robbed in this period and partially adapted. The recorded lower fill of Ditch 3 should also be assigned to this phase.

The upper fill of Well 1 was composed of five deposits of soil and rubble, (215), (214), (213), (210) and (206), in sequence from base to surface. The two lower layers contained purely Roman material, a grey-green sandy silt (215) containing much rubble and pottery, including Oxfordshire imitation samian and other coarse wares dating as late as the mid or late fourth century. The building debris included rare slate and clay roof tile debris, gritstone rubble and three rectangular blocks with square slots similar to those incorporated in the foundations of the colonnaded building. Above this was a similar layer (214) containing pebbles, some building debris and flecks of charcoal. The quantities of pottery included some which linked with material in (215) (coarse ware 213–222;

samian 125–126; mortaria 43–44). Layers (210) and (213) above this were fine greenish brown soils devoid of finds or substantial rubble. These merged with the uppermost fill (206), which consisted of black soil and rubble containing medieval pottery.

The Period 4 metalled deposits and structural elements over Well 2 collapsed in this period, leaving a hollow. The lower 0.8m of the fill in the well was a waterlogged grey, gravelly silt (330) containing pottery of the late third or fourth century and some twigs and wood objects from common deciduous species (samian 114; wooden object 3; unworked wood p. 298). The middle fill, a yellow grey sandy silt, (325), contained a square socketed base and linear foundation blocks from the Period 4 structures and fragments of slate roof tiles and a coin of the mid fourth century (coin 62). The overlying hollow was of oval plan, 1.6m long, 1.1m wide and 0.9m deep, the fill (317), a dark grey-brown silt and rubble. This contained small gritstone rubble, slate roof tile debris as well as finds of similar date to that in the lower fill (coarse ware 199–203; samian 131; coin 61). The fill had then consolidated before the deposition of grave 9 from Period 6, providing a *terminus ante quem* for the sequence.

The nature of the final activity in the colonnaded building is uncertain but, in the late Roman or early post-Roman period, some foundation blocks were removed, leaving robber trenches or voids, at least some of the stones being thrown into Well 1. In addition, a group of stone blocks, including a rectangular slotted block, had been laid on the east side of foundation (311), which itself may not have been in its original position. The cuts of (218), (230), (231), (275), (276), (318), (323) and (324) all retained the shape of blocks removed at some date; the fill of dark silt and rubble produced little dateable material. To the north irregular hollows (326), (327) and (335) lay in the area heavily disturbed by demolition work and there is no certainty that they represent foundations robbed at this period. A final thin scatter of dark grey soil and pebbles (226) over (227) in the area east of the building may have been more an occupation layer than surface; this contained pottery of the fourth century besides earlier material (samian 128–129; mortarium 45).

Discussion

The major event in the latest Roman period was the final levelling over Ditch 4 and its replacement by Ditch 3, an event that provides a link with the sequence on Site A where a full section of this ditch was obtained. The upper levels of Ditch 4 stratigraphically preceded the cutting of Ditch 3 and the sinking of Well 1, all these levels producing freshly fragmented Roman material. The lower fill of Ditch 3, as on Site A, accumulated late in the Roman period but it was still a significant hollow in the early post-Roman period. The upper filling of Ditch 3 and of Well 1 must be dated later on the lack of such finds and the presence of post-Roman material. The uppermost levelling of Ditch 4 and the loose metalling over it must, however, belong in the early medieval period.

The replacement of Ditch 4 by Ditch 3 represents a major remodelling of the defences, at least on the eastern side. The course of Ditch 4 is presently unknown outside this site, this major defensive feature being deliberately filled in Period 4.2 and reduced by 5.2 to a shallow hollow by rubbish dumping. Ditch 3, by contrast, although less substantial, was the final Roman defence which then silted up slowly, never receiving the deliberate rubbish filling of its predecessor and surviving as an earthwork into the post-Roman period.

Well 1 was constructed in phase 5.1, its construction pit cutting the metalled surface of Phase 4.2. Its late date would suggest that it acted as a replacement for Well 2 which by then had been sealed by this metalling. The lowest fill contained rubbish of late third and fourth century, including dead animals, which should mark its disuse. Foundation blocks from the colonnaded building in the layers above, (214) and (215), must mark at least the partial demolition of the latter in the very late or sub-Roman periods. This rubble was associated with much freshly-broken pottery of the fourth century, whereas the rubble-free deposits above did not produce any dateable material and would have accumulated in periods 6–7. The uppermost fill can be assigned to Period 8 from the presence of medieval pottery.

The collapsed fill of Well 2 produced clear evidence for the displacement or demolition of a substantial building prior to the sixth century Anglo-Saxon cemetery, but the colonnaded building may have continued in use to the end of the Roman period and been re-used in the early post Roman Period.

Area C

Some observations were made in the area to the south-west during the laying of service trenches. These identified the upper fills of two partially silted features crossing on an east-west alignment south of the later Roman south defences. Some occupation was also noted in trenches at the City Road end of the strip occupied by the old railway line (Fig. 2).

Two major features were identified in a service trench that ran along the access road to the garage blocks erected in the south-western area of the site, towards the line of the City Road. The trench started 20m south of the corner of the Roman rampart and followed the south-eastern boundary of the site, approximately 4 metres in from the fence line. No sign of Ditches 2 or 2a was seen in these works which commenced approximately 15m east of Section J–K which had revealed these on the east side of the fort's corner (Fig. 6).

Little detail can be provided about the more northerly of the features, the trench being too shallow at this point to provide a full cross-section. The feature was identified approximately 25m south of the projected line of the southern stone defences and showed as a shallow depression 4m wide in the old ground surface beneath the base of the railway embankment. From the location of this feature in either section it appeared to follow an approximately east-west alignment and could have represented a ditch sealed by post-medieval topsoil but still visible in the old ground surface as a slight hollow.

Of the second feature, 43m south of the wall line, the upper 0.5m was visible cut into the natural silts and filled with clay. This was sealed by the old topsoil and was not marked by any slight earthwork hollow. The cross-section suggested a feature perhaps 4m wide at the lip following a line approximately parallel to the southern defences.

Nearer City Road, a test trench 30m from its eastern kerb and parallel to it produced no sign of ditches or occupation but contractor's trenches 15m from the road did reveal slight traces of occupation. Two trenches approximately 10m apart and set at right angles to City Road were linked by another at right angles. The intervening 15m between these trenches and the west side of the road was disturbed by the railway bridge foundations but the southernmost of the trenches revealed up to 1.2m of deposits over the natural clay. The lowest deposit consisted of a thin layer of grey clay and charcoal sealed by 0.7m

of sand and gravel and, to the east, by dark grey soil. The junction of these deposits was marked by a U-shaped ditch, 1m wide by 0.5m deep, and aligned approximately north-south. These layers were sealed by red marl and clay, possibly redeposited material connected with the bridge construction. The gravel and sand extended northwards along the trench connecting with the other trench, but little stratigraphy survived in the latter.

Little can be concluded from these observations but the more northerly hollow might have marked the site of a ditch almost completely silted up and running parallel to the southern defences and 25m from them. This would correspond with Ditch 3 but its width and position do not conform with the expected curvature and size of a ditch negotiating the south-east corner of the defences. That it had survived as a very slight earthwork, like Ditch 3, suggests a relatively late date. The other ditch also appeared to follow the southern defences but was somewhat narrower than the ditches associated with them. The fill of clay could represent a backfilled rampart. Its date is unknown but it might represent part of an early defensive system rather than corresponding to the much wider Ditch 4 on the eastern side. The problem of the extent and nature of the earliest defensive system is addressed below (p. 122).

The deposit of sand and gravel nearer the City Road could derive from external occupation, traces of which have been recorded on the opposite side of the modern road, near the site of the bath house or heated building (Brassington 1982b, 85–6). Any road southwards from the Period 2 fort is likely to have run close to that structure, the south gate perhaps lying on the north side of Parker's Piece. The gravel deposit noted here, bounded by a ditch on the east, could derive from some metalled open area since it did not have the cambered surface and foundation to be expected of a road. A road at this point would imply the position of a south gate and internal north-south cross street in the area of Webster's excavations in 1961; no such features were encountered there.

THE POST-ROMAN PERIOD

Introduction

Post-Roman activity was less intensive but included some structures of considerable importance for the later history of the site. On Site A four periods were identified and numbered 6 to 9 but on Site B an intermediary Period 5/6 of structural activity has been identified between Phase 5.2 and Period 6, a total of five periods being represented.

At the end of the Roman period the main features extant were the wall and the cut for Ditch 3, separated by a berm approximately 16m wide. Beyond the ditch on Site B was a slight hollow over Ditch 4, the line of Ryknield Street and, to the east, the possibly derelict remains of the colonnaded building and the north-eastern building. As far as is known from its truncated fill, Ditch 2a had been filled in Period 4 but the incompletely exposed Ditch 7, with its dark soil and rubble fill, could have remained open into Periods 5 and 6. Material in the lower fill of Ditch 3 dated to the mid or late fourth century which would imply that that was a substantial earthwork in Periods 5 and 6. On both Sites A and B the upper fill of this ditch produced Early or Middle Saxon material. The derelict buildings in the extra-mural area were succeeded by less well defined structures, the latter designated Period 5/6, four periods of post-Roman activity succeeding this. The first, Period 6, was characterised by the presence of inhumation burials accompanied by Anglo-Saxon grave-goods, one of these surviving in a truncated state on Site A, the remainder occurring on Site B. These graves and their finds are described separately in detail by Gavin Kinsley (below, pp. 84–121). Some deposits on the berm and in the fill of Ditch 3 may also date to this or the immediately succeeding period. Period 7 was less easily identified on both sites but comprised a variety of deposits and structures which were associated with material of later Anglo-Saxon date. The most important feature in this period on Site A was a stone rubble platform on the corner of the defences, bounded on the south by a ditch. Structures and a ditch also occurred on Site B. Period 8 comprised what little evidence there was for the medieval period. Many features from timber structures could not be more closely identified other than that they belonged to either Periods 7 or 8. The few features of the post-medieval period were assigned to Period 9, this period being notable mainly for the accumulation of soils derived from cultivation, the evidence for the destruction of the Roman walls and erection of a building, probably a greenhouse. The sequence was then concluded by the levelling of the site and the construction of the railway embankment in the mid nineteenth century.

On Site A the Roman and early post-Roman levels had been severely eroded in the area between the Roman wall and the line of Ditch 3, probably as a result of medieval and post-medieval agriculture. As already noted, up to a metre of deposits could have been eroded from the area east of the wall in Period 8, truncating the upper levels of the latest Roman ditches 2a and 3 and the features of Periods 6 and 7. On Site B the Roman deposits had survived but here they had been cut into by firstly the traces of Period 5/6 structures and secondly the Anglo-Saxon burials of Period 6 and a few settlement features of Period 7/8. On the far northern edge, adjoining the Old Chester Road, the construction of the nineteenth-century railway bridge had completely destroyed much of the archaeology. The two areas will be described and the results discussed separately, the cemetery and its finds being the subject of a dedicated chapter by Gavin Kinsley.

Site A

Period 6

On Site A only one feature can be certainly assigned to this period, a single inhumation grave dug on the berm outside the east wall of the Roman defences. The lack of evidence for dereliction suggests the Roman defences were standing relatively intact at this time, confirming the evidence from Period 7 that a later structure was built against the south-east corner of the fort.

This adult inhumation grave (15) appeared to be the only burial of this date in the vicinity of the wall (Figs 12 and 15; cemetery report p. 107). It lay on the berm, approximately 2m from the line of the wall with the head to the south-west, the grave cut set at an angle to it. The skeleton had been seriously disturbed by later features, only the skull, upper abdomen and accompanying grave-goods surviving. The body lay in a shallow, ill-defined cut into (14), the soil which had accumulated on the berm in front of the wall in Period 4. A trench or gully (38), assigned to Period 7 or 8, cut across the centre of the grave; the north-eastern or foot end had been eroded away.

From the evidence for the silting of Ditch 3 later in the Anglo-Saxon period this ditch would have remained a major obstacle, even without re-cutting, since it may have been up to 2m deep by 7m wide, if allowance is made for later truncation (Figs. 5 and 18). The course of this ditch south of the fort is not known but the alignment established on Site A suggests a shallower curve for it on the corner and an alignment almost 20m south of the south wall. Ditch 7 could equally still have been open, the dark earth and rubble in that having accumulated late in the Roman or even in the post-Roman period.

Period 7

This period was notable for a series of features which date to the late Anglo-Saxon period but appear to have been associated with the Roman defensive circuit, strengthening or re-using the standing wall and the silted ditches. These comprised a rubble foundation on the south-east corner of the fort, immediately south of which was Ditch 5 which followed the line of the southern defences to terminate on the corner. Another Ditch 6, 6a and 6b, terminated at the eastern lip of Ditch 3, which itself produced material suggesting it was an open hollow at this period. Between Ditch 3 and the eastern wall was also a series of undated structural features which may have been broadly contemporary.

As already noted the Roman wall appears to have remained in good repair but to have received no obvious alteration or addition in the late Roman period. Outside the curve of the wall's south-east corner, however, a distinct platform of gritstone rubble was encountered. This sealed essentially late Roman deposits but the inclusion in them of some later finds suggested its deposition in the late Anglo-Saxon period. It had later been considerably disturbed by post-medieval activity on all sides.

The earliest post-Roman deposits outside the wall at the south-eastern corner and on the southern side consisted of layers (42), (42a) and (42b), components of a single distinctive deposit of clean, homogeneous yellow-brown sandy silt and sandstone rubble which covered the berm close to the wall face (Sections C–D and E–F, Fig. 4). The deposit was sub-divided according to the nature of the overlying deposits, (42) referring to this layer where sealed by only dark soil and rubble on the southern and eastern sides

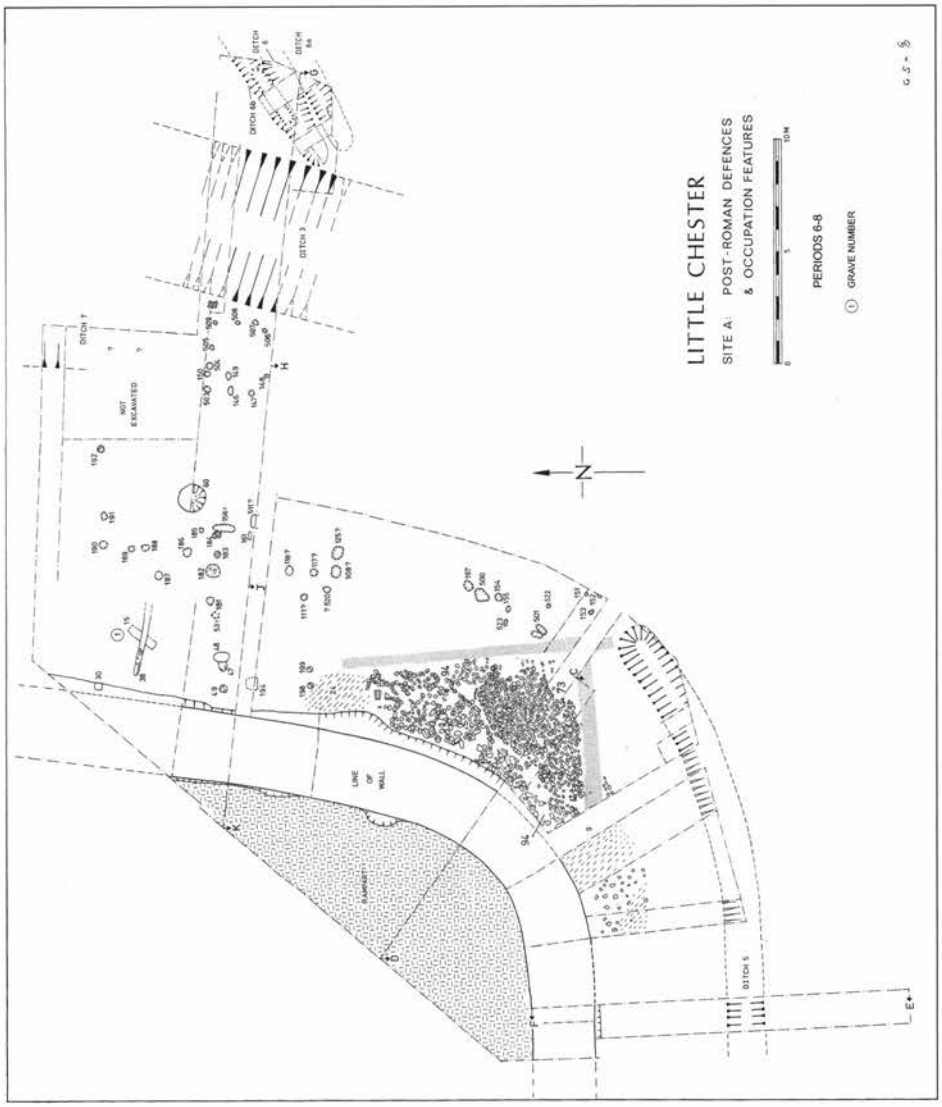

Fig. 12: Little Chester: plan, Site A, Post-Roman phases including the Anglo-Saxon burial.

Plate 11: The stone platform (73) outside the south-east corner of the Roman defences on Site A, looking west. Rubble deposit (94) to right.

of the fort. On the corner the stratigraphy was more complex, (42a) designating this deposit where sealed by soil and mixed rubble (94), close to the edge of the robbed wall trench, (42b) being applied to that portion which was sealed by a platform of rubble (73), further from the wall face (Section C–D, Fig. 4; Plan, Fig. 12; Plate 11). Deposit (42) probably formed in the late Roman period over the metalled surface (74) on the berm, this sandy silt being similar to (14) and (54) of Period 4.2, further north along the eastern side. These deposits may have derived from debris left from the construction of the wall and the weathering of its face but had incorporated later finds, (42) containing some Roman pottery and several coins of the third and early fourth (coins 27, 40 and 57) but also sherds of late Anglo-Saxon pottery. Coins and a little pottery of the third and early fourth century also occurred in (42b) as well as fragments of late Anglo-Saxon pottery of the late ninth or early tenth century (coins 47, 53 and 63; medieval pottery 1–3). A stone mould for the production of small ingots was also recovered from this layer, this object typologically belonging to late Anglo-Saxon or Viking contexts (stone object 29). Fragments of slate roof tile in (42a) and (42b) would also suggest that debris from the destruction of Roman structures of Period 4 on Site B had been spread some distance, unless these had derived from the defences. The fragments, however, were relatively small and did not suggest, for instance, a roof fall from a tower on the wall itself.

The area of rubble (73) overlying (42b) was a mass of close-packed gritstone and mortar rubble up to 0.25m thick, the stone comprising sub-angular rubble all 0.20–0.30m in diameter (Plan, Fig. 12; Section C–D, Fig. 4, Plate 11). Included amongst the rubble

were four fragments of Roman brick and one, perhaps intrusive, sherd of medieval pottery. The stone was closely packed in two or possibly three courses up to a depth of 0.50m, the upper level surface at approximately 47.40m OD but sloping off to south and east. The apparent packing and coursing of the material suggested this was structural and not simply a mass of collapsed rubble, the stone forming a deliberate platform or foundation. In plan this possible structure survived as an approximately triangular mass measuring approximately 7.5m on a north-east to south-west alignment by 3.5m wide, this shape the result of truncation on east and south. It extended to a point 5.5m from the outer edge of the robbed wall trench but was separated from that by a strip of more disturbed rubble (94) 2m wide. The possible structure was sealed by later cultivated soil.

The outline of this rubble feature had been considerably affected by later activity and its original extent is now uncertain. The eastern limit of (73) is unlikely to have been original since it lay very close to the line of (11), a north-south linear foundation of the nineteenth century, and an underlying trench (130). As it survived the eastern face of (73) was irregular, seemingly interrupted by three insets approximately 0.75m wide which may result from localised excavations on the western face of the nineteenth century foundation. Although the southern edge of (73) was cut diagonally by a recent trench (45) the south and south-eastern edge was not drastically altered; there was here no sign of any made edge to the rubble layer.

The rubble deposit (94) filling the gap between this structure and the wall trench also extended northwards and westwards along the berm beyond the limits of (73). This rubble sealed (42a) and was more varied, containing squared gritstone rubble blocks and lenses of dark grey soil. This deposit abutted (73) on the south-east but was cut by the curving edge of the eighteenth century robber trench on the north-west. No significant finds were recovered from (94), other than a neatly shaped copper alloy ingot from the base of the deposit, an object that is typologically of Late Anglo-Saxon date and similar to the form of ingot that could have been produced in the stone mould found close by in (42b) (copper alloy object 25; stone object 29).

To the north and west a series of ill-defined layers of soil and rubble of the late Saxon and medieval period lay on the berm immediately in front of the wall. Firstly (18) and (24) can be recognised as dark grey brown silts overlying (42) (Sections E–F, Fig. 4 and J–K, Fig. 5). Layer (24) produced a little Roman pottery and fragments of two ring-shaped loom weights of Anglo-Saxon type, the whole group producing a significant quantity of tenth to twelfth century pottery (medieval pottery 9–29). This was, in turn, sealed by rubble and dark soil, (9) and (17) similar to (94), these deposits containing many large rounded pebbles and pottery from Roman to early post-medieval date. The pebbles, although too large for sling shot, suggested, from their size and location at the foot of the face of the wall, use as hand-projectiles perhaps flung against defenders of the wall (Plate 12). A context for the use of pebbles as weapons might be provided by the evidence for the re-defence of the Roman fort, represented by the rubble platform and additional ditches (below, p. 143).

