Microfiche Section

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Excavations at Towcester, Northamptonshire: The Alchester road surburb

A E Brown and Charmian Woodfield

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Excavations of a Saxon site in St James' Square, Northampton 1981

J H Williams and D Farwell

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LAYER LIST

In this list the run of context numbers established during the excavations of 1974-76 have been retained and fresh context numbers allocated to features identified in 1967 and 1977, continuing the run fixed in the 1974-76 series. The original designations given by the excavators in 1967 and 1977 have been added in brackets prefixed by the year of the excavation.

PHASE 1

1. Fills, Alchester road side ditches

i) Eastern side

9 (Area 3)
84 (1, 3) (Trench 4)
91 (Trench 6)
95 (2, 3, 4, 5) (Trench 5)
120 (2, 3) (Trench 1)

ii) Western side

123 (2) (Trench 1)
124 (1, 2, 3) (Trench 4)
174 (Area 2)
176 (2, 3) (Area 1)
282 (3) (1977, 100X)

2. Additional side ditch, western side Alchester road

117 (2, 3) (Area 2)
355 (Trench 1)

3. Land drains and ditches

135 (Trench 7)
142, 145, 151, 152, 157 (1β), 159 (2), 161 (3), 162 (Area 1)
186 (1977, 4)
194 (1977, 12)
287-8(2) (1977, 105-6)
298 (1977, 116)
299 (2) (1977, 117)
357 (Area 1)

4. Structures

165, 204 (Building 1/2; 1977, 22)
191 (Building 1/3; 1977, 9)

PHASE 2

1. Upper part of fill, Alchester road side ditches

i) Eastern side

4, 10 (Area 3)
79 (Area 3)
95 (1, 3) (Trench 5)
99 lower (Trench 19)
120 (1) (Trench 1)

ii) Western side

98 (Trench 19)
112 (Area 4)
113 (1) Trench 18)
123 (1) (Trench 1)
176 (1)(Area 1)
282 (2) (1977, 100)
320 (Trench 22; 1967, Trench 6, Cutting 8, Feature 15)
327 (Area 5; 1967, Area 3, Cutting 7, Feature 22)

2. Upper part of fill, additional side ditch, western side Alchester road.

117 (1) (Area 2)

3. Ditches, east of Alchester road.

i) Rearward plot boundary

101 (Trench 6)
301 (Trench 23; 1967 Trench 5, Cutting 2, Feature 2)

ii) Plot side boundary

35, 67 (Area 3)

4. Ditches, west of Alchester road

i) Rearward plot boundaries

109 (Trench 3)
178 (Trench 8)
183 (2, 3