The rubble platform (73) and the adjacent stratigraphy had been truncated by two linear post-medieval disturbances, one to the south a ditch or gully (45) on an east-west alignment, another on the east a linear foundation (11) the western side of an extensive nineteenth-century greenhouse that occupied much of the area between the robbed wall

Plate 12: Post-Roman rubble (94) on the berm immediately east of the robber trench of the eastern fort wall on Site A. On the right, close to the further ranging rod, is a scatter of large water-rounded pebbles, possibly projectiles fallen at the base of the wall.

trench and the site of Ditch 3. The line of these disturbances had dictated the outline of the rubble platform on its southern and eastern sides.

To the south-east of the rubble platform, and 3m from it, was the butt end of Ditch 5, this ditch being traced west to run parallel with the south wall and 6m from it. This ditch was 2m wide and 0.8m deep, although later erosion may have truncated it. It was of steep-sided V-shape and filled with (72) and (77), dark grey sandy silt with lenses of brown clay silt and a significant quantity of rubble. The lower fill of the eastern butt-end contained angular gritstone rubble, including some squared blocks. Finds comprised late Roman pottery and a fragment of slate tile, besides several sherds of late Anglo-Saxon wares (medieval pottery 30–32).

On the eastern side of the site Ditch 3 was, at this date, a silted hollow at least 0.75m deep and possibly up to 1.5m deep, the width being between 6 and 8m. During this period (56), (62) and (63) accumulated above the primary late Roman fill. The lowest of these (63) consisted of 0.20m of almost black silt containing some gritstone rubble and frequent pebbles, above which was (62), 0.25m of grey brown silt with less pebbles. The uppermost layer (56) was similar but shallower and contained more pebbles, the upper part of this truncated by (18), the later medieval or post-medieval cultivated soil. These deposits are comparable to those on Site B, layer (250) in particular producing similarly dated finds. These deposits were removed mechanically but late Roman and Anglo-Saxon pottery was recovered from (63) and the uppermost fill (56) contained late Roman pottery besides pottery and a loom weight of Anglo-Saxon date (medieval pottery 4–8).

To the north-east and continuing the line of Ditch 5 beyond the eastern edge of Ditch 3, was a Ditch 6, 6a and 6b (Plan, Fig. 12; Section G–H, Fig. 6). Only the butt end of this silted hollow was exposed, the ditch recut on possibly two occasions on slightly different alignments. The first phase consisted of 6a, a rounded U-shaped cut 1.2 m wide and 0.6m deep, containing three layers, (86)–(88). The uppermost deposit was a sterile yellowish grey clay silt (88) which sealed (86) a thin layer of red clay and green shale. These deposits sealed the main fill (87), 0.35m of black soil containing a little burnt clay. The only finds were a few sherds of Roman pottery from (86) and (87). This had been cut by Ditch 6 which had a rounded V-cut profile, 1.25m wide and 0.45m deep, and was filled with grey clay silt. This contained a little late Roman pottery. Both these cuts were sealed firstly by (57), a layer of grey silt containing much red burnt clay and charcoal, and secondly by (79), a cleaner grey silt with lenses of yellow clay. To the north-east Ditch 6 was cut by a further recut (6b) which was not fully investigated but measured 1m wide and came to a butt-end 1.2m from the surviving edge of Ditch 3.

Finally, it should be noted that Ditch 7, on the inner edge of Ditch 3, although treated as a possible Roman precursor of the latter, could have been open at this date. The filling of dark silt and a few Roman sherds was possibly a later accumulation, the band of gritstone rubble along the western lip a feature only paralleled in the post-Roman Ditch 5. The limits of the ditch were not established but the southern terminal must have lain immediately north of the post-hole structure on the western edge of Ditch 3 (Fig. 12).

Nearer the fort, in the strip of ground between the wall face and the inner lip of the silted Ditch 3, three groups of settings for timber structures were identified which may date early in the post-Roman sequence. The first group lay close to the wall in the north-western area of the excavations, the second to the east on the strip of ground between Ditches 2a and 3 and a third lay to the south outside the corner of the defences.

The first group consisted of at least 27 post-holes and perhaps another ten which were less certainly associated since they were sealed by homogenous dark silts and may have belonged to either early Roman levels on the berm or been intrusive from post-medieval levels (Plan, Fig. 12; Table 5). A trench or slot foundation was probably also associated. Each post pit was approximately 0.20–0.40m in diameter, the depth somewhere between 0.10–0.25m. Most were circular or oval in plan but three, not certainly part of the group, were more sub-rectangular. The fills were generally a dark soil not easily differentiated from the overlying layer (18), twelve retaining small stones as packing. Finds were few, comprising only the occasional sherd of Roman pottery. The trench-like foundation (38) near the northern edge of the group was 0.38m wide and 0.15m deep, the base dropping in level eastwards in conformity with the Roman level (14) into which it was cut. It was filled with dark soil and, at its west end, packed with groups of small angular rubble. At a point 1.6m along its length it cut across the inhumation burial (15). The fill contained no finds.

The post-holes in this area appeared to form a rectilinear pattern composed of one pattern of four posts close to the wall and at least four possible alignments extending up to 8m from its face. The first group comprised two pairs of similar stone packed holes, (47)/(49) and (198)/(199) both set at right angles to the wall, 4m apart and extending 2.7m from its face. Of the linear patterns one consisted of (48), (53), (181) and (182), this row extending east from (47)/(49) for 5m. Another row appeared to run parallel to and 7m from the wall face, this comprising (117), (118), (160), (183), (186), (188),

Period	Context	Width	Length	Depth	Fill	Type
7–8	151	0.20	0.25	0.12		P.H.
	152	0.20	0.30 +	0.15		P.H.
	153	0.20	0.35	0.16		P.H.
	154	0.35	0.40	0.07		P.H.
	155	0.16	0.28	0.05		P.H.
	197	0.40	0.50	?		P.H.
	500	0.60	0.70	?		P.H.
	501	0.32	0.58	0.15	S. P.	P.H.
	521	0.25	0.40	0.15?	S.P.	P.H.
	522	0.15	0.15	0.05?		?P.H.
	523	0.2	0.33	?		P.H.

Table 4: Little Chester: dimensions and fills of post-holes, Post-Roman structures on berm, Site A, Periods 7–8.

Period	Context	Width	Length	Depth	Fill	Type
7–8	30	0.3	0.3	?		P.H.
	38	0.35	3.1 +	0.45	S.P.	Slot
	47	0.25	0.35	?	S.P.	P.H.
? 9	?48	0.55	0.7	0.32		? R. / P.H.
	49	0.3	0.3	.15 +	S.P.	P.H.
	53	0.3	0.35	0.05		R.
	117	0.3	0.3	?		P.H.
	118	0.4	0.5	0.1		P.H.
	160	0.4	0.45	0.16		P.H.
	161	0.18	0.38	?		P.H. / F.S.
	181	0.22	0.28	?		?P.H.
	182	0.6	0.63	0.1	S.P.	P.H.
	183	0.28	0.30	0.1 +	S.P.	P.H.
	184	0.3	0.40	0.1 +	S.P.	?2 x P.H.
	185	0.2	0.20	0.1 +		P.H.
	186	0.36	0.45 + ?	?		P.H.
	187	0.38	0.38	?		?P.H.
	188	0.26	0.28	0.1 +	S.P.	P.H.
	189	0.2	0.2	0.1 +		P.H.
	190	0.35	0.4	0.1 +	S.P.	?P.H.
	191	0.3	0.3	0.1 +	S.P.	P.H.
	192	0.24	0.28		S.P.	P.H.
? 9	193	0.6	0.6	?		R. / P.H.
	194	0.55	0.2 +	?		P.H.
	198	0.25	0.3	?	S.P.	P.H.
	199	0.25	0.3	?	S.P.	P.H.

Table 5: Little Chester: dimensions and fills of post-holes, Post-Roman structures on berm, Site A, Periods 7–8.

(189) and (190). A third row comprised (161), (184), (185), (158) and (191). Other apparent alignments included (198), (199) and (117) and (30), (190), (191) and (192) on the south and north sides of the whole complex. The last of these features is certainly of late or post-Roman date since it cut Ditch 2a. A further alignment lay close to the wall face comprising (30), (49), (194) and (198).

The second discrete area of post-holes lay 6m to the east, immediately south of the presumed terminal of Ditch 7 and on the inner edge of Ditch 3 (Table 6). Twelve sockets were identified within the limits of the trench, comprising (146)–(150) and (503)–(509). All were 0.20–0.30m in diameter, no deeper than 0.10m and four contained packing stones. Their fill was a dark grey brown soil and, in the case of (147) and (149), traces of burning but none contained dateable finds. Within the very limited area exposed the post-holes effectively formed three sides of a rectangle 3m east-west by at least 2m north-south but others could have existed in the area east of this group where the ground had been disturbed by a nineteenth century foundation. Other shallow post-holes without packing-stones in the upper surface of Ditches 2a and 3 might have been missed in excavation. These features had been heavily truncated by later erosion, being sealed by a dark grey clay silt (144) and a localised area of grey soil and pebbles (58), containing Roman, medieval and post-medieval pottery. This, in turn, like the ditches to either side, had been sealed by a dark soil similar to (18) (Section G–K, Fig. 5).

Period	Context	Width	Length	Depth	Fill	Type
7–8	146	0.25	0.4	0.05	S.P	2 x P.H.
	147	0.22	0.3	0.08		P.H.
	148	0.2	0.2	0.05	S.P.	P.H.
	149	0.25	0.34	0.1		P.H.
	150	0.28	0.28	?		P.H.
	503	0.28	0.35	0.08		P.H.
	504	0.3	0.3	0.04		P.H.
	505	0.2	0.28	?		P.H.
	506	0.18	0.18	0.08		P.H.
	507	0.15	0.2	?		P.H.
	508	0.16	0.22	?		P.H.
	509	0.15	0.2	?		P.H.

Table 6: Little Chester: dimensions and fills of post-holes, Post-Roman structures on berm, west side of Ditch 3, Site A, Periods 7–8.

The third group of post-holes comprised eleven earth-fast sockets in a small area east of the rubble foundation and north-east of the end of Ditch 5 (Table 4). These were more variable in size, (197) and (500) being 0.40–0.70m in diameter, and (501) and (521) forming a pair each with a sub-rectangular outline 0.30 by 0.60m. The others were close to 0.20–0.40m in diameter. In depth this group varied between 0.05 and 0.15m and, apart from (501) and (521), they contained little sign of packing stones in their grey soil fill. No dateable finds were recovered from their fill. No coherent plan could be recovered since this area was, again, circumscribed on the east by the edge of excavation and, on the west, by the disturbed east face of the stone rubble feature (73). As noted above, this

area had been affected by post-medieval activity, the rubble platform's surviving outline partly a product of later disturbance in Period 8.

The remaining feature that might date to this period is pit (60), this circular pit adjoining the northern post-hole group on the east. This pit was 1.25m wide and 0.5m deep, the sides sloping steeply to a level base with a central smaller depression. It had been filled with grey brown soil and some gritstone rubble accompanied by only a small amount of Roman pottery.

Periods 8 and 9

Few features on Site A can be dated to the medieval period. Here attention will only be drawn to a trench or gully (130) which adjoined the eastern side of the rubble platform (73), truncating it on that side. This feature consisted of a U-shaped hollow 0.55m wide and 0.20m deep which was traced for a distance of at least 2.5m towards the butt end of Ditch 5. The fill of grey soil and sandstone rubble contained some pottery of the mid thirteenth century (medieval pottery 45–53). Some uncertainty remains about this feature since it underlay the line of the foundation of a nineteenth century greenhouse but it appeared to be distinct from it.

A widespread deposit of dark grey-brown silt and small pebbles (18) was encountered in the open ground east and south of the walls, especially over the silted Ditch 3 (Sections C–D, E–F, G–K, Figs 4 and 5). This homogenous soil was up to 0.3m deep and contained small quantities of comminuted medieval pottery and tile. This was sealed by a similar but darker humic silt (10) which contained post-medieval material. This, in turn, was cut by the linear foundations, post-holes and planting pits of greenhouses from the nineteenth century. The foundations consisted of un-mortared gritstone rubble, in places supporting low brick footings. These extended across the robbed wall trench of the fort, the result of the destruction recorded by Stukeley as having been carried out prior to 1721 (Stukeley 1721, 25). The levelled footings of these greenhouses were, in turn, sealed by the material of the railway embankment.

Site B

Period 5/6

In the region of the late Roman buildings on Site B clear evidence was present for later occupation succeeding both the Roman colonnaded building and the timber building to the north-east but preceding the early Anglo-Saxon cemetery of Period 6. These enigmatic structures of Period 5/6 comprised drystone features coinciding with the earlier Roman building (Plan, Fig.13; Table 7). The most substantial was (312), a row of gritstone blocks resting on the late Roman surface between Grave 8 (304) and base (311) and possibly extending to (331). This structure consisted of five blocks and a group of smaller fragments, apart from the square base which itself may not have been in its original position. The largest was a rectangular block with two square mortice-holes and a roughly tooled upper surface, the four other blocks beside it had rounded and worn upper surfaces as if they had been worn while *in situ*. It is noteworthy that this rubble did not appear to seal Grave 8. The area immediately to the west and north of (268) had been cut away by pit (315) of the early medieval period. The remaining features in the vicinity consisted of five irregular groups of gritstone rubble (243), (268)–(270) and (331), in each case overlapping robber trenches from the Roman building. Features

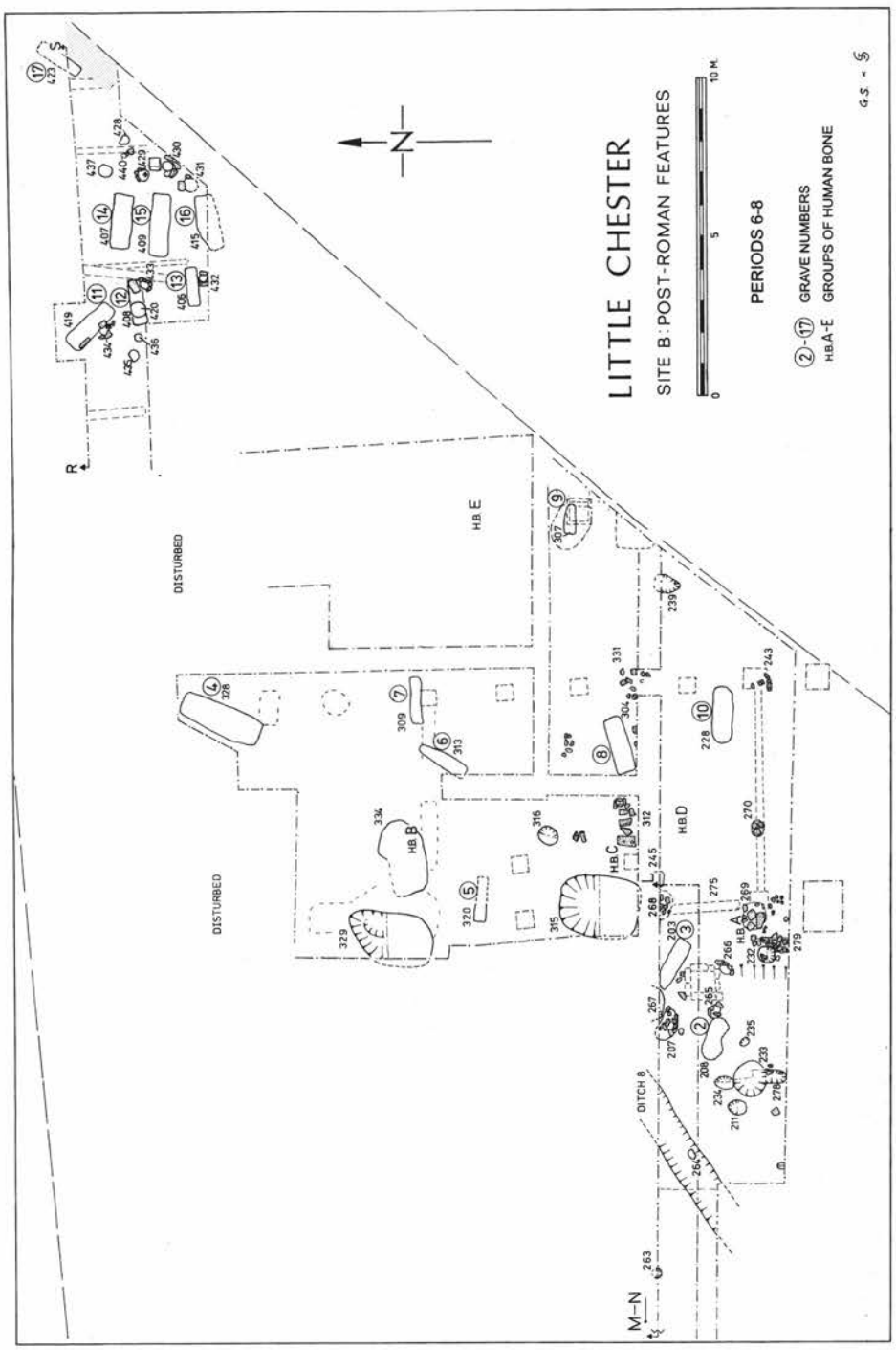

Fig. 13: Little Chester: plan, Site B, Post-Roman phases including the Anglo-Saxon cemetery.

(243) and (269) lay at, respectively, the south-east and south-west corners while (331) lay to the north-east side midway between bases (240) and (302) of the colonnaded building. Other features to the west could be related to this complex but appeared to be holes for earth-fast posts, different in character to the stone packed features. These are described below in Period 7/8.

Period	Context	Width	Length	Depth	Fill	Type
7–8	207	0.5	1.0	0.35	S.P.	P.H.
	211	0.45	0.55	0.28		P.H.
	232	0.5	0.5	0.25	S.P.	P.H.
	233	1.0	1.1	0.25		?P
	234	0.4	0.6	0.36		P.H.
	235	0.2	0.3	0.2		P.H.
	239	0.55	0.6+	0.15		P.H.
	243	0.45	0.60	?	S.P.	?P.H.
	245	0.15+	0.45	?		?P.H.
	263	0.4	?	0.2	S.P.	P.H.
	264	0.2	0.3	0.4		P.H.
	265	0.5	0.8	?	S.P.	P.H.
	266	0.3	0.4	?	S.P.	P.H.
	267	0.1+	0.9	0.35–0.4	?S.P.	P.H.
	268	0.4	0.9	0.10	S.P.	S.F.
	269	0.7	0.7	?	S.P.	P.H.
	270	0.45	0.45	?	S.P.	P.H.
	278	0.4	0.8 +	0.10	S.P.	F.S.
	279	0.5	1.1	?	S.P.	S.F.
	312	0.6	1.50	?		S.F.
	316	0.5	0.6	?		P.H.

Table 7: Little Chester: dimensions and fills of post-holes, Post-Roman structures east of Ditch 3, Site B, Periods 7–8.

Two isolated pits or post-holes (239) and (316) can be identified within and east of the colonnaded building but their relative date is unknown. Post-hole (239) was roughly oval and approximately 0.60m wide by 0.15m deep, the fill of dark soil and a little rubble containing some late Roman pottery. Pit (316) was 0.60m in diameter and was filled with dark soil containing late Roman pottery.

A cluster of earth-fast post sockets lay in the north-east corner of the site, coinciding with the site of the clay and timber Roman buildings (Table 8). At least six of these were substantial stone packed holes between 0.40 and 0.50m in diameter, with packing stones set above the Roman marl floor and thus certainly dug from a higher level through (401) and into (402). The remainder were simple earth filled sockets between 0.20 and 0.40m in diameter also cut into (402). The dark earth filling was not closely examined but no material later than the Roman period occurred in their vicinity. No clear pattern emerged but (429), (431) and (437) formed a north-south line roughly parallel to (424) and (432), and (433) lay close to the line of (416). Their date relative to these linear features was only established in the case of (440) which overlapped the line of (424); (433) adjoined (416) but did not cut it. Their relationship to the burials was ambiguous, six

holes lying east of the grave row, the remainder lying to their west, close to the three other burials. Holes (432), (433), and (434) adjoined burial cuts but did not obviously cut the interments while another apparent post-hole (420) coincided with the disturbed fill of Grave 12 but its relationship could not be resolved. (420) and (437) contained no packing and do not necessarily belong to this structure. Recognition of any structure represented by these post-holes is hampered by the lack of any associated floor surfaces.

Period	Context	Width	Length	Depth	Fill	Type
7–8	420	0.4	0.4	?		
	428	0.2	0.35	?		P.H.
	429	0.4	0.4	?	S.P.	P.H.
	430	0.4	0.4	?	S.P.	P.H.
	431	0.4	0.65	?	S.P.	P.H.
	432	0.2	0.2	?	S.P.	P.H.
	433	0.3	0.3	?	S.P.	P.H.
	434	0.2	0.2	?	S.P.	P.H.
	435	0.25	0.35	?		P.H.
	436	0.2	0.2	?		P.H.
	437	0.4	0.45	?		P.H.
	440	0.15	0.15	?	S.P.	P.H.

Table 8: Little Chester: dimensions and fills of post-holes, Post-Roman structures on site of Anglo-Saxon cemetery, Site B, Periods 7–8.

Period 6

Site B produced the clearest evidence for the use of the site for Anglo-Saxon burial, at least sixteen graves being identified amidst the ruins of the Roman structures and encroaching on the line of Ryknield Street (Fig. 13). The details of the individual burials and the general character of the cemetery are described below, here only their context in relation to the Roman structures and the later Anglo-Saxon activity will be addressed.

The burials can be divided into two groups, the larger occurring on the site of the colonnaded building and comprising Graves 4–8 and 10 (Contexts (228), (304), (309), (313), (320) and (328)). That other burials may have existed here is suggested by the presence of loose human bones (groups A–E) in the uppermost levels within the building debris, perhaps of five shallow graves. Two more burials, Graves 2 and 3, (203) and (208), were cut through the metalling beside Well 1, and here also loose human bones suggested the one-time presence of a shallow burial. Human bone was also noted in the upper fill of pit (334), in the disturbed northern end of the colonnaded building. The other group, Graves 11–17 (Contexts (406), (407), (408), (409), (415), (419) and (423)), cut the clay-floored buildings to the north-east. The intervening area of gravel surface, which was cleared over an area of 6m by 15m, produced only one burial, Grave 9, cutting the uppermost fill of Well 2 and slight traces of a scattered burial to its north. This implies that there was a genuine separation of the graves into two groups, sited on the two areas of derelict building. The density of graves to the north-east, nearer the line of the Roman road, might imply that the major area of burial is in that direction, adjoining the road.

Plate 13: General view looking north of the north-east corner of Site B showing Roman floors cut by Period 6 graves and structures of Periods 7–8.

In the case of the first group, five burials (Graves 5–8 and 10) lay within the area of the colonnaded building, respecting its structures and, in the case of Grave 7, cut into the gravel surface against a column base. These four were aligned with the short side of the building but Graves 4 and 6 lay at an angle to it, the former cutting a rubble foundation (321) forming part of its northern end. The relationship of Grave 4 to the structure had been effectively destroyed by later disturbance. The relationship of these burials to the undated but post-Roman adaptation or destruction of the colonnaded building was proved only in the case of Grave 8 which notably contained no rubble yet appeared to cut the drystone foundation (312) and (331).

The most significant relationships are perhaps apparent in the case of Graves 2 and 3, both of which were cut into the metalled surface west of the building and adjoining Well 1. The former lay between the surviving head of the well and the building but the latter lay to the west, on the metalled surface presumed to form the eastern side of Ryknield Street and adjoining a post-Roman post-hole (265). Again, the relative date of these features could not be ascertained, other than that they were all post-Roman.

Grave 9, east of the building, cut the fill over the collapse of the late Roman foundation on the site of Well 2 (Fig.10).

The group to the north-east comprised five graves, Burials 12–16, aligned east-west and two, 11 and 17, set at an angle to the axis of the Roman building (plate 13). Burials 14–16 were set side by side between trenches (416) and (424) while 11 and 12 lay to the west of (416) and 13 to the south of it. Burial 17 lay separate and 5 m from this cluster,

east of foundation (414). The relationship of the burials to the earth-fast timber structures here is problematic, since the stone packed post-holes would appear to post-date the foundation trenches bounding the Roman marl floors of the third and fourth century yet are seemingly avoided by the burials. The only exception was (420) which coincided with (408), Grave 12, but in that case the burial was very disturbed and the relationship was perhaps not clearly established.

Periods 7 and 8

Period 7, covering the later Anglo-Saxon period, was not in most cases easily differentiated from the early medieval Period 8, so these two periods are here treated together. The majority of the features dateable from finds, however, belong to the early medieval Period 8.

Period 7 was only certainly represented by dated levels from the further silting of Ditch 3 (Section M–N, Fig. 8). Ditch 3 was not bottomed on Site B, only the east side and upper fill being exposed. It contained two deposits in its lowest levels, (261) and (252), both of which produced only late Roman material. Above the latter was a dark grey to black silt (250) with pebbles up to 0.40m deep which produced, apart from late Roman pottery, sherds of late Anglo-Saxon wares of the tenth century and a knife of similar date (medieval pottery 4–8; iron object 38). Above was a similar pebbly dark soil (248), up to 0.50m deep but containing more rubble and only late Roman material. In section the pebbles and small stones contained in these deposits appeared to have eroded from the adjacent metalling (209), suggesting an early medieval date for the accumulation of this deposit.

Other than the structural features already described and assigned to the early post-Roman transition, Period 5/6, a group of features can be isolated in the area west of the colonnaded building. This comprised nine post-holes varying in size and content and not all certainly related to a single structure (Plan, Fig. 13). Of the western group five post-holes, (207), (232) and (265)–(267), were between 0.5 and 0.8m in diameter and 0.20–0.40m deep with packing of small gritstone fragments and a further two, (278) and (279), were sub-rectangular features up to 1.1m long with rubble packing. The remaining five were similar in size but filled with dark pebbly earth; one, (233), was a shallow circular scoop filled with soil and thus may be a small pit and not structural. Six produced Roman pottery but two, (211) and (234), also contained post-Roman and medieval pottery. Two slighter holes (263) and (264), to the west were too isolated to form any pattern and were certainly late in the sequence, since they cut the metalling (209) and Ditch 8 (220) of the thirteenth century.

Other than structural remains a small number of pits could be assigned in general terms to the post-Roman period, in the case of (315) definitely to Period 8. Only pits (315) and (329) were investigated by half sectioning (Plan, Fig. 13; Section, Fig. 11). Pit (315) was a sub-rectangular pit, 2.5m long by 1.75m wide and 0.90m deep with steep sides rounding to a level base. It was filled with dark grey-brown soil and occasional pebbles and gritstone rubble to almost the base, in which lay 0.10m of greenish grey silt. The pit had been cut into layers of gravel and gravelly silt similar to those exposed in section L–M, the lowest of these here stained yellowish grey. The nature of the lowest fill and the staining suggested use as a cess pit. The finds consisted of redeposited Roman material but also fresh sherds of twelfth century pottery, animal and bird bones and two

iron objects, one a possible linch-pin the other a needle (medieval pottery 33–41; iron objects 28 and 30). Pit (329) was an irregular oval 2.75m by 1.7m and up to 0.5m deep, filled with dark soil, much angular gritstone rubble and some lenses of red marl, as well as a little late Roman pottery. The rubble was concentrated in the south-eastern part as if derived from the adjacent Roman foundation (322) into which it was cut. Pit (334) was not fully defined and may consist of an area of dark soil and gritstone rubble, like (329), impinging on the Roman structure on the west and, to the east, an area of more gravelly fill on which bones of a child burial were observed (Human Bones group B). These remains may have derived from a burial disturbed by the pit or have been displaced from a burial nearby in this heavily disturbed area.

Possibly the latest elements in the early medieval sequence is the soil accumulated in the uppermost levels of Ditch 4, east of the hollow formed from the silting of Ditch 3, a dark soil (224) in the shallow hollow of this ditch producing a little pottery of the early thirteenth century (Section L–N, Fig 8; medieval pottery 42–49). This was sealed by a thin and loose metalling (209) which also produced pottery of this date, suggesting the sealing of the silt in the early medieval period. This metalling was bounded or cut by a ditch on a line diagonal to that of the adjacent silted Ditch 3. Ditch 8 (220), was a U-shaped gully, 1.15m wide and 0.30m deep, filled with dark grey pebbly soil and a little Roman pottery. This ditch must have terminated or turned northwards in the area of pit (315). The relationship with post hole (264) was uncertain, the latter only being noted after the excavation of the ditch.

Discussion

In the following discussion Sites A and B have been treated together, Periods 5/6–8 having each a dating range broad enough to allow a correlation between the two areas. The identification of Anglo-Saxon graves and of dated material from Ditch 3, which was sectioned on both sites, allows some correlation between the two areas to be attempted.

During the immediate Post-Roman period, Period 6, on Site A there is no evidence for alteration of the Roman defences, the lack of rubble layers and dark earth, for instance, on the berm suggesting that the wall was not in a state of disrepair or collapse at this point on the circuit. The one certainly extant Ditch, 3, was only partially silted and still a major obstacle. There was no indication that any structures existed in this area in Period 5/6 and the identified building remains close to the wall all probably belong to occupation in Period 7 and are to be associated with the late Anglo-Saxon pottery from this area.

On Site B the earliest post-Roman activity in Period 5/6 is represented by the destruction of foundations from the colonnaded building. The removal of foundation blocks and their deposition in Well 1 was seemingly a deliberate act of demolition, unlike Well 2 where the stones appeared to have collapsed into an older, buried well-shaft. The latter feature is, however, important in establishing a sequence in which this collapse was followed by the accumulation of soil (317) in the resultant hollow before the interment of Grave 9 in the early sixth century cemetery. Grave 8, furthermore, suggests that some of the drystone structures in the area of the colonnaded building may also predate the cemetery since the grave appeared to interrupt the line of the dry stone structure (312) and (331) and therefore to be later than it. The identification of Period 5/6 rests on this apparent relationship between post-Roman features in the southern end of the

colonnaded building, the groups of stone rubble possibly representing a late or sub-Roman adaptation of the structure. This structure would have comprised (243), (269), (270) along the south side and (268), (312) and (331) on the north. Settings (243) and (269) must have replaced blocks which had been physically removed and broken up. The wear on the upper surface of the stones in (312) would suggest that a doorway could have existed on this northern side. A building of perhaps 7m long, east-west, and 4.25m wide can be proposed from these traces, the stone base (240) perhaps lying midway along the east end and supporting one end. Some of the features to the west were perhaps also related, (265) and (266) respecting the well head and (278) and (279) aligned on the south side and perhaps forming the north end of a building to the southwest and contiguous at the corner. A date prior to the early medieval period is certain from the relationship with pit (315) and the relationship with Grave 8 would allow dating of the building to the fifth or early sixth century.

The north-eastern complex of earth-fast posts might also have formed part of a structure reflecting the pattern of the linear Roman timber foundations but preceding the burials. Two groups can be identified that, while not forming a recognisable building plan, might still derive from two parallel sides of a building facing north onto the old Roman road, other elements of the structure lying beyond the excavation sections to north and south. On the west (432) and (433) would have formed one wall but this would leave (420), (434)–(436) as some extension to the west. On the east (429)–(431) and (437) formed a more convincing line with (428) and (440) lying to the east and almost mirroring the western extension. A structure 3.5m wide is suggested, perhaps widening to 6m to the north if the extensions represent dog-legs in the two side walls.

The coincidence of timber structures and clusters of burial from Period 6 seems more than coincidence but may be a product of the chosen excavation limits. The lack of both burials or of any features in the intervening area does suggest there is some grouping of graves on the site of the structures. Two burials, Graves 2 and 3, lay either side of Well 1, Graves 4, 6–8 adjoined or cut foundations and 14–16 formed a line between the two clusters of post-holes in the north-eastern structure.

By the late sixth or early seventh century a small Anglo-Saxon cemetery had been established within the area of the structures, the extent of this burial ground being unknown and the location of the associated settlement also remaining undiscovered. Sixteen graves were identified on Site B and one isolated example on Site A close to the wall. Scattered groups of bones (groups HB A–E) could relate to a further five shallow and disrupted burials of this phase even though this material was encountered in the latest Roman occupation levels and was not obviously contained in grave cuts. There was either a scatter of burials, perhaps of sub-Roman date or, more probably, other Anglo-Saxon burials that have not survived. The one burial on Site A may be an isolated outlier or the chance survival of a group, other burials having been removed by later cultivation of the area away from the base of the wall. As already noted the majority of the burials on Site B could have co-existed with the remnants of the colonnaded building and the sub-Roman structures erected amidst the ruins.

In the following Period 7 the most significant and tantalising of the features on Site A is undoubtedly the stone platform (73) on the corner of the Roman defensive fort. Some features of this corner structure should be emphasised. Firstly, although the margins of (73) had been heavily disturbed, the remaining component was composed of fairly clean,

regularly sized angular stones mixed with mortar rubble and did not have the appearance of mixed, loose debris or collapsed structure; as already noted, there is no sign of early collapse of the defences in this area. Secondly, the horizon with (42b) beneath was well defined suggesting the deposition of the rubble as a single event. Thirdly, there was a marked differentiation with the mixed rubble of (94). The rubble (73) would, therefore, appear to be part of a deliberate construction, the most likely purpose being as the foundation for a structure such as a bastion added to the original wall circuit. The looser rubble and soil (94) may have been itself a robber trench, but earlier than the eighteenth century destruction of wall core described by Stukeley, this trench having been cut along the face of the wall to remove blocks from it, one rubble block occurring in this deposit.

The presence of late Anglo-Saxon pottery in the sandy deposit on the berm beneath the rubble platform (73), raises the issue of what purpose could have been served by such an addition to a Late Roman defence during the Late Anglo-Saxon or early medieval period. Other sherds of Anglo-Saxon pottery came from Ditch 5 and later contexts in this area, suggesting some activity in this area. A platform of rubble abutting the wall at this point implies that it served as the foundation for the rebuilding of the corner of the wall or its strengthening by the addition of a bastion, part of the re-building or strengthening of the existing circuit. The context of this unusually late refurbishment of Roman defences in the late Anglo-Saxon period will be further discussed below.

Ditch 5 may have measured 3m wide by 2m deep, allowing for erosion. A single phase cut without accompanying bank, it produced finds similar in date to those beneath the rubble platform. Its location and the presence of some rubble in its butt-end suggest it was open when the adjacent structure on the south-east corner was in existence or derelict. The relationship to the projected line of Ditch 3 as it turned the south-east corner of the defences was not visible but since Ditch 3 has not been identified on the south side it is possible that Ditch 5 continued its line along the southern defences. Neither ditch was, however, identified by Webster on this side although a drop in level at the very southern end of his section could represent the inner lip of a ditch (Webster 1961, figs 2 and 4). If the main late Roman ditch was indeed missing or levelled to the extent that it was not identifiable then this, albeit shallow, ditch may have been dug as an additional impediment to access to the wall from the south; with the wall so close there would be little point in cutting a boundary ditch at this point.

On the opposite outer edge of Ditch 3, Ditch 6 was the terminal of a boundary continuing to the north-east beyond the line of the defences. This re-cut earthwork ended close to, or at the original edge, of Ditch 3. In its final phase the ditch had been recut on the north-west, the original cut sealed by spoil, possibly from a bank. As with Ditch 7 the lack of finds other than residual Roman material makes dating difficult, but it is likely to fall broadly into Periods 7 or 8.

A relationship between these ditches and the timber structures is possible, all three Period 7 ditches terminating close to Ditch 3 and these structures. In the area north of Ditch 5 and west of Ditch 3 three structures of earth-fast post construction can be identified although recognisable building plans cannot be recovered. One structure lay immediately north of the terminal of Ditch 5 and adjacent to the corner foundation, the second was set on the inner lip of Ditch 3 immediately south of Ditch 7 and the third and most extensive lay 15m to the north on the berm adjacent to the wall face. The first two in particular could have formed parts of rectangular buildings set on the inner edge of

Ditch 3, close to the terminals of the other two ditches. The third group of features was only the surviving elements of a more complex pattern, truncated by later activity and extending beyond the excavation. There was no trace of associated floor surfaces, the post-hole group occupying an area 6m wide east-west by 10m north-south, abutting the wall face on the west. As supports for load-bearing posts the whole group appear too slight and dispersed to have spanned this area and the group may outline one or more small buildings and/or a fenced area. Two main patterns could be postulated. The first encompasses an area 5m by 10m set at a slight angle to the wall face with (30) to (198) forming the west side and (117) to (187) part at least of an eastern side. Features (49) to (182) would then have formed an internal division. An alternative would see a structure set at right angles to the wall (49) to (182) forming the north side, (198) to (117) the south, (194) and (118) falling in the west and east walls respectively. This would create a slightly trapezoidal structure approximately 4–4.5m wide by 5m long. Another possible enclosure or very slight structure could have an outline bounded by (117) to (190) on the east, set parallel to the wall and 7m from it, (38) being a gully or foundation slot within this set at right angles to the wall. The only other related feature observed at this level was the small pit (60). None of these features was dated but the presence of late Anglo-Saxon pottery and loom weights in the deposits immediately to the south suggests settlement here at that date.

Ditch 6 would have formed some separate, outer boundary or slight defence terminating at Ditch 3, opposite the north-eastern of the timber structures. If the second phase was associated with a bank on the south-east then this may have faced north-west towards the defences and the east gate. On the opposite side, Ditch 7 apparently ran parallel to the inner edge of Ditch 3 and terminated close to the south-east corner. It could have served as a late strengthening of the eastern ditch system continuing the line of Ditch 5 along the eastern side, after a gap of nearly 30m.

A farming or domestic use seems unlikely for the changes to the Roman defences and the construction of buildings on the berm outside them, and although these ditches and timber structures are relatively slight they might still have served some defensive purpose, perhaps temporary and of more than one phase. In this interpretation the corner foundation would have supported a squared-off addition to the original curved wall face or even a projecting bastion, built up to an unknown height. The gap in the ditch system between 5 on the south-west and 6 and 7 on the north-east is puzzling but the presence of timber structures on the berm here may indicate an access point across Ditch 3 or even the termination of that defensive line, the area being guarded or blocked by the timber structures and overseen by the refurbished corner of the fort. How Ditch 6 might fit into such a scheme is not clear but its terminal appeared to respect the line of Ditch 3.

The other timber buildings adjoining the eastern wall would then lie within these defences, the occurrence of Anglo-Saxon material including loom weights and a mould and metal ingot suggesting domestic and craft work of this approximate date. The occurrence of one weight in the lower fill of Ditch 3 associated with Anglo-Saxon pottery of the tenth century reinforces the picture of occupation of this extra-mural area at approximately the same time as the alterations to the south-east corner of the defences. Such occupation might seem inconsistent with a refurbishment of the defences but may not have been exactly contemporary.

Few features can be definitely assigned to the early medieval period and there is little proven settlement within the excavation limits. Extensive deposits over the site of the now silted ditches on Site A derived from the cultivation of the area outside the Roman wall. The only settlement was encountered on Site B, where Ditch 8 could have served as part of the medieval settlement pattern. Rather than being a boundary, this distinctive round-bottomed channel may have connected with the cess-pit (315), conducting overflow from this into the outer ditch hollow to the south-west. The date of both features must lie in the twelfth century, since Ditch 8 cut the rough metalling (209) and soil (224), both of which contained pottery of similar date to that from pit (315). This pit and perhaps (329) may have lain to the rear of early medieval properties facing north onto the road and adjoining the surface to the west, the metalling of which had eroded into the upper fill of the ditch (248). The other features on Site B relate to timber structures which cannot be easily interpreted, but some in a row apparently parallel to Ditch 8, could have formed a post line on its south-east side.

THE ANGLO-SAXON CEMETERY by GAVIN KINSLEY

In this report on the Anglo-Saxon cemetery, Anglo-Saxon skeletons are analysed and reported on by M. Harman (compiled 1973), artefact descriptions, and all other text where unspecified are by G. Kinsley (1996, with the exception of the catalogue descriptions of glass beads by M. Guido). A detailed analysis of the glass beads is by Leo Biek, identifications of mineral-preserved organic material on metal objects are by Glynis Edwards and Jacqui Watson of the Ancient Monuments Laboratory, and artefact illustrations are by H.B.M.C.E. drawing office and R. Sheppard.

The presence of mineral-preserved organic material on an object is noted in the published catalogue as MPO; a detailed description of the mineral-preserved organic material on metal objects is in archive, and the principal conclusions are incorporated into the text by G. Kinsley. Drawings of iron objects have been based on their outward appearance, and on radiograph views; views taken from the latter are shown as outlines.

The graves have been numbered serially, at the post-excavation stage, starting with the single grave in Site A, and then progressing generally from south-west to north-east in Site B (Figs. 12 and 13). Clusters of human bone which may represent disturbed graves have been numbered A to E. The catalogue entry for each grave gives information in the following order: grave number, grave shape, grave dimensions, grave orientation, body position, skeletal data (estimated sex, age and height, dentition and pathology) and descriptions of grave-goods (physical form and location on body). Further details of the skeletal analysis are given below under discussion. The human skeletons are described by M. Harman. Fragments of artefacts found in the upper fills of the graves were considered to be accidental inclusions; they are listed in the archive but not described here.

Catalogue of the Graves

All the human bones were examined. Most of the bones were in fairly good condition, though some were broken; all the skulls were in fragments. The sex of the individuals was assessed mainly from the relevant features of the skull and the pelvis, the size and ruggedness of the rest of the skeleton also being taken into consideration. Estimates of the age of the individuals were based on the state of epiphyseal fusion and on the state of tooth eruption and degree of tooth wear, using the chart given by Brothwell 1972. The height of adult individuals was calculated, where possible, from the total length of the limb bones, using the regression formulae worked out by Trotter and Gleser 1952. The dental formula for each skeleton is given, using the following symbols:-

Upper jaw

Right	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Left
side	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	side

Lower jaw

-	part of jaw missing	A	abscess
/	tooth lost after death	E	pulp cavity exposed
X	tooth lost before death	NP	tooth not developed
C	caries		

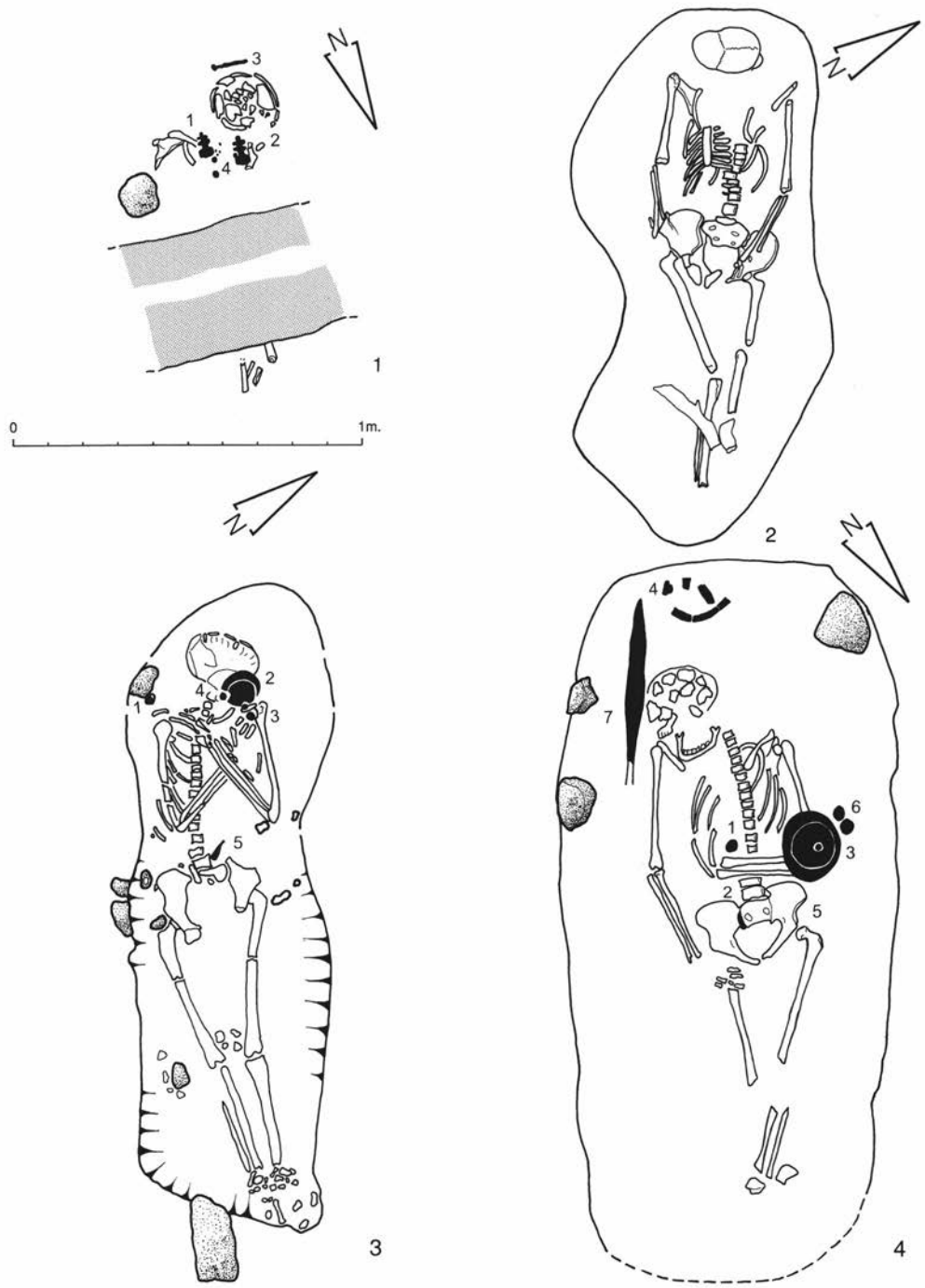

Fig. 14: Little Chester: plans of Anglo-Saxon graves, Sites A and B, Graves 1–4.

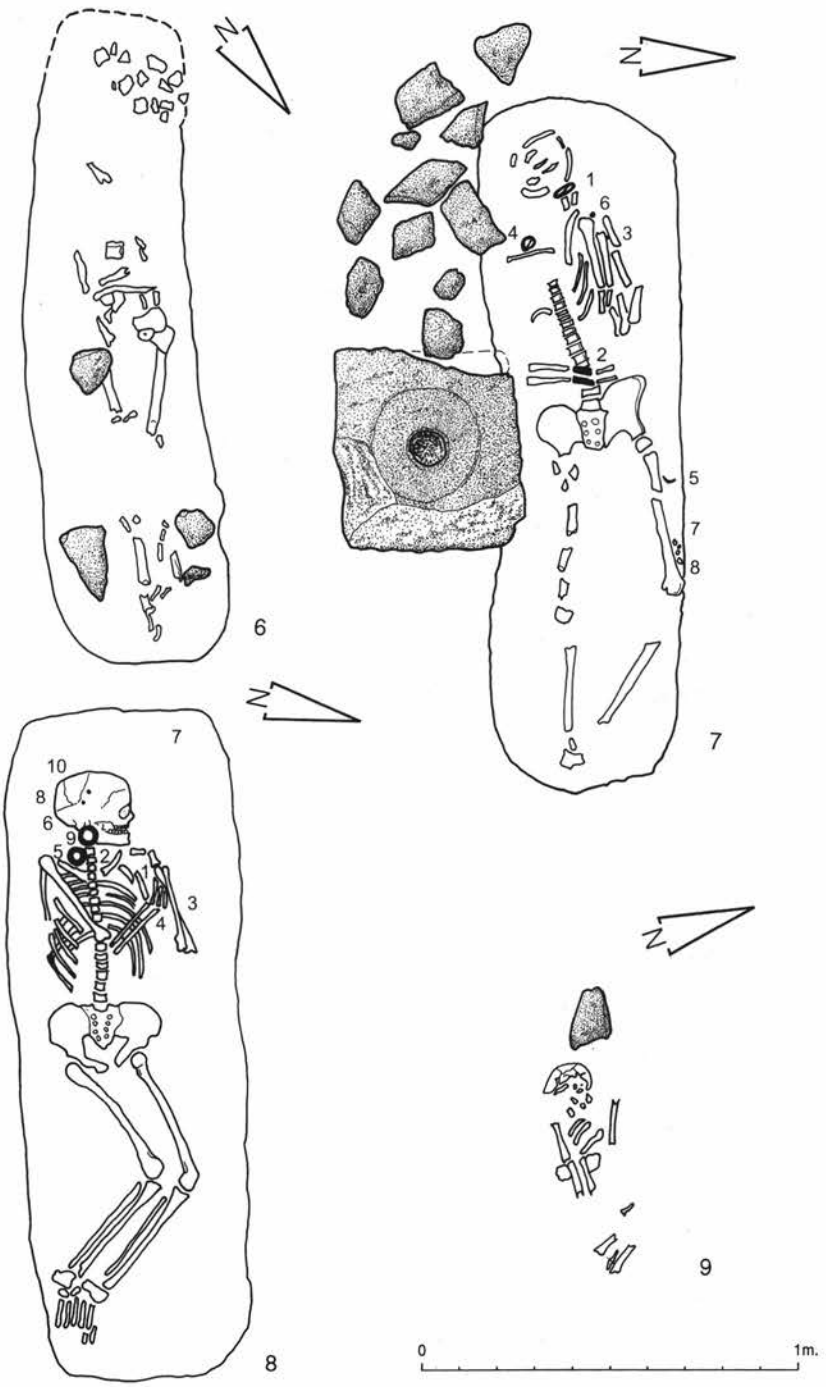

Fig. 15: Little Chester: plans of Anglo-Saxon graves, Site B, Graves 6–9.

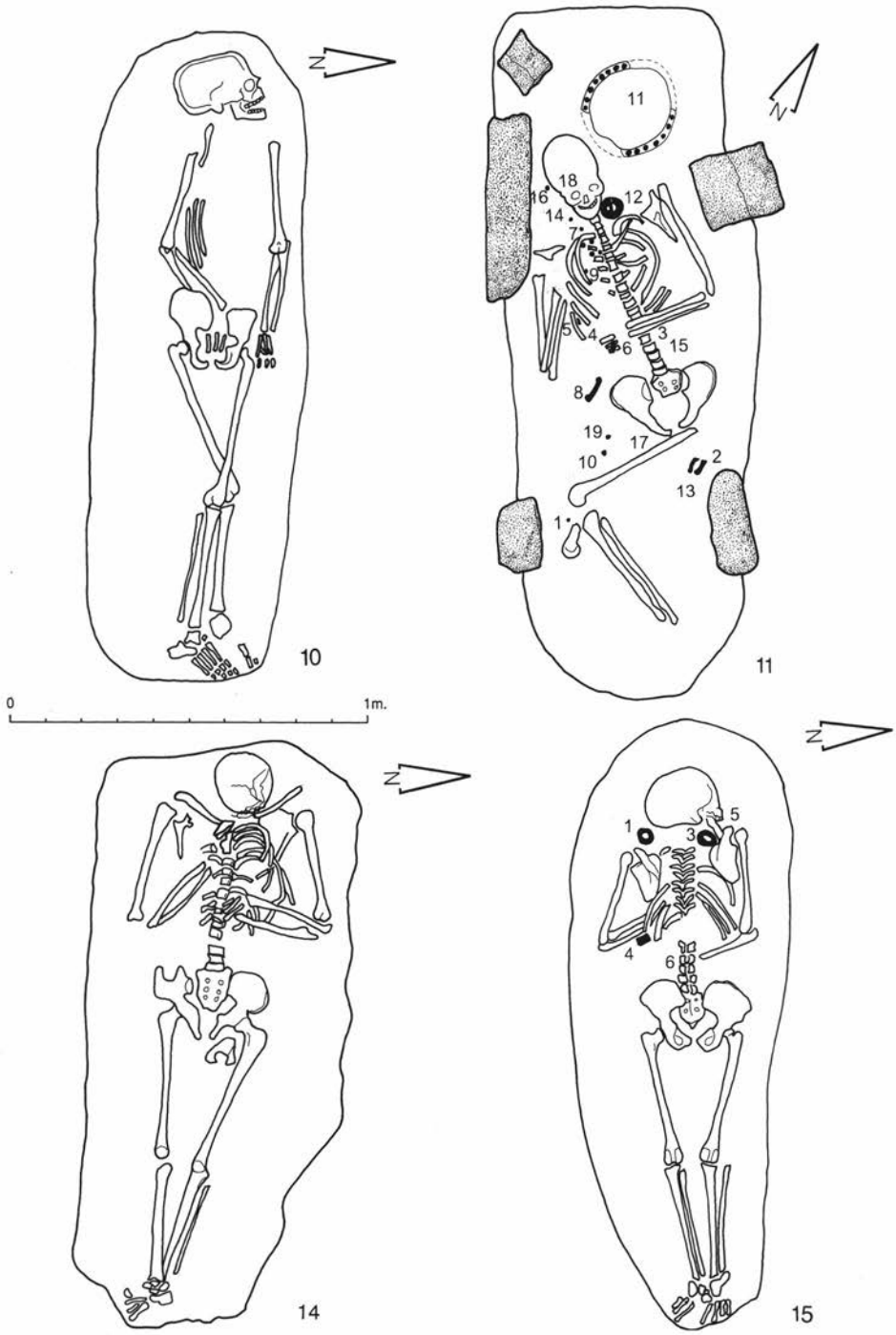

Fig. 16: Little Chester: plans of Anglo-Saxon graves, Site B, Graves 10, 11, 14 and 15.

Fig. 17: Little Chester: key to colour conventions used in drawings of beads.

Grave 1 (context 15, grave plan Fig. 14; grave-goods Fig. 18)

Grave: No grave outline observed. Orientation: *c.* 210 deg. Skeleton supine, disturbed: only the skull and upper abdomen surviving, with traces of the femur to the north-east.

Skeleton: ?male over 40 years. Present: most of skull, 2 clavicles, 2 scapulae, femur and tibia shaft fragments, patella.

A
~~8~~ 7 6 5 4 3 2 1 ~~1 2 3 4 5 6 7 8~~

~~8 7 6 5 4 3 2 1~~ 1 2 ~~3~~ ~~4~~ ~~5~~ ~~6~~ 7 8
A

Pathology: a small amount of osteophytic growth on the patella and eburnation on the articular surface of both this and the distal end of the femur indicate that the individual suffered from osteoarthritis.

Grave-goods:

1&2(i) Matching pair of copper alloy small-long brooches with iron pins, found on either collar bone. Decoration on each comprises punch-marks using two tools, grooves on bow, and circular-ended slots in edges of headplate. Both brooches show some degree of wear, and no. 2 has been repaired, with a replacement lug holding the iron cross-bar of the pin, fixed to the headplate with two copper alloy rivets. MPO on both. Lengths 77mm.

2(ii) Fragment of copper alloy sheet. 6x12mm with one raised edge and V-shaped notch cut out of one end. Found behind pin of no. 2.

3 Copper alloy pin with small attached ring, found above the head. Decorated with a grooved collar. Length (of pin only) 147mm.

4 Four beads found between 1 and 2. Amber: one thick, flat, 13mm (not illustrated), one thick, flat, broken across the original hole and pierced for a second time, 15mm; glass: one annular, bluish-white with crossed waves and dots in blue, diameter 9mm; one annular, terracotta-coloured, with wide girth band of yellow marbled with green, diameter 15mm.

5 Coin 15, a barbarous radiate of the late third century, found beside head. Possibly an accidental inclusion in the grave fill. (See coin report, below p. 226)

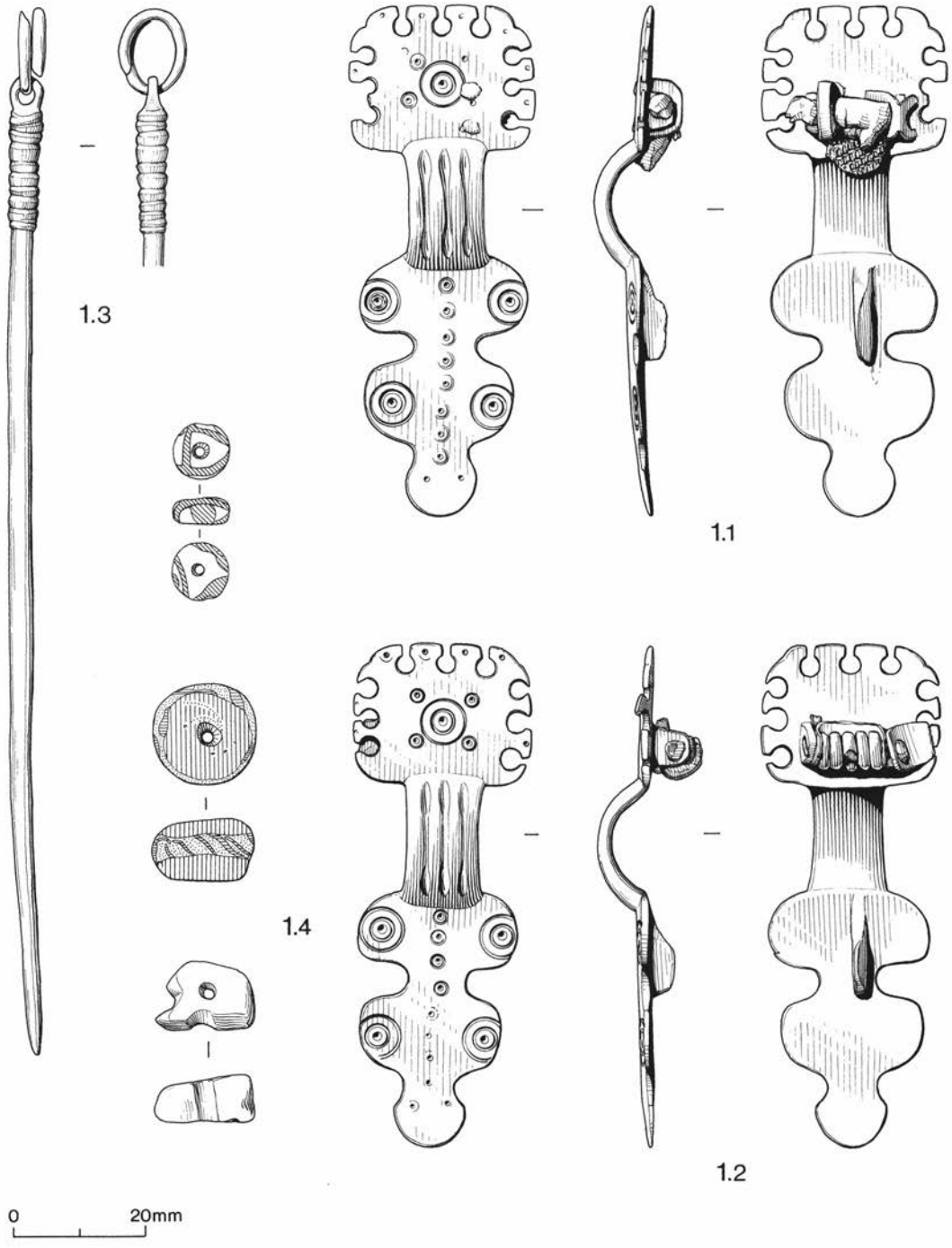

Fig. 18: Little Chester: grave-goods from Grave 1.

Grave 2 (context 208, grave plan Fig. 14; grave-goods Fig. 19)

Grave: irregular, 1.5x0.8m. Orientation: 295 deg. Skeleton supine, head resting on the slope of the end, facing right, hands resting on pelvis, legs extended.

Skeleton: female, 20–25 years, 4′ 11″.
Present: virtually complete skeleton, some bones incomplete.

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

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

Total length of limb bones in mm:

Femur	Humerus	Radius
395	295	210

Grave-goods:

1 Fragment of sheet copper alloy wrist clasp found in upper fill of grave. Rectangular, with slot. Rectangular patch of corrosion on upper surface may indicate position of a now-detached and missing bar.

2 Blade and tang of iron knife, found in upper fill of grave. MPO on detached flakes. Length 83mm.

Grave 3 (context 203, grave plan Fig. 14; grave-goods Fig. 19)

Grave: roughly rectangular, but more irregular towards head, 1.8x0.4m. Orientation: 300 deg. Skeleton supine, torso to left side of grave, feet to right, head facing left, hands crossed on chest, legs extended. Some finger bones were noted on the pelvis, indicating slight post-depositional disturbance.

Skeleton: male, 20–25 years, 5′6″. Present: virtually complete skeleton.

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

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

Total length of limb bones in mm:

Femur	Tibia	Fibula	Humerus	Radius	Ulna
456	352	348	325	254	270

Pathology: sacral spina bifida is present. The skull is metopic, and there are at least fifteen wormian bones in the lambdoid suture, and two in the coronal suture.

Grave-goods:

1 Iron stud from shield, found above right shoulder. MPO on back. Diameter 20mm.

2&4 Iron shield boss found above the face. One rivet remains attached to the flange. MPO on 2. Boss height 100mm, diameter 120mm. Associated fragments (not illustrated) include three more rivets, one numbered 4, and parts of the flange.

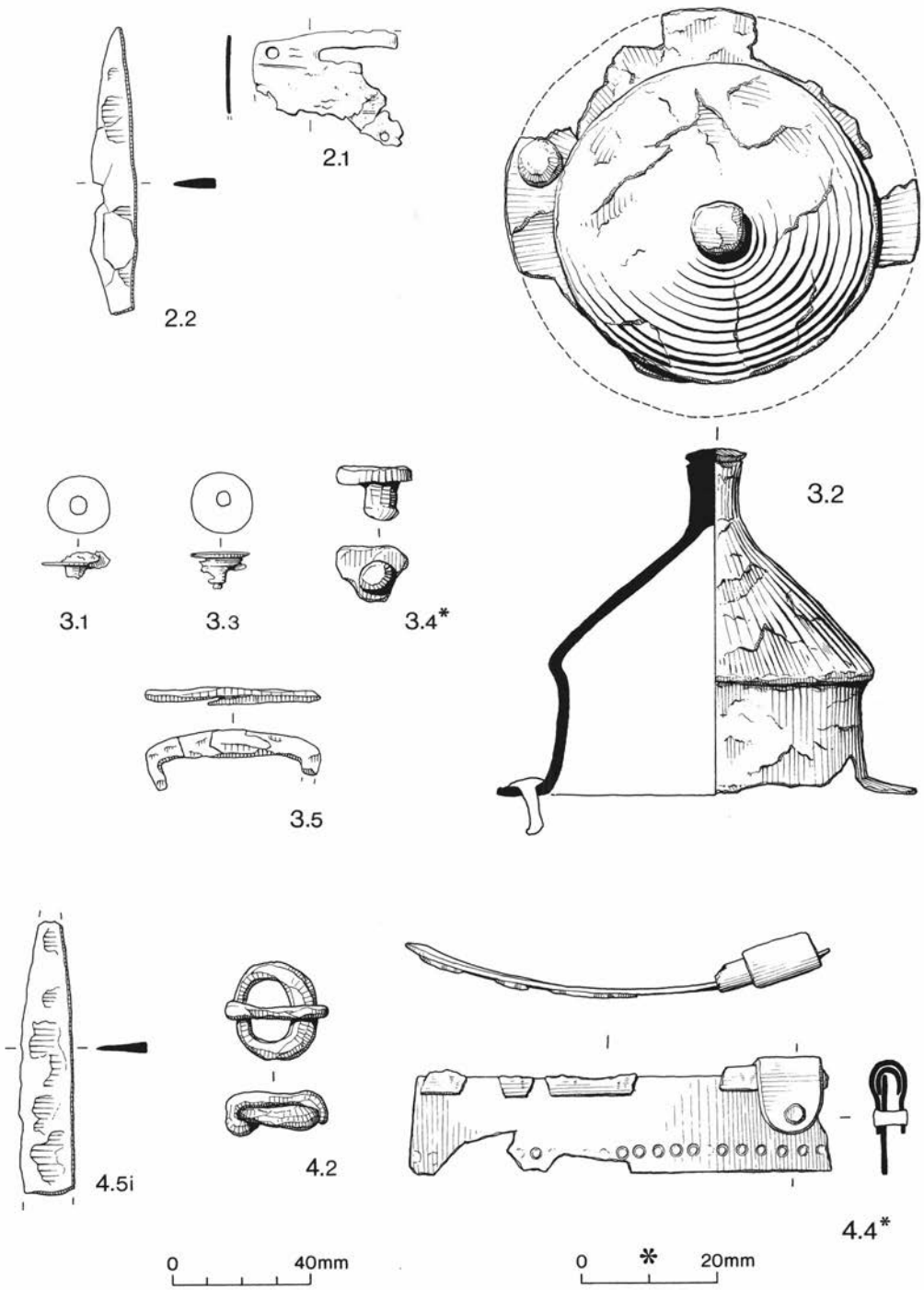

Fig. 19: Little Chester: grave-goods from Graves 2, 3 and 4 (part).

Plate 14: Grave 4, looking south.

Three straight-edged fragments with MPO, probably part of a grip. There are not enough pieces in this whole group to comprise all of the detached flange and a grip.

3 Iron stud from shield with MPO, found just below flange of boss. Diameter 19mm.

4 See 2

5 Iron object, found at waist. ?MPO. Length 50mm.

Grave 4 (context 328, grave plan Fig. 14; grave-goods Figs. 19–20; Plate 14)

Grave: roughly rectangular, 2.1x1.0m. Orientation: 205 deg. Three gritstone lumps at south end probably accidental inclusions. Skeleton supine, head facing right, left hand over right stomach, right hand by right pelvis, legs extended, crushed.

Skeleton: male, 35–40 years, 6′0″.
Present: skull and mandible, fragments of most post-cranial bones.

– 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8

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

Total length of limb bones in mm:

Radius	Ulna
275	300

Grave-goods:

1 Iron stud from shield, found above left wrist. MPO. Diameter 33mm.

2 Iron buckle found at waist. Oval loop, 24x28mm.

3 Iron shield boss found over left elbow. Flange with five rivets, four of which survive; the iron grip appears to have been attached to a lining by two studs, and forged to the flange at the Y-shaped ends. MPO. Height of boss 79mm; diameter 165mm.

4 Fragmentary copper alloy rim fittings found above head. Comprising strip, width 15mm, decorated with a row of punched circles, and a separately-applied rim fixed in place with a series of U-shaped clips rivetted through the centre of the strip. Remains of at least five such rivets survive, but fragments are too small to give an indication of the dimensions of the original vessel.

5(i) Iron knife found at left hip. MPO. Part of blade, back almost straight, length (incomplete) 79mm.

(ii) Iron buckle. Part of tongue and oval loop. Original loop width about 26mm. Not illustrated.

6(i) Iron stud from shield, found to right of left elbow. MPO. 42x34mm.

(ii) Iron stud from shield. MPO. 42x34mm.

(iii) Copper alloy rivet, originally adhering to (i). Diameter 10mm.

7 Iron spearhead found to left of head. Broken into three parts. MPO. Length 375mm.

Grave 5 (context 320, no grave plan, grave-goods Fig. 21)

Grave: no grave outline observed. Disturbed, and not planned. Only skull and upper abdomen survived at the west end of grave.

Skeleton: ?sex, 25–30 years. Present: four teeth, skull fragments, 1 clavicle.

Grave-goods:

1 Two beads. Glass: one barrel-shaped, terracotta-coloured, with yellow marvered crossed waves, diameter 8mm; one barrel-shaped, slightly greenish-yellow, length 6mm.

Grave 6 (context 313, grave plan Fig. 15)

Grave: sub-rectangular, narrow, and slightly curved, 1.7x0.5m. Orientation: 215 deg. Skeleton badly crushed.

Skeleton: female, over 40 years. Present: skull and mandible, fragments of all limb bones, not measurable.

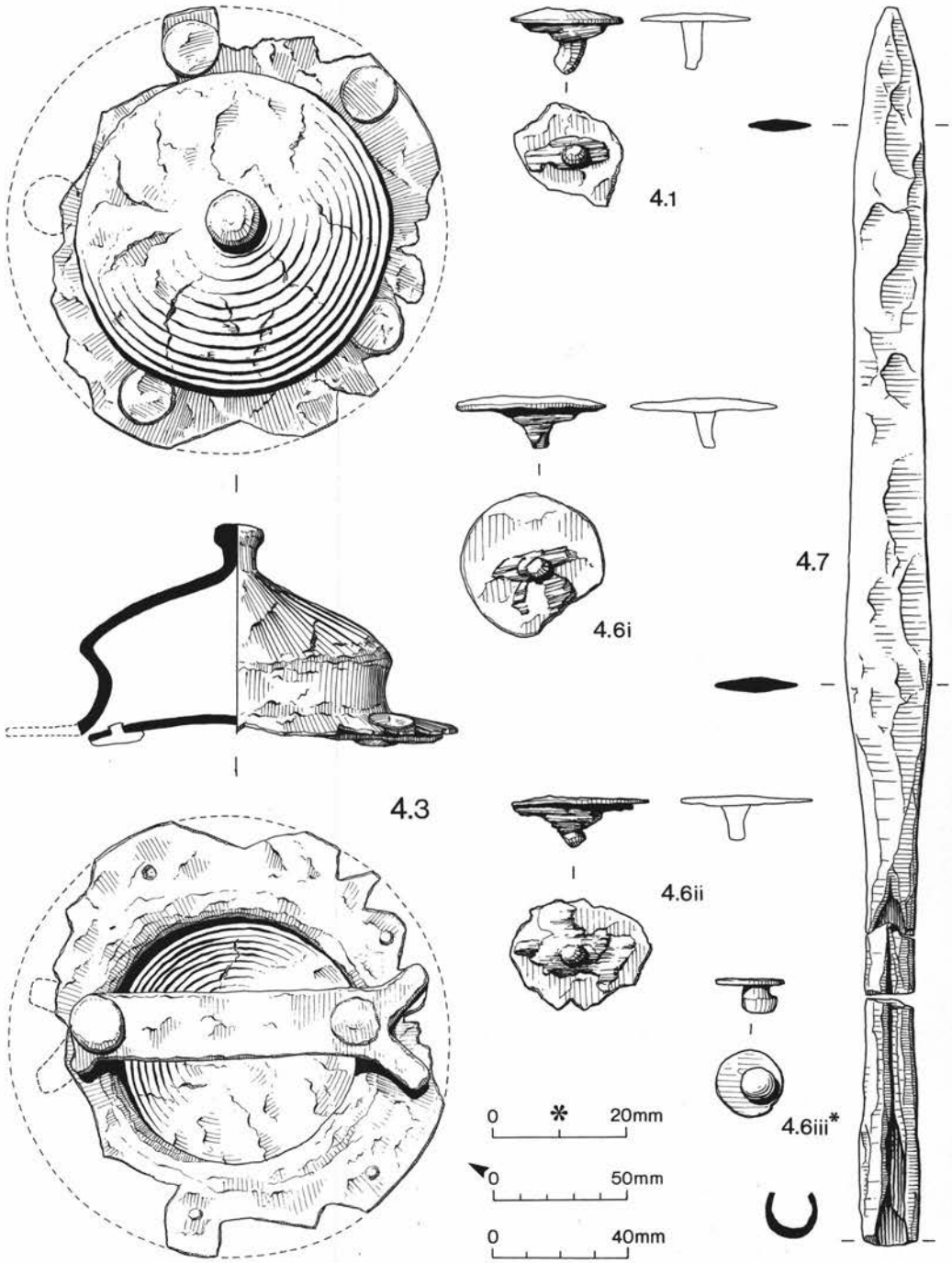

Fig. 20: Little Chester: grave-goods from Grave 4 (completed).

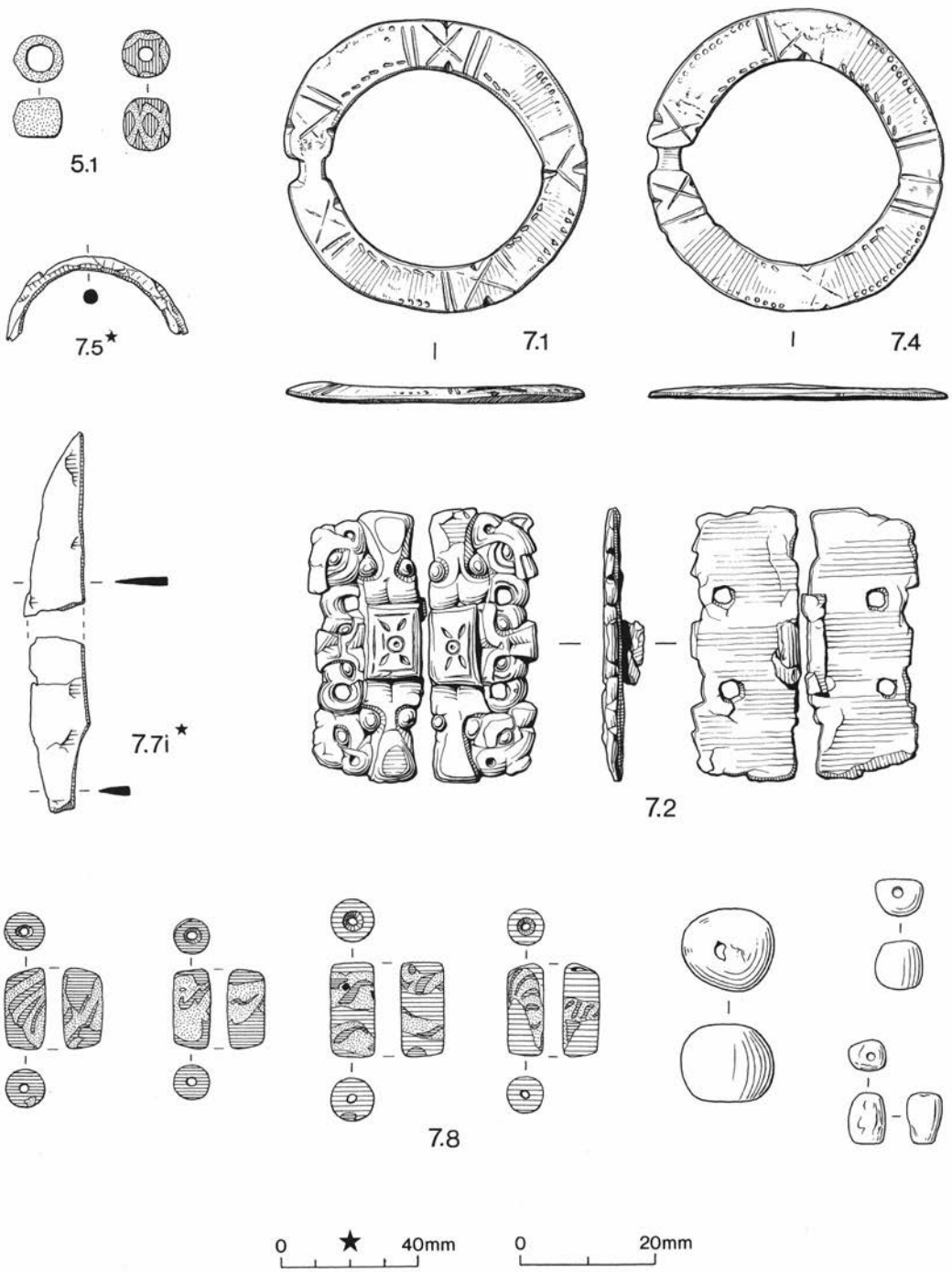

Fig. 21: Little Chester: grave-goods from Graves 5 and 7.

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

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

Pathology: slight osteophytic growth around the ligamentary pit on the right femoral head, accompanied by an area of eburnation on the articular surface, probably indicates osteoarthritis in the right hip joint. The left femoral head is not affected.

Grave 7 (context 309, grave plan Fig. 15; grave-goods Fig. 21)

Grave: sub-rectangular, south side concave to avoid column base, 1.8x0.5m. Orientation: 265 deg. Skeleton supine, left hand at left shoulder, right hand over stomach area, left leg slightly bent.

Skeleton: ?sex, 40–45 years. Present: virtually complete skeleton.

A
E
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8

8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8
C
A

Pathology: slight osteophytic growth on the bodies of the lumbar vertebrae is indicative of mild osteoarthritis.

Grave-goods:

1&4 Matching pair of cast copper alloy annular brooches, found above left and right collar bones. Although the grave plan shows both with pins, these are no longer present. The annular bands are flat in section with recesses to accommodate the loops of the pins. Decoration comprises incised lines, facets, and punch marks using one tool. Both brooches are somewhat worn, no. 4 more than no. 1. Diameters at pin recesses: no. 1, 45mm, no. 4, 44mm.

2 Gilded copper alloy wrist clasp, found at right wrist. Decorated in chip-carved geometric and Style I ornament; the snouts of the four animal heads seen full-face at each end of each half of the clasp were originally covered with applied sheet-silver triangles, only one of which survives (lower left, as illustrated). The gilding has worn off the prominent surfaces, and is now restricted to the recesses in the chip-carving. Length 40mm.

3 Sheet copper alloy fragments, found at left wrist. Traces of one hole for attachment (not illustrated). The position of this find on the body suggests that it could be the remains of a wrist clasp not matching no. 2.

4 See 1&4.

5 Part of iron ring, found by left thigh. Circular in section. Diameter of ring 58mm (not illustrated).

6 Length of iron rod, found at left shoulder. MPO. Length 29mm (not illustrated).

7(i) Fragmentary remains of iron knife, found at left thigh. Part of blade and tang; original length uncertain (not illustrated).

(ii) Possible iron buckle. ?MPO. Radiographs show what might be part of a buckle, diameter about 15mm, amongst the associated fragments (not illustrated).

8 Seven beads found at left knee. Amber: three rounded polyhedral, 7, 8 and 13mm, plus fragment of fourth (not illustrated); glass: three cylindrical, greenish with yellow and green band, lengths 14, 12 and 12mm; one similar with traces of red/brown, length 14mm.

Grave 8 (context 304, grave plan Fig. 15; grave-goods Fig. 22; Plate 15)

Grave: regular, rectangular, 1.8x0.7m. Orientation: 255 deg. Skeleton supine, head facing left, hands together over left shoulder, legs slightly flexed, knees to left.

Skeleton: female, 20–25 years, 5′1″. Present: virtually complete skeleton.

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

Total length of limb bones in mm:

Femur	Tibia	Fibula	Humerus	Radius	Ulna
416	333	330	285	218	235

Pathology: the neural arch of the last lumbar vertebra is separate from the body. There is one wormian bone in the lambdoid suture.

Grave-goods:

1 Thirty-five beads, found on chest. Amber: twenty-five rounded polyhedral, 6–12mm; two flat, 16 & 21mm (three examples illustrated); two disintegrated; 'gold-in-glass': one spherical, pale green, diameter 4mm (not illustrated); glass: two barrel-shaped, opaque grass-green, lengths 9mm; one cylindrical, greenish, folded with bands of yellow and green and traces of light brown, length 14mm; one annular, pale yellow with pinkish-to-dark-red crossed waves, diameter 6mm; one cylindrical, opaque, streaky grey-blue, length 12mm.

2 Three fragments of copper alloy sheet found on chest (not illustrated).

3&10 Pair of copper alloy wrist clasps, one and a fragment found by left arm, the remainder of 10 found at back of head. The hooks from both are now detached. All are decorated with a central row of hemispherical repoussé bosses, and lines of punch-marks from one tool. 10 now completely fragmented. All pieces originally 19x34mm.

4(i) Animal claw pendant, found on chest. Squared end pierced and stained with copper alloy. Associated fragments of copper alloy are probably of wire, presumably remains of a suspension loop. Length 19mm.

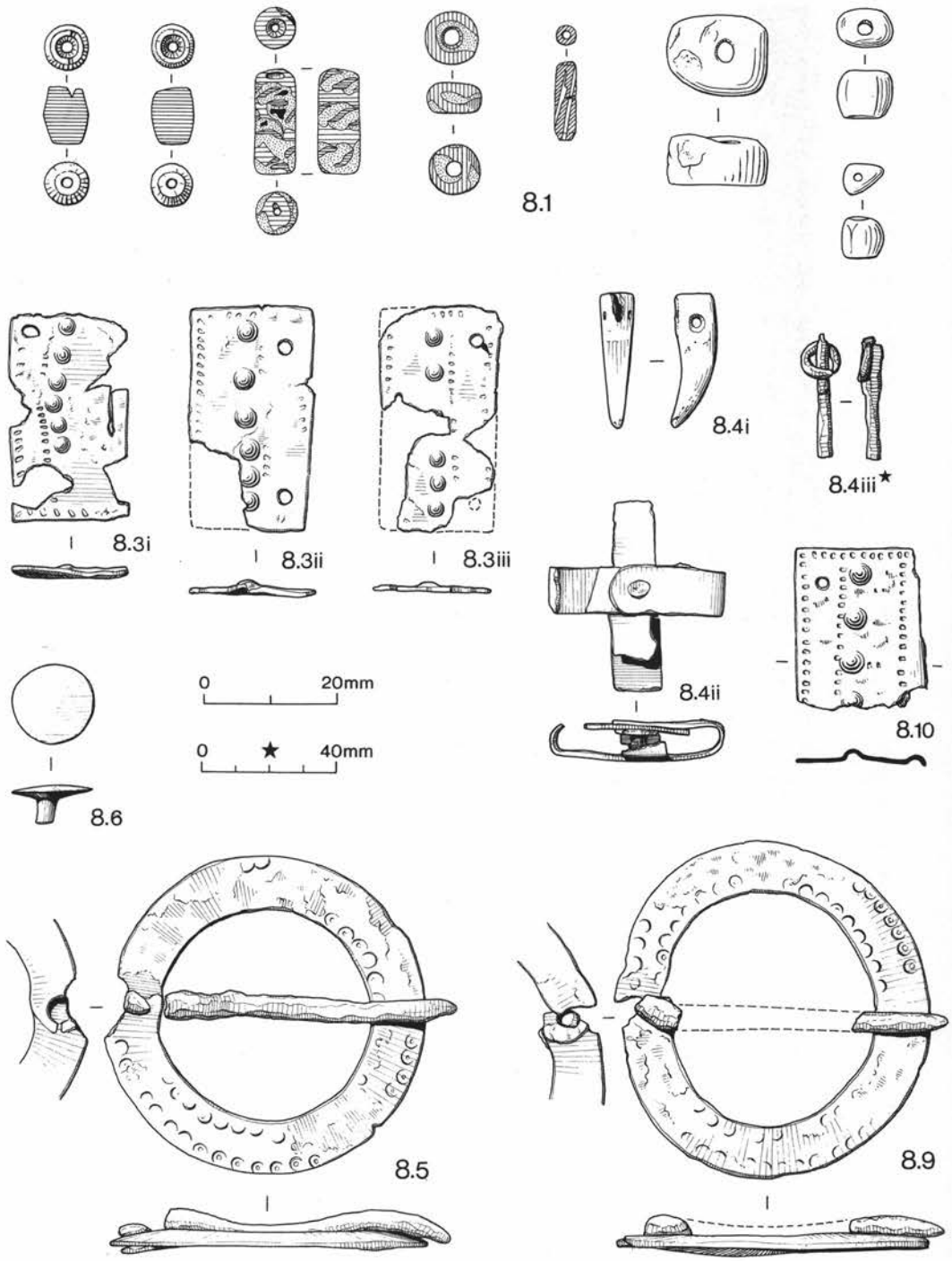

Fig. 22: Little Chester: grave-goods from Grave 8.

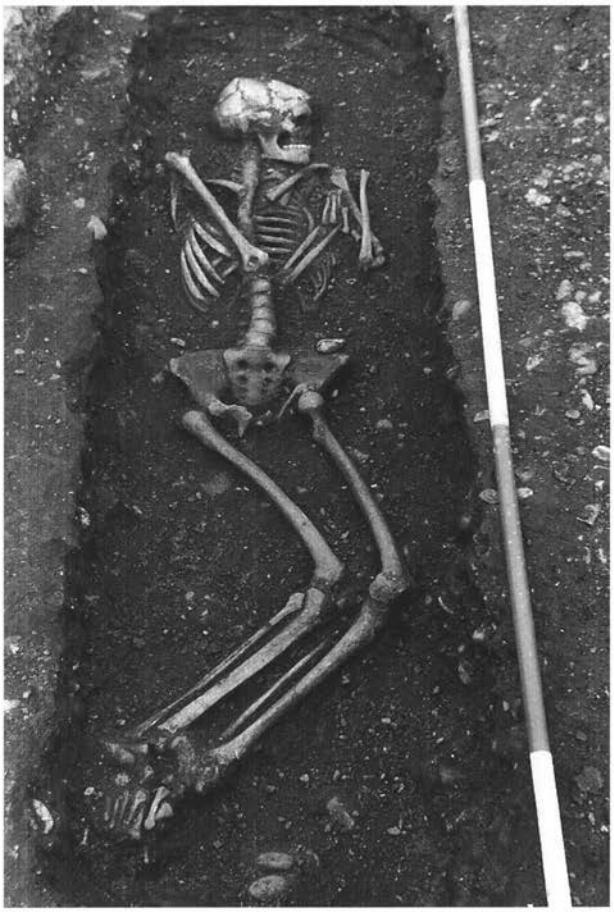

Plate 15: Grave 8.

(ii) Sheet copper alloy object found on chest. Formed of two complete looped and crossed bands joined by a central rivet. It may have surrounded some perishable substance. Length 26mm.

(iii) Iron object, found on chest. Rod with ring attached to one flattened end, the other end, circular in section, broken off. Ring C-shaped. Length (incomplete) 36mm.

5&9 Matching pair of sheet copper alloy annular brooches with iron pins, no. 5 found above right collar bone, and no. 9 behind jaw at top of spine. Decorated with punch-marks of one tool. Each brooch formed from a penannular band with a single hole in each terminal; this was then bent round with the holes overlapping, and the loop of the pin passed through the holes to keep the ring closed. 9 as MPO. Diameter of no. 5, 47mm; maximum diameter of no. 9, 50mm.

6 Copper alloy rivet, found at back of head. Patches of white metal survive on the front face. Diameter 12mm.

7 Two coins (nos 3 and 8) in the fill of the grave, the former a plated denarius of Vespasian, the latter an Antoninianus of Tetricus 1. Both possibly accidental inclusions (Coin report, below p. 226).

8(i) Two fragments of copper alloy sheet found at the back of the head. One has two parallel rows of punched triangles. Maximum dimension 12mm (not illustrated).

(ii) Bead. Amber: irregular in shape, 7mm (not illustrated).

9 See 5&9.

Grave 9 (context 307, grave plan Fig. 15)

Grave: no grave outline recorded. Orientation: *c.* 260 deg. Skeleton poorly preserved. Position of body not clear from plan, but note book says 'almost crouched'.

Skeleton: ?sex, *c.* 4 years. Present: four deciduous teeth, frontal fragment, 2 humeri, 2 radii, 2 ulnae, and 2 femur shafts.

Grave 10 (context 228, grave plan Fig. 16)

Grave: regular, oval, 1.8x0.6m. Orientation: 275 deg. Skeleton lying on left side, hands in front of pelvis, right pelvis collapsed forward, legs extended.

Skeleton: male, 20–25 years, 5′6″. Present: virtually complete skeleton.

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

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

Total length of limb bones in mm:

Femur
448

Pathology: the skull is metopic, and there are five wormians in the lambdoid suture.

Grave 11 (context 419, grave plan Fig. 16; grave-goods Figs 23–25; Plates 16–17)

Grave: regular, rectangular, 1.9x0.7m. Orientation: 320 deg. Five large stone blocks (all fragments of Roman masonry), resting on edge against the sides of the grave. Skeleton supine, left hand on stomach, right hand by right shoulder, legs bent to right. The legs appear to have been bent to create space in the grave for the placing of the bowl, no. 11, by the head.

Skeleton: female, 20–25 years, 5′8″. Present: virtually complete skeleton.

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

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

Total length of limb bones in mm:

Femur	Tibia	Fibula	Humerus	Radius	Ulna
488	381	377	348	258	278

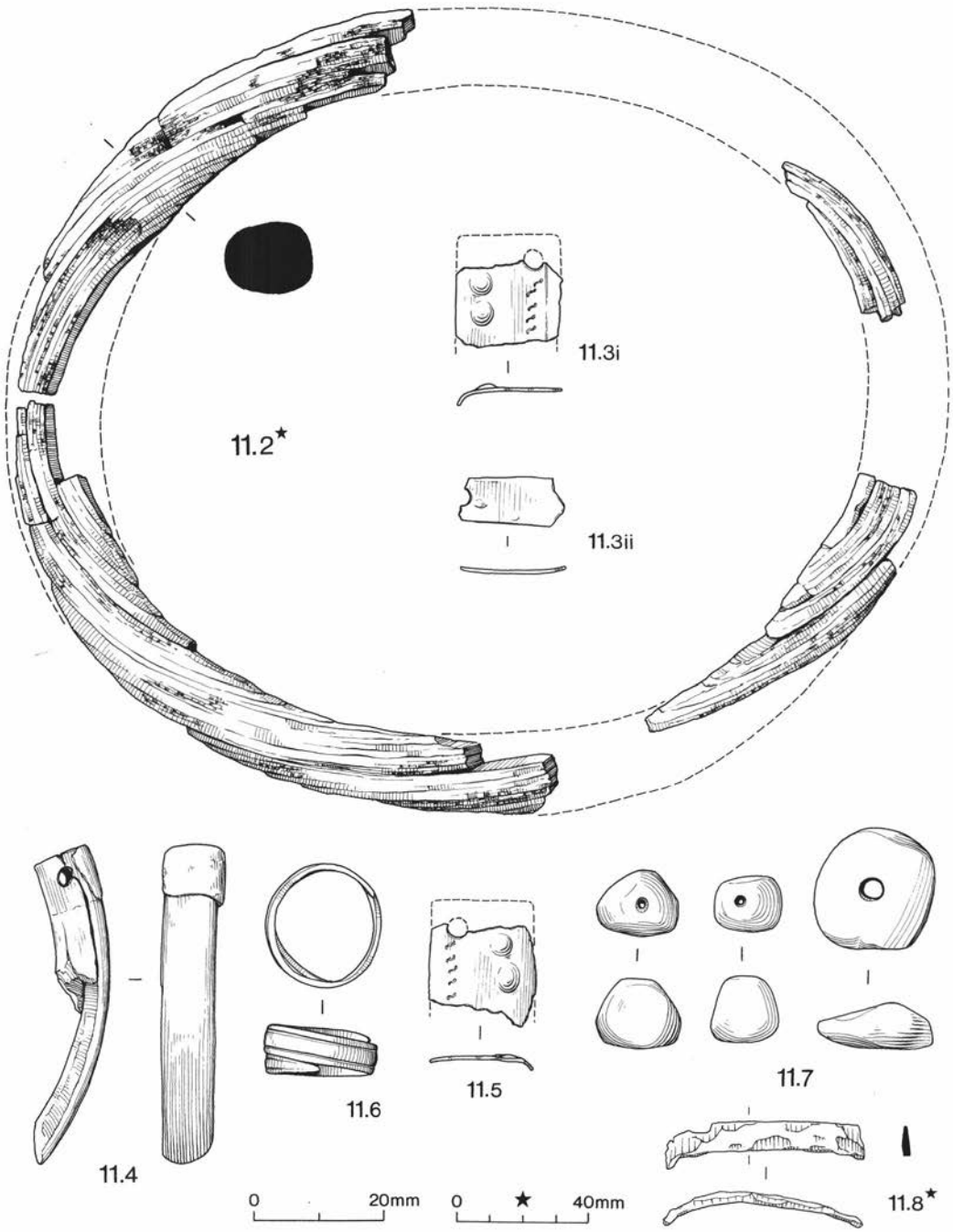

Fig. 23: Little Chester: grave-goods from Grave 11 (part).

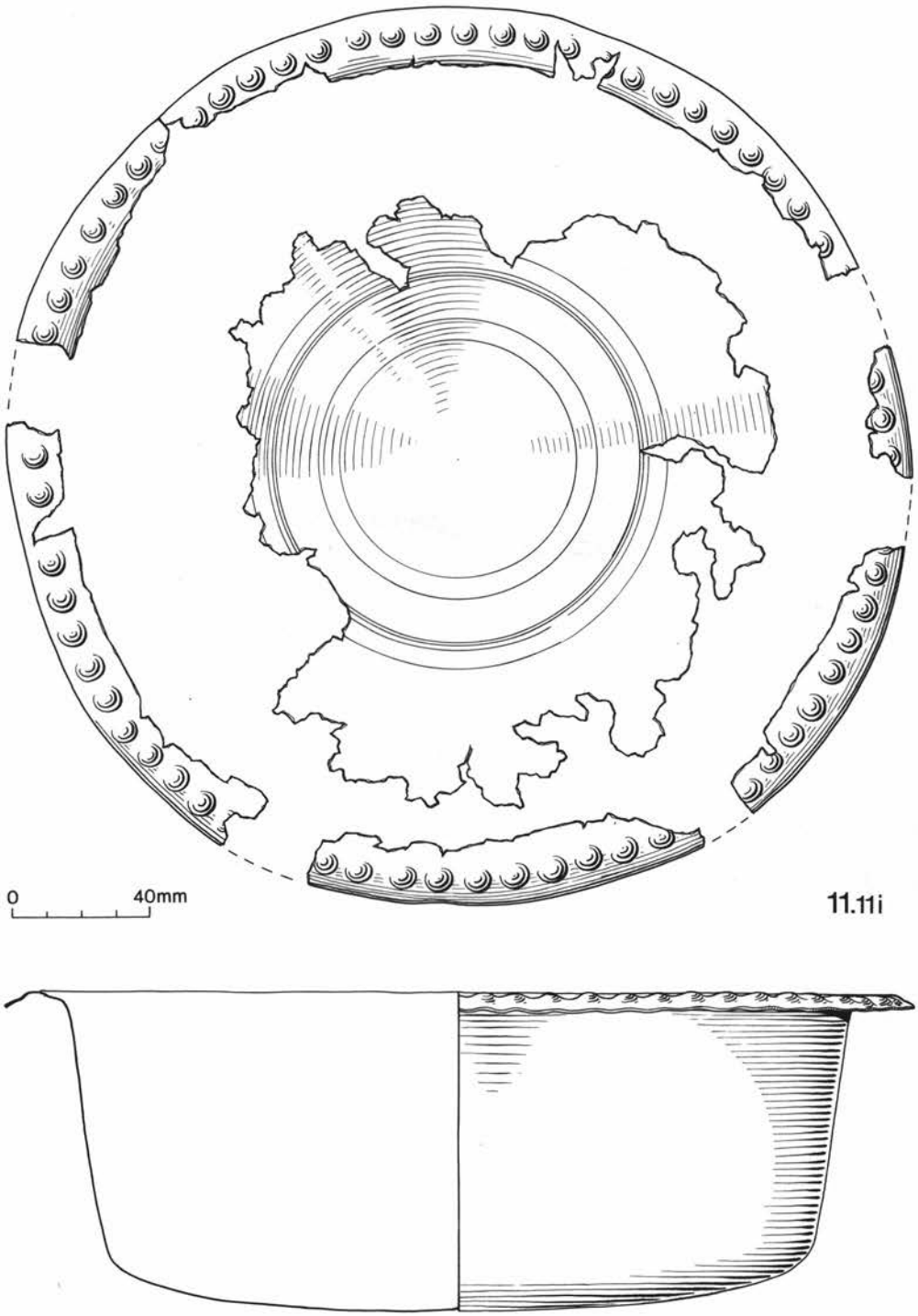

Fig. 24: Little Chester: grave-goods from Grave 11 (part).

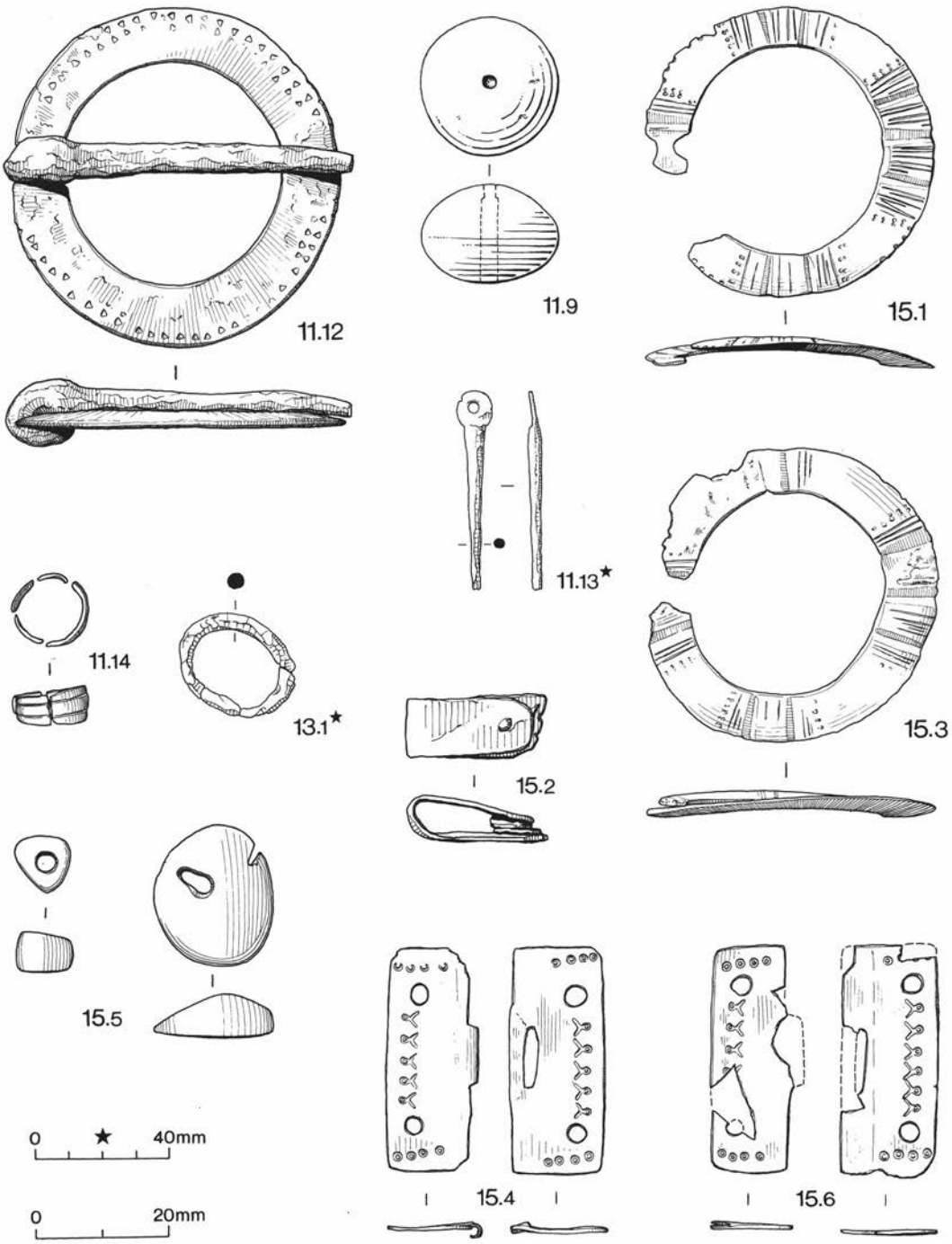

Fig. 25: Little Chester: grave-goods from Graves 11 (part), 13 and 15.

Plate 16: Grave 11 looking north-west showing four stone blocks lining grave and bronze bowl close to the head.

Plate 17: Grave 11. Detail of copper alloy bowl and brooch at shoulder.

Grave-goods:

1 Copper alloy object, found at left knee. Two fragments of copper alloy sheet fastened together by an iron rivet. MPO. Largest fragment 11mm (not illustrated).

2 Parts of an ivory ring found by left hip. One spot of iron staining. Roughly oval, maximum dimension about 145mm.

3(i)&5 Fragmentary pair of sheet copper alloy wrist clasps found on left, and close to right wrist. Decoration comprises an incised line, hemispherical repoussé bosses, and punch marks from one tool. No. 5 could be from the same object as no. 3. Width of fragments 16mm. Another fragment of these clasps was found with no. 11 (see 11(iii)).

3(ii) Length of sheet copper alloy strip with two broken ends, one pierced. Traces of white metal on back. Length 16mm.

4 Animal tusk pendant found amongst lowest right hand ribs. Squared end, with copper alloy binding, part missing. Pierced for suspension. Length 50mm.

5 See 3(i)&5.

6 Silver finger-ring, found on finger of left hand. Made from a single band of silver tapering to a point at each end, twisted into a spiral. Decorated with two parallel grooves. Inner diameter 16mm.

7 Fourteen beads found on right chest. Amber: fourteen rounded polyhedral 9–20mm (three examples illustrated).

8 Curved iron strip found near right hip. Length 61mm.

9 Bead found on right chest. Crystal: biconical, diameter 20mm. Worn and chipped around circumference, and cracked.

10 Bead found near right hip. Amber: rounded polyhedral, 11mm (not illustrated).

11(i) Copper alloy bowl found above and to right of head. Found and lifted complete but only the illustrated fragments were reconstructable. The vessel has been spun from a single piece of copper alloy, with everted rim decorated with a continuous line of hemispherical repoussé bosses. Marks on the base show that a separate footring was originally attached, diameter about 85mm. Two rivet holes 10 and 40mm below the rim on either side of a larger irregular hole probably indicate an ancient mend. The illustration shows the rim as seen from above, and the outer surface of the base. Original diameter about 260mm; depth probably about 85mm; thickness of base and sides 0.3–0.4mm; thickness of rim 1mm.

(ii) Eight iron fragments (not illustrated).

(iii) Two fragments of copper alloy wrist clasp, matching nos. 3 and 5, although the fragments do not join. Two further fragments could also be part of the same clasp (not illustrated).

12 Cast copper alloy annular brooch with iron pin, found above left collar bone. The flat band has recesses to accommodate the loop of the pin. Decoration comprises a single row of punch marks round the outer edge, not obviously worn, but in places obscured by corrosion. The tool used produces two, possibly four triangles. MPO. Diameter 50mm.

13 Iron object, found to right of thigh. Rod circular in section, thinning and widening towards pierced disc-shaped end. MPO. Length (incomplete) 60mm. Associated curved fragments could be part of buckle or ring (not illustrated).

14 Small silver ring found to left of jaw. Decorated with two incised lines, and of similar construction to no. 6. Internal diameter about 10mm.
15(i) Fragmentary iron nail found below left forearm. Oval head. Length 52mm (not illustrated).
15(ii) Iron fragment not from 15(i). MPO (not illustrated).
16 Length of iron rod found to left of head. MPO. Length 26mm (not illustrated).
17 Glass fragment, found below right hip. Perhaps accidentally included in the grave fill (not illustrated).
18 Iron fragment. Found on teeth or in mouth. Now missing, probably corroded away (not illustrated).
19 Fragments of iron rod, found in upper fill of grave, to left of right hip. Square in section, with 10mm at one end bent through 45°. Length about 110mm (not illustrated).

Grave 12 (context 408, no grave plan)

Grave: disturbed very shallow burial. Orientation uncertain. Extended in an approximately east-west sub-rectangular grave.

Grave 13 (context 406, no grave plan, grave-goods Fig. 25)

Grave: sub-rectangular, well-defined grave outline. Orientation: *c.* 270 deg. Not planned. Skeleton crushed by machinery, and very decayed. Sketch in notebook indicates supine, forearms crossed over stomach region, legs slightly flexed, knees to left.

Skeleton: ?sex, 9–12 years. Present: skull fragments, fragments of pelvis, 2 femora, 2 tibiae, 2 fibulae.

Grave-goods:
1 Iron buckle found near the right elbow. ?MPO. Oval or D-shaped loop 32x39mm (not illustrated).

Grave 14 (context 407, grave plan Fig. 16; Plate 18)

Grave: rectangular, 1.7x0.8m. Orientation: 280 deg. Skeleton supine, head resting against west end of grave, left hand on stomach, right hand on chest, legs extended.

Skeleton: male, 30–35 years, 5′7″. Present: virtually complete skeleton.

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

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

Total length of limb bones in mm:

Femur	Tibia	Fibula	Humerus	Radius	Ulna
463	371	360	335	253	271

Pathology: a small hollow (*c.* 23mmx17mm) in the left parietal, near the junction of the coronoid and sagittal sutures, may be due to a small head injury or a localised infection. The skull is metopic, and there are two wormian bones in the lambdoid suture.

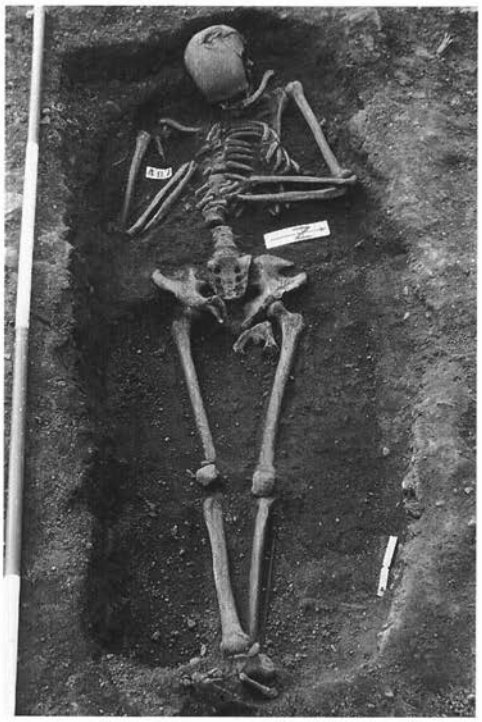

Plate 18: Grave 14, looking west.

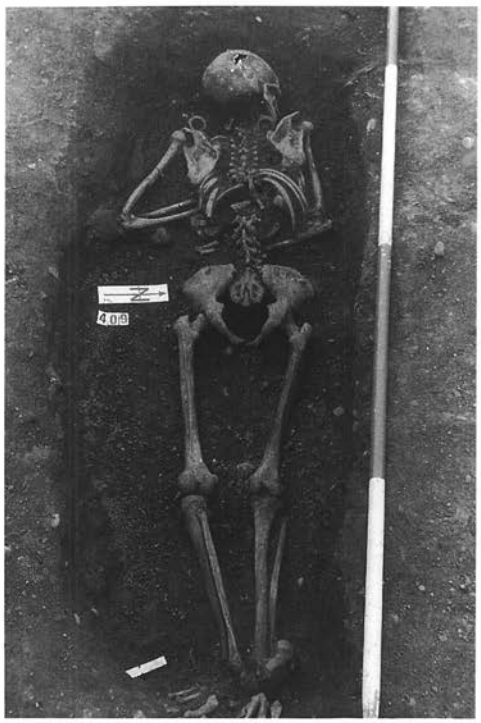

Plate 19: Grave 15, a prone skeleton with two ring brooches visible at shoulder.

Grave 15 (context 409, grave plan Fig. 16; grave-goods Fig. 25; Plate 19)

Grave: irregular, 1.7x0.6m. Orientation: 280 deg. Skeleton prone, head facing slightly right, left hand under chest, right hand under stomach, legs extended.

Skeleton: female, 25–30 years, 5′2″. Present: virtually complete skeleton.

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

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

Total length of limb bones in mm:

Femur	Tibia	Fibula	Humerus
421	337	330	301

Pathology: the upper right third molar is both displaced and reduced and lies horizontally in the maxilla instead of vertically. It has partially erupted on the lateral surface of the right maxilla, just behind the zygomatic arch. The atlas has a cleft neural arch. There are three wormian bones in the lambdoid suture.

Grave-goods:

1&3 Matching pair of cast copper alloy annular brooches, found above left and right collar bones. No. 1 has the remains of an iron pin. The annular bands are flat in section, with recesses to accommodate the pin loops. Decoration comprises incised lines, punch-marks from one tool, and grooves. The latter appear to be part of the original casting. Diameters: no. 1, 43mm; no. 3, 45mm.

2 Iron fitting, position not recorded. Ends joined by a rivet. Length 42mm.

3 See 1&3.

4&6 Matching pair of sheet copper alloy wrist clasps, found at either wrist. Decoration comprises punch marks from two tools: single circle, and alpha motifs. Traces of white metal on both. MPO on 4. 'Hooks' 35x12mm, 'eyes' 35x14mm. One sheet copper alloy fragment found with no. 6 appears to be part of a separate object (not illustrated).

5 Two beads found by the mouth. Amber: one flat, oval, 21mm, one rounded polyhedral, 8mm, fragment of a third.

Grave 16 (context 415, no grave plan)

Grave: partly excavated and not planned. Orientation ? Contained human teeth and skull fragments at west end.

Skeleton: ?sex, 20–25 years. Present: 9 loose teeth.

Grave 17 (context 423, no grave plan)

Grave: not planned, less than half lay within the excavation: legs only observed. Orientation ? Note book notes 'adult'.

Human bone groups A to E

In addition to the above graves, five clusters of human bone were recorded in Site B, their positions indicated by letters A to E on the plan of the post-Roman features on Site B (Fig. 13). Their date is uncertain but they may represent parts of other, disturbed burials from this cemetery. The disturbance may have occurred during agricultural activity in the medieval period or during the works connected with the construction or, indeed, the demolition of the railway bridge.

The human skeletons by M. Harman

The remains of fifteen individuals were inspected: two children, five women, four men, and four adults of uncertain sex.

	0–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40+
Male					2		1	1	
Female					3	1			1
Uncert	1		1		1	1			2

Table 9: Little Chester: the distribution of deaths tabulated according to age and sex.

The number of individuals involved is too few to regard the small number of children as significant, or for the group to provide any general impression of the population of this

area in early Anglo-Saxon times. The average height of the men was 5′8″, and of the women, 5′2″.

Dental health was considerably better than in the modern English population; there was no indication that any of the individuals of less than forty years had anything seriously wrong with their teeth, though of the three individuals aged over forty years, there were caries in 3% of the teeth, abscesses in 25% of the tooth sockets, and 10% of the teeth had been lost before death. One woman aged between twenty-five and thirty had the upper right wisdom tooth erupting through the side of the upper jaw instead of in the normal position behind the other molars.

There were no healed fractures seen in the bones examined, and very little other evidence of injury or disease, though the three people of over forty years (two of them incomplete skeletons) all had some evidence of osteoarthritis.

The group shows an interesting range of congenital anomalies. Of the five individuals with wormian bones in the sutures of the skull, three were also metopic, and three exhibited spinal anomalies, one of these being metopic also. This can be more clearly seen in the table below, and the coincidence of these features is strongly suggestive of some degree of family relationship. The burials of this group are distributed throughout Area B, without any obvious concentration in one area.

Skeleton	3	8	10	14	15
Wormian bones	x	x	x	x	x
Metopism	x		x	x	
Spinal anomalies	x	x			x

Table 10: Little Chester: distribution of congenital abnormalities.

Grave-Goods

In the following sections individual objects are referred to by the numbers in brackets, the first number being the grave number, the second the object number, separated by a full stop.

Small-long brooches (1.1, 1.2)

No close parallels to the small-long brooches can be found amongst the numerous examples published by Leeds (Leeds 1945, 4–44), and they can be more usefully compared with the great square-headed brooches, specifically that from Marston St. Lawrence, Oxon (Leeds 1949, no. 102). Punch marks on the small-long brooches form a simple equivalent to the elaborate chip-carved decoration of the great square-headed brooches: perforations and grooves in the headplate edges mirror those in the great square-headed brooches, three grooves on the bow compare with three ridges, a vertical row of punch marks on the foot compare with a medial ridge, and five lobes on the foot compare with three lobes and two projecting animal heads. Numerous other great square-headed brooches provide examples of the individual features mentioned above. Hines dates the great square-headed brooches to the sixth century (Hines 1984, 197), although Speake has suggested that they continue into the seventh (Speake 1986, 204). The Little Chester small-long brooches, therefore, also presumably belong to the same period, the sixth to early seventh century.

Annular brooches (8.5, 8.9, 7.1, 7.4, 15.1, 15.3, 11.12)

Annular brooches are the most common type of brooch found in 'Anglian' England. They are not, however, closely dated, belonging broadly to the late fifth to early seventh centuries (Hines 1984, 260, 262–3).

Wrist clasps (2.1, 8.3, 8.10, 7.2, 15.4, 15.6, 11.3, 11.5, 11.11)

Wrist clasps have recently been comprehensively classified by Hines (Hines 1984, 35–109); although his study did not include the Little Chester clasps, they occur as follows.

Type B7, with rectangular plates often bearing punched and repoussé decoration (clasps 8.3 and 10, 15.4 and 6, 11.3, 5 and 11). Type B13a, identical to B7, except that the decoration incorporates a bar attached longitudinally to each plate (clasp 2.1). Most examples of both types of clasp are dated to the sixth century, but the types may have been introduced in the late fifth.

Type C, with elaborate cast zoomorphic ornament (clasp 7.2). Hines 1984 has supplied an extensive note on the clasp, of which the following is a paraphrase. This wrist clasp belongs to the quite rare Class C of Anglo-Scandinavian clasps of the third to sixth centuries, ornate cast clasps showing no sign of the simpler elements (wire, plate, bar, etc.) of which classes A and B are constructed. A likeness and probable relationship between this clasp and a single piece from Empingham I, Leicestershire, grave 1 (Clough *et al.* 1975, plate 7c) allows both examples to be grouped together as form C4. The Empingham clasp is an exceptionally fine artefact in parcel-gilt cast silver, with niello inlay. Possibly made *en suite* with an accompanying square-headed brooch, form and manufacturing techniques suggest that both clasp and brooch may have been manufactured in Southern Scandinavia. The Little Chester clasp is simpler in form and less expensive in material than that from Empingham, but retains the three outward-facing animal masks around a rectangular panel, and profile heads in the angles between these masks. The clasps may be regarded as a later and cheaper copy of the Empingham model, which can be dated to the very beginning of the sixth century, as can the accompanying brooch. The Little Chester clasp is likely to have been made in the first half of the sixth century, but was probably buried somewhat later, being apparently accompanied by a second much cheaper sheet copper alloy clasp on the other wrist.

Silver rings (11.6, 11.14)

The woman in Grave 11 wore two rings, the larger (no. 6) on the left hand, the smaller (no. 14) either in the right ear, or perhaps as part of the necklace of amber and crystal beads found on the chest. The rings are similarly decorated and form a matching pair.

Parallels from several sixth century female burials can be cited: Broughton Lodge, Nottinghamshire, graves 8, 35, 56 and 58 (Kinsley forthcoming), Holywell Row, Suffolk, grave 11 (Lethbridge 1931, 4–9); Morning Thorpe, Graves 342 and 396 (Green *et al.* 1987, Vol. I, 132 and 154–5); and Spong Hill, Norfolk, inhumation grave 38 (Hills *et al.* 1984, 87–90)

Amber beads (1.4, 8.1, 8.8, 7.8, 15.5, 11.7 and 11.10)

At Dover, amber beads occurred in graves spanning the period 475–625, but their period of greatest popularity was the sixth century (Evison 1987, 60, 67). A sixth century date is

compatible with the remaining material from all the graves containing amber beads at Little Chester.

Glass and rock crystal beads by M. Guido and S. Hirst (1.4, 8.1, 7.8, 5.1, 11.9)
(in Table 11 the italic numbers in the first column refer to (colour) domains as defined in the table)

Thirteen glass beads (and one rock crystal bead) from five graves were examined in 1988 by the late Margaret Guido. For publication Sue Hirst provided the following note, taking into account data in Guido's posthumous book (1999).

The presence of a distinctive type of opaque red bead, with green and yellow roughly twisted decorative band in Grave 1 suggests a date in the later fifth or first half of the sixth century for this grave. This bun-shaped example (Guido 1999, type 8xviiib), of the type now often called 'traffic light' beads and thought to have been made in East Anglia where they are most common, was found with an opaque blue white annular bead with blue low-crossing swags and spots (Guido 1999, type 3iiib), of a similar date range (see Penn in prep.).

Graves 7 and 8 contained, respectively, three and two examples of cylinder beads in opaque pale green, with dark green and yellow roughly twisted decorative bands similar to that on the red bead from Grave 1, but applied in a spiral. These may be variants on the commoner red cylindrical examples of this type of bead (Guido 1999, type 8xixa), possibly also made in East Anglia in the late fifth to first half of the sixth century. However, the other similar examples quoted by Guido among her type 5ix beads are both from sixth century graves at Linton Heath B (Cambs) and Little Wilbraham (Cambs). The beads may be related to the much more carefully made green beads with twisted green and yellow centre bands arranged in a chevron from a late sixth century grave at Sewerby (Yorks), dated by metalwork, with parallels from Driffield (Yorks) and Sleaford (Lincs) (Sewerby bead type C7b in Hirst 1985, 68). These associations may suggest a sixth century date for Graves 7 and 8 and the accompanying beads in Grave 8 could also be of this date.

The two glass beads from Grave 5 suggest a later date for this grave. The opaque red barrel bead with narrow crossing double swags in opaque yellow is a type very popular in the later sixth or early seventh century (Brugmann 1997). The accompanying shiny opaque greenish yellow short cylinder bead is also of a type common in bead strings of the late sixth/early seventh century (Hawkes 1973, 193).

Guido noted that the bun-shaped crystal bead from Grave 11 can be paralleled from a number of sites of fifth to sixth century date. Such beads appear to have overlapped with, but generally perhaps pre-dated, the more carefully made large crystal beads with many facets.

Analysis of Beads by L. Biek

All the beads were analysed by Julian Henderson (see 1982 for details of quantitative XRF method). Peter Kay, then at the International Tin Research Institute, sampled yellow domains (28, 33, 39, 43, 47) on five of the beads and recorded their X-ray diffraction (XRD) powder photographs: they were remarkably similar and the pattern corresponds to that published by Rooksby (1964) for the lead tin yellow prepared by

him: cubic $PbSnO_3(+Si)$. All the beads were examined by Justine Bayley and Leo Biek at the Ancient Monuments Laboratory under a low power microscope (up to *circa* x40).

The detailed results appear in Table 11 which is laid out for ease of comparison according to the format used previously (Biek *et al.* 1985) and should be read with the accompanying Notes and Key.

The potential value of beads, both for providing cultural and technological information is now widely recognised, following the pioneering work of Guido (1985), Hirst (2000), Brugmann (1997) and others (see e.g. Henderson 1999). Even for the present small group it has been possible to make a fine distinction between the contents of Grave 5 and the others. To some extent this may be reflected in the analytical results, although there are not enough to allow a more definite comment; they do, however, confirm the use of the lead tin yellow characteristic of Central Europe (Biek 1983) — here seemingly with some more 'parochial' East Anglian typological overtones.

Histograms are the most effective way of demonstrating similarities and distinctions at a glance (Tables 12–13). A telling selection shows domains 19 and 21 (refer to Table 11) to be identical, and also their strong family connections with the other yellows. The dark green 48 may be compared to the 'dark turquoise' described for Sewerby (Hirst 1985). Conversely, similar compositions of colourants (e.g. 14 and 15, 18 and 27) give different colours under different melting conditions (e.g. Bayley 1999).

Thanks are due to Michael Edwards for assistance with the histograms.

Pin (1.3)

The location of this pin at the back of the head suggests that it was used for securing piled-up hair or some kind of headgear. No exact parallel to the form has been found. However it does bear some resemblance to those of the 'Klapperschmuck' type: long pins with grooved and bossed shanks, and decorative sheet metal tags attached by a ring at the head. They are occasionally found in Germanic graves of north-east France and Belgium, dating from the late fourth century until at least the later fifth (Böhme 1974, 36–7, 39). English examples, with triangular tags, are known from Leagrave, Bedfordshire, Brighthampton, Oxfordshire, Searby, Lincolnshire, and Canterbury, Kent (Smith and Read 1906, 59–61). A pin from the fifth or early sixth century grave 229 at Mitcham, Surrey, was fitted with rings and no tags, although the latter may have been lost before burial (Bidder and Morris 1959, 75, 110 and pl. XV; Dickinson 1979, 44). The Continental pins were found on the head, but in England they are usually found on the chest, presumably acting as dress-fasteners.

Iron buckles (4.2, 13.1, 11, 13)

Small buckles without plates occur in numerous sixth-century contexts, for example Spong Hill graves 22 and 46 (Hills *et al.* 1984, 69–70, 100–102), and Morning Thorpe graves 106, 112, 242, 299, 303, 304, 312, 342 and 410 (Green *et al.* 1987, 64–5, 66–7, 103–4, 117–8, 119–120, 121–2, 132–3 and 158–9).

Ivory ring (11.2)

Ivory rings are commonly associated with women's burials of the fifth to seventh centuries (Myres and Green 1973, 100–3). As at Little Chester they were generally worn at the waist, and Green suggests that they formed a stiffener to the mouth of a long bag,

Scientific examination Julian Henderson, Justine Bayley, Peter Kay and Leo Biek 5.3.01

< APPEARANCE >

< COLOUR* >

< Close and microscopical examination* >

dom. no	ref.numbers & domain*	free description	illumination: reflected	illumination: transmitted	surface*: detailed condition	surface*: relative stale	interior: bubbles* drag	interior: pigments*	hole*: regular*	hole*: uniform*	hole*: lining*	hole*: chamfer	hole*: smooth ends	mode of shaping
	Grave AM 7761- GI													
	1 87 6													
11	matrix	(bluish) white	1/2op greyish white, blue tinge	colourless	S on flat>R+P on Q	vG > p	+++++		1/8x	+	+	+ t	+	q
12	decoration	(dark) blue	med-dk Co blue	(med Co blue)			(++++)							T h?r n
13	88 7													
14	matrix	terracotta	op pinkish red op black frs	stratified op red in clear	flat 1/8 R +S $	G		many angular coarse totally op black flakes	x	x	+	+ t n	x	q n
15	cable 1	op lemon yellow	typical strong op yellow	vf+few coarse partls in clear	R+S $ on Q	p								&+16 T r?h
16	cable 2	mid-green	medium green	(pale green, but v mixed: & +15 :)	P but vS in clean $ where clear of 15	F	(++?: i from P)							&+15 T r?h
17	5 89 27													
18	matrix	terracotta	op strong red	stratified op red in clear	vS	vG			+	+	+	x	+	@
19	waves	op lemon yellow	op pale yellow	partls in clear	vS	vG								T h
20	90 28													
21	monochrome	op lemon yellow	med op yellow	partls in clear	vS	vG	++		x	x	+	x	+	q
22	8 91Aa 38													
23	monochrome	(op)mid-green	1/2op medium to pale green	v pale green 1/8 clouded by bubbles--->	matt+many S $	F	vf ++	v few op yellow partls but enough to be noted	x	+	+	x	+	q
24	91Ab 38													
25	as Aa above								x	+	+	x	+t	q
26	91Ba 38													
27	matrix	(op)mid-green	1/2op medium-pale green*	v pale green 1/8 clouded by bubbles--->	matt+many S $	F	vf ++		x	+	+	x	+	q
28	cable 1	op yellow	typical strong op yellow	vf+few coarse partls in clear	S +rare large P	G	(i:+)	sparse small op red-brown thin $ on surface						&+29 T r?h
29	cable 2	dark green	medium green	pale green	S+many fP	G	vf ++							&+28 T r?h
30	91Bb 38													
31	as Ba above													q
32	91C 38													
33	matrix	pale op yellow	op yellow	partls in clear	S	vG			x	+	+	x	+	q
34	decoration	pale pinkish	diffuse op red mixed+buff (on surface)	op red domains (cf 18 above) +buff (38,46 below)	matt=small S $ in R buff	G								T h?r n
35	91D 38													
36	monochrome	dk grey-blue	1/2 op fibrous blue+white	pale blue +colourless clouded by -> bubbles	RP c	p	+++ :++__		x	+	+	x	+ 1	B
37	7 92A 43													
38	matrix	(op)mid-green	1/2op medium to pale green +grey $='buff'	v pale green 1/8 clouded by bubbles --->	matt+many scaly S $	p	vf (+++)		x	+	+	x	+	q
39	cable 1	op yellow	typical strong op yellow	vf+few coarse partls in clear	S+rare large P	G	(i:+)							&+40 T r?h
40	cable 2	dark green	medium green	pale green	S+many fP	G	vf ++							&+39 T r?h
41	92B 43													
42	matrix	(op)mid-green	1/2op medium to pale green	v pale green 1/8 clouded by bubbles --->	matt +many S $	G	vf +++		x	+	+	+	+	q
43	cable 1	op yellow	typical strong op yellow	vf+few coarse partls in clear	matt ('dry') +rare large P	F	(i:+)	sparse small op red-brown thin $ on surface						&+44 T r?h
44	cable 2	dark green	medium green	pale green	S+many fP	G	vf ++							&+43 T r?h
45	92C 43													
46	matrix	buff	buff=grey $ all but hide 1/2 op medium to pale green	U	R=scaly $ cover	p	U		x	+	+	+	+	q
47	cable 1	op yellow	typical strong op yellow	vf+few coarse partls in clear	matt ('dry') +rare large P	F	(i:+)	sparse small op red-brown thin $ on surface						&+46 T r?h
48	cable 2	dark green	medium green	pale green	S+many fP	G	vf ++							&+47 T r?h
49	11 93 ST19 rock crystal	clear colourless	A	A fl	vS; l $ of / * X + other damage	vG			+					drilled mostly but not wholly from one side

<	COMPOSITION								>	INTERPRETATION		
<	Results of elemental analysis (%)								>			
Al	Fe	Mg	Ca	Na	K	Cu	Pb	Sn	Si	colorants	opacifiers	comment
6.70	1.60	0.62	4.70	0.57	0.45	nd	0.13	nd	84.95	none		v high Si, low Pb; fairly 'clean', high melting, v low Na
4.30	2.70	1.36	5.90	17.20	0.94	0.47	0.66	nd	66.20	Cu^2 (?Co*)		normal Na, lower melting
4.40	7.30	1.70	4.20	4.90	1.00	3.99	23.90	0.17	48.10	(Fe) Cu^1(=Cu_2O) Pb (Sn)		high Pb, low melting, high Cu, v high Fe, low Na; black =?CuO (?-lining*)
)3.10	1.00	0.50	4.16	17.80	1.00	4.17	20.53	0.19	47.34	[$PbSnO_3$(cubic,+Si)(*)]		)as *14* except
)										Cu^2+Pb		)normal Na,low Fe)(ie 'clean'))high Cu from green?
2.70	2.60	0.50	4.44	11.55	0.59	3.00	19.70	0.10	54.55	(Fe) Cu^1(=Cu_2O) Pb (Sn)		high Pb+Cu, med Na, typical'sealing-wax red'
1.90	0.50	1.00	3.60	7.00	0.42	0.03	53.55	0.50	31.20	[$PbSnO_3$(cubic,+Si)(*)]		v high Pb,low Fe+Cu (ie 'clean')
1.75	0.59	1.18	3.00	10.49	0.17	0.02	52.58	0.43	29.40	[$PbSnO_3$(cubic,+Si)(*)]		virtually = *19*

2.50	1.14	1.43	2.37	11.74	0.22	2.90	37.50	nd	39.90	Cu^2+Pb		high Pb+Cu, med Na
										(Cu^2+Pb)		(as *23*: by analogy)
3.60	1.10	1.40	4.75	13.60	1.10	1.91	19.40	nd	52.80	Cu^2+Pb		interestingly, virtually = *18* but here oxidised form
2.70	0.83	1.00	1.75	0.70	0.16	0.002	67.41	0.50	24.60	$PbSnO_3$(cubic,+Si)*		extremely high Pb, otherwise ~ *21, 19* except v low Na
										(Cu^2+Pb)		(as *40*: by analogy)
3.48	0.90	1.00	2.40	10.83	0.20	nd	45.63	0.20	34.86	$PbSnO_3$(cubic,+Si)*		high Pb, mainly~*19*
8.40	5.71	1.00	3.18	1.17	0.16	1.58	43.47	0.12	34.90	(Fe) Cu^1(=Cu_2O) Pb (Sn)		high Pb (Pb/Si of *34 = 33:cf14=15*) high Fe+Al, low Na; result of weathering?
3.10	3.72	0.50	7.40	0.79	0.47	0.64	2.42	0.20	80.45	(?Co*) Cu^2		v high Si (cf *11*), some Cu+Pb, low Na

3.56	1.10	1.38	4.30	14.90	0.95	1.78	22.40	nd	49.40	Cu^2+Pb		essentially ~ *27*
4.01	1.40	0.54	2.90	0.43	1.48	0.67	40.80	0.51	47.19	$PbSnO_3$(cubic,+Si)*		high Pb, some Cu, low Na<K
4.65	0.98	1.40	4.30	0.66	1.57	2.90	26.54	nd	56.70	Cu^2+Pb		med Pb, high Cu, low Na<K, no Sn
										(Cu^2+Pb)		)
										$PbSnO_3$(cubic,+Si)*		)(by analogy with) *38-40*) but lead tin)yellow also *detected*
										(Cu^2+Pb)		)
4.38	3.20	0.55	3.60	0.45	0.34	3.20	38.34	0.13	45.60	Cu^2+Pb		med-high Pb, high Cu, low Na; unlike compositions of similar matrices in group; ?corrosion
4.90	1.80	1.90	4.32	0.50	0.93	2.02	36.33	0.91	46.16	$PbSnO_3$(cubic,+Si)*		~ *39* but high Sn +unusually high Cu: contamination from *46* +/or *48*?
5.20	3.77	0.63	6.90	0.50	1.2	2.24	39.90	0.10	39.40	Cu^2+Pb		similar to *40* , again low Na<K
0.90	nd	nd	nd	nd	0.02	nd	nd	nd	98.86	none		quartz

Table 11: Little Chester: the glass and crystal beads, scientific examination, Graves 1, 5, 7, 8 and 11.

KEY TO TABLE 11

*	See NOTES	H	See Henderson 1982: XRF results as wt. % of oxides	r	Rolled
+	Present			S	Smooth
x	Absent			!!	Transparent
~	Similar to	h	Marvered (in)	/	Cut
m	Lengthwise	I	Interface(s)	"	Scratches
A	As free description	i	Inferred from present state of surface	&	Twisted
B	Drawn tube			T	Trail
b	'Bottom'	n	Flattened	t	'Top'
c	Copper corrosion products	O	Rounded	U	Unsuitable
		1/8	Slight(ly)	v	Very
F	Fair	½	Semi-	X	Crack(s)
f	Fine (texture)	op.	Opaque	[ ]	Data less important/ certain
G	Good	P	Pit(ted;ting)		
@	Wound	p	Poor	( )	Data less specific
$	Area(s)	Q	Equator	〈	less than
∧	Nicked	q	Spiked (see Theophilus)	〉	more than
nd	Not detected	R	Rough		

NOTES TO TABLE 11

See Key above for symbols and abbreviations. The following provides definitions or explanations of terms used in the table.

Bubbles: + + + or more suggest deliberate (use of) bubble formation. (See Notes in Hirst 1985 for detailed comments.)

Close . . . examination: Where opacity partial or illusory, nature of (clear) matrix sometimes evident at fringe angles, or seen to shallow depth, as indicated, under 'reflected' light.

Colour: For general background see Biek & Bayley 1979, and Bayley 1999; for specific colours, Hirst 1985 and references in Notes therein.

Domain: The 'active' three-dimensional portion of glass responsible for a given local attribute, principally colour in the present context, as related to identified (or otherwise known) composition and visible decoration. The numbers in italics in the left hand column refer to such domains which can then be compared directly across the table.

Drag: Textural alignment/distortion of bubbles, indicating nature and direction of working.

Hole: 'Perforation' has been avoided as it cannot apply except to the crystal bead.

Interpretation: Attempt to deduce method of colouring and shaping from composition and marks of manufacture.

Lining: Non-vitreous dark layer -?picked up hot from iron rod (see Lundström 1976, 8).

Mode of shaping: Based in part on standard techniques kindly demonstrated by Paul Woods, Royal College of Art, and on Theophilus' recipe for rings (73–4).

Pigments: Coloured particles present unintentionally?

Regular: + = transverse section regular; × = transverse section irregular.

Surface: Effect of condition on observation.

Uniform: + = longitudinal cross-section constant; × = longitudinal section changes smoothly.

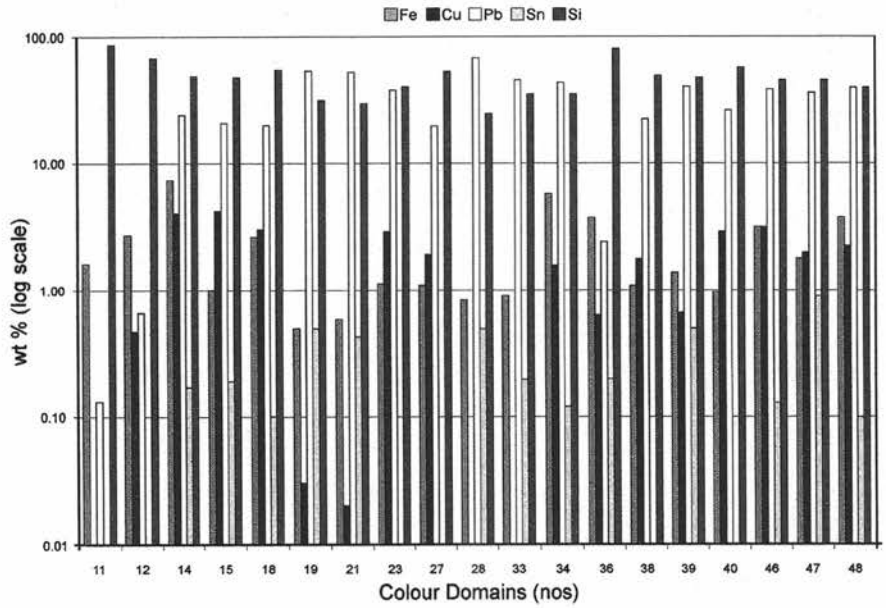

Table 12: Little Chester: the glass beads, colour domains.

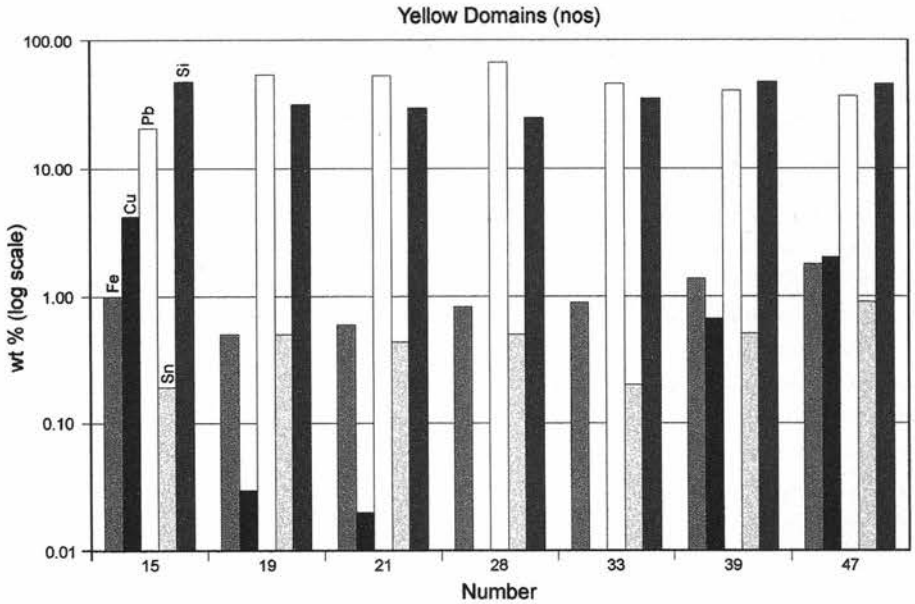

Table 13: Little Chester: the glass beads, yellow domains.

often accompanied by girdle-hangers or other parts of a chatelaine. A spot of iron staining on the Little Chester ring indicates the presence of a small iron object now completely perished.

Copper alloy bowl (11.11)

Bowls of this type, with bossed rim and footring, have been studied by Kennett (1969, 140–2). These 'bead-rim bowls' are found most commonly in Merovingian and Anglo-Saxon graves; although a high-footed version is known from continental late Roman sites, the type continues in a variety of forms into the late sixth century.

Evison lists seventeen sites where bowls of this type have been found, from the East Midlands and East Anglia, London (Surrey), Kent and Sussex (Evison 1987, 269 and fig. 116). To this can be added the Little Chester bowl, and another from Empingham, Leicestershire (Rutland), now in Nottingham University Museum (accession no. EMP 70B55). The two listed from Broughton Lodge, Nottinghamshire, come from graves 5 and 73 (Kinsley forthcoming). Most are closely comparable to the Little Chester bowl, and foot rings were found with some. A bowl from the Dover cemetery came from grave 20, dated by Evison to the 'very end of phase 1' (475–525) (Evison 1987, 137), and therefore belongs just within the sixth century. Four in Kennett's list were found in rich female graves, dated by him from the mid sixth to early seventh centuries. The missing footring and possible mend on the Little Chester bowl suggest some age at burial. Kennett notes that more than one type is present amongst the Anglo-Saxon bowls, and that this might imply an insular development, or be a reflection of the wide variety that must exist in the hundred or more continental examples. It is tempting to see the relatively few insular finds, in comparison with the large number of continental examples, as imports, and clearly closer comparison between the two groups of material would be profitable.

Spearhead (4.7)

With angled, concave-sided blade, with overall length of 375mm, this spearhead belongs to Swanton's class H3 (Swanton 1973, 111–114). It is one of the most common types of spear, is found extensively throughout the areas of early Anglo-Saxon settlement, and is dated to the later fifth and sixth centuries.

Shields (3.1–4, 4.1, 3 and 6)

Both the shields were fitted with sharply-carinated bosses riveted to the board, iron grips, and studs fixed through the shield board. The function of the studs is not known, but the layout of the two shields may be compared, with one rivet placed near the left edge (as viewed from the front), and one, or two, placed close to the flange of the boss, on a slightly different axis. Mineral-preserved wood on the studs and boss from Grave 3 have enabled Jacqui Watson to deduce that the shield was probably made from flat-sawn birch planks, 10.7mm thick adjacent to the boss. No evidence for joins was found, but as birch trees do not produce wide timber, probably two or three planks were used, perhaps joined by tenons or using a tongue-and-groove technique. The board was apparently covered with leather before the metal fittings were applied. The grip had a wooden component, but its form is unclear. The evidence from Grave 4 suggests that the shield was made from Ash boards with a tangential surface at least 13.8mm thick around stud 4. In the same grave, Z-spun threads adhered to the knife 5(i), probably to the blade, and further traces of textile (Z,Z, 2/2 twill, i.e. clockwise-spun, the weft passing under, then over, two warp threads) adhered to the blade of the spear 7.

The shield-boss in Grave 3 has many of the characteristics of Dickinson's Group 4, defined as a tall narrow boss with spike apex, four flange rivets and a short flat grip,

though the flange and grip are incomplete. The date range for the group is fifth to at least mid sixth century (Dickinson and Härke 1992, 17–19). The shield-boss in Grave 4 most closely resembles Dickinson's Group 3 (sixth to seventh centuries; Dickinson and Härke 1992, 14–17) with convex cone, small apex and five flange rivets, but differs in having convex walls.

Fragmentary fittings from vessel (4.4)

These came from the rim of a vessel made from some perishable material, and are not closely dateable.

Jewellery and dress (interpretations of mineral-preserved organic materials by Jacqui Watson)

The women buried with jewellery in the Little Chester cemetery conformed to the familiar fashions of the traditional 'Anglian' regions. Brooches were worn singly or in pairs at the neck, often accompanied by necklaces of glass, amber and crystal beads, and decorated clasps on the wrists. These arrangements have been taken to indicate the wearing of a tubular untailored garment gathered at the shoulders, with a sleeved undergarment (Owen-Crocker 1986, 28–43 and fig. 30). Wrist clasp 4 from Grave 15 had a 15x8mm area of mineral-preserved textile indicating 2/2 twill (i.e. the weft passed under, then over, two warp threads), probably indicating the nature of the undergarment. The occupants of Graves 7 and 11 had items suspended from a belt or girdle at the waist. Mineral-preserved organic remains in Graves 1, 7, 8 and 11 indicate the presence of Z-spun (i.e. clockwise) threads of textile around the upper body, while in Grave 11 traces of fabric by the knees may indicate long garments, with possibly a belt fitting by the waist.

The amber bead found by the right thigh in Grave 11, and the parts of clasps found with the bowl in the same grave, and on the right side of the head in Grave 7, were not in the expected positions, and may have become detached during burial, or have been moved by subsequent small-scale disturbance, such as that caused by burrowing animals.

There is little evidence for male attire, other than belts. Linguistic evidence and archaeological evidence from the Continent suggest the wearing of short cloaks, sleeved tunics with shirts beneath, and trousers (Owen-Crocker 1986, 65–84). Male graves, when furnished with grave goods, are principally characterised by the presence of weapons.

Discussion

The cemetery plan

The most southerly grave, Grave 1, lay in Site A; no human bone or disturbed grave-goods were found in a large area east and south of this grave, although much of the area had suffered scouring of the late Roman levels and burials could have been removed. The grave lay about 40m south-west of the main group of graves in Site B, close to the south-east corner of the fortified area. Immediately to the north, a strip around 10m wide, up to the limits of excavation, was not so disturbed, yet free of burials: the grave may therefore genuinely have been isolated from the others in the cemetery. However, the north-east half of the grave had been completely eroded and other burials immediately to the north could have been completely destroyed in this way. At first sight, the main group of burials in Area B (2–17, A–E) forms two groups, one to the north-east comprising Graves 11–17, and a second comprising Graves 2–9 and A–E. However, the

apparent gap between the groups was disturbed, and although Grave 4 was cut through the surviving metalled surface, the burial closest to the gap, E, was highly disturbed, indicating that later disturbance had greatly damaged at least one grave in this area, and could have completely removed evidence of others. The gap between the two areas may therefore be more apparent than real. The extent of the cemetery to the east, west and north of Area B is unknown. To the west the fort wall is perhaps likely to have formed a boundary to burial, but Ditch 3, shown by finds from the silting to have remained a major obstacle into the Late Anglo-Saxon period (1.5m deep and 6 to 8m wide), and Ryknield Street both lay between Grave 1 and the other graves of the cemetery.

The seventeen partly-preserved burials within the excavated area are too small a sample to reveal spatial trends in the distribution of attributes of the burials, such as orientation, age, sex and wealth. The density of burials, at 2–3m separation may be compared with that at other Anglo-Saxon cemeteries such as Broughton Lodge, Nottinghamshire (Kinsley 1993, fig. 105).

Despite these limitations, there is one apparent row of graves (14–16), orientated perpendicular to Old Chester Road, suggesting some form of internal organisation of the cemetery, but orientations range from head SSW (Grave 4) to NW (Grave 11). This may be compared with the relatively well-ordered layout of many Anglo-Saxon inhumation cemeteries (e.g. Broughton Lodge, Nottinghamshire; Kinsley 1993, fig. 105), although the significance of this is unclear.

The period of use of the cemetery

The maximum likely date range of the dateable artefacts in the graves covers the period late fifth to early seventh century, but no artefacts have a sufficiently restricted range to permit the closer dating of individual graves. This must indicate the date range of the excavated graves, but not necessarily, of course, the full date range of the entire cemetery, some of which must lie beyond the excavated area.

The stratigraphic and spatial relations between the graves and the late Roman buildings and associated features suggest that the latter had been abandoned before the graves were dug: Graves 2 and 3 were cut into the metalled surface of Ryknield Street beside Well 1, Grave 3 lying between the well and the adjacent building to the east, while Graves 4–8 and 10 lay within the colonnaded building, 4, 5, 7 and 10 interrupting its wall-lines. Grave 9 overlay the collapsed Well 2. Human bone was also found in the upper fill of pit 334. Grave 6 cut a rubble foundation. Graves 11–17 overlay or cut into the clay floors of the buildings in the north-east corner of Area B, although none cut any detectable wall-line.

It seems likely that the cemetery was no longer used for burial by the time the structures of Period 7 were erected. The post-holes do not form patterns that can be convincingly related to graves, and from this period, a gully (38) cut Grave 1 in Area A, and one post-hole (433) cut Grave 12(408). Evidence for the date of this phase is discussed below.

The position of the burial in Grave 15

Prone burials, normally of females, and frequently in contorted positions, are occasionally found in early Anglo-Saxon cemeteries. Some examples have been found placed in graves above other burials laid out in a more normal position, and it has been suggested

that the contorted prone burials were buried alive in the grave as a sacrifice, or as punishment for some crime such as witchcraft: European documentary sources show that until well into the medieval period death by live burial was a punishment reserved especially for women (Hirst 1985, 38–43). Other prone burials in individual graves, such as that at Little Chester, have none of the apparent violence of the contorted type. Grave 78 at Kingsworthy, Hampshire, contained a young girl of sixteen years laid out in a body position closely resembling that of Grave 15 from Little Chester. The skeleton bore evidence of partly-healed injuries said to have resulted from rape (Hawkes and Wells 1975, 118–122), and Hawkes and Wells suggest that the prone position might indicate that the girl was killed as a punishment for submitting to the rape. Unfortunately evidence from late Saxon texts cited indicate only compensation rather than punishment for the victims of rape, or for their owners, in the case of slaves. The significance of a prone burial with no clear evidence of struggle such as that from Little Chester is uncertain, and many interpretations may be suggested, but it may at least be observed that a person tightly bound might be buried alive and face down, and leave no signs of struggle before suffocating.

An anomalous burial

It should be noted that the brooches and beads in Grave 1 conflict with the possible male attributes of the skeleton. This apparent conflict may be attributed to the imperfect preservation of the skeleton, and the burial may confidently be identified as female.

The relationship of the cemetery to the Romano-British settlement

Within the excavated area, the buildings of the vicus had clearly fallen into disuse before the graves were dug. Ryknield Street appears also to have at least declined in use, as Grave 2 was dug through its surface, well out from the edge of the road. The disuse of the buildings adjacent to the central point of the Little Chester road network strongly implies that the vicus had declined or been abandoned by the sixth century when the cemetery came into use. The choice of this central location may have been mere coincidence, but it is possible that the cemetery represents a late outermost phase of a late or sub-Roman roadside cemetery. Its location outside the principal gate of the fortified area perhaps indicates that occupation may have continued within its walls into the sixth century.

Although evidence for activity in the late Anglo-Saxon period has been found within the fort (see below, and Langley, forthcoming), the focus of late Saxon settlement was probably around the church of St. Alkmund, in existence by *c.* 800, in what became the medieval and modern town centre of Derby (Hall 1974, 20–23). Five human burials without grave-goods were discovered in 1926 on the west side of the fortified area within the walls (Clews 1927). Comprising three men, one woman and a child of six, the burials were neatly laid out with heads to the west; although pronounced post-Roman at the time of discovery, no evidence of date was given. The location within the defences implies a post-Roman date, and the lack of grave-goods favours a mid or late Anglo-Saxon date, or later. The cemetery is presumably related to the occupation within the walled area described below.

Grave no.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*
Excavation context	*15*	*208*	*203*	*328*	*320*	*313*	*309*	*304*	*307*	*228*	*419*	*408*	*406*	*407*	*409*	*415*	*423*
sex of skeleton	*?M*	*F*	*M*	*M*	*?*	*F*	*?*	*F*	*?*	*M*	*F*	*?*	*?*	*M*	*F*	*?*	*?*
sex of grave-goods	*F*	*F*	*M*	*M*	*F*	*F*	*F*	*F*	*–*	*–*	*F*	*–*	*?*	*–*	*F*	*–*	*–*
age of skeleton	*+40*	*20–25*	*20–25*	*35–40*	*25–30*	*+40*	*40–45*	*20–25*	*c.4*	*20–25*	*20–25*	*?*	*9–12*	*30–35*	*25–30*	*20–25*	*?*
orientation	*210*	*295*	*300*	*215*	*?*	*215*	*265*	*255*	*c.260*	*275*	*325*	*?*	*?*	*280*	*270*	*?*	*?*
brooch	*x*	–	–	–	–	–	*x*	*x*	–	–	*x*	–	–	–	*x*	–	–
pin	*x*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
amber bead	*x*	–	–	–	–	–	*x*	*x*	–	–	*x*	–	–	–	*x*	–	–
glass bead	*x*	–	–	–	*x*	–	*x*	*x*	–	–	–	–	–	–	–	–	–
crystal bead	–	–	–	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–
pendant	–	–	–	–	–	–	–	*x*	–	–	*x*	–	–	–	–	–	–
wrist clasp	–	*?*	–	–	–	–	*x*	*x*	–	–	*x*	–	–	–	*x*	–	–
silver ring	–	–	–	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–
iron ring	–	–	–	–	–	–	*x*	–	–	–	–	–	–	–	–	–	–
ivory ring	–	–	–	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–
iron buckle	–	–	–	*x*	–	–	*x*	–	–	–	*?*	–	*x*	–	–	–	–
knife	–	*?*	–	*x*	–	–	*x*	–	–	–	–	–	–	–	–	–	–
spear	–	–	–	*x*	–	–	–	–	–	–	–	–	–	–	–	–	–
shield	–	–	*x*	*x*	–	–	–	–	–	–	–	–	–	–	–	–	–
copper alloy bowl	–	–	–	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–
rim fittings	–	–	–	*x*	–	–	–	–	–	–	–	–	–	–	–	–	–
iron fitting	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*x*	–	–
copper alloy fragments	*x*	–	–	–	–	–	*x*	*x*	–	–	*x*	–	–	–	–	–	–
iron fragment	–	–	–	–	–	–	*x*	–	–	–	*x*	–	–	–	–	–	–
copper alloy object	–	–	–	–	–	–	–	*x*	–	–	*x*	–	–	–	–	–	–
iron object	–	–	*x*	*x*	–	–	–	*x*	–	–	*x*	–	–	–	–	–	–
copper alloy rivet	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–	–	–	–
iron nail	–	–	–	–	–	–	–	–	–	–	*x*	–	–	–	–	–	–
glass fragment	–	–	–	–	–	–	–	–	–	–	*o*	–	–	–	–	–	–
coin	*o*	–	–	–	–	–	–	*o*	–	–	–	–	–	–	–	–	–

? *indicates uncertain identification*
o *indicates not certainly intentionally placed in grave*

Table 14: Little Chester: concordance of graves and grave-goods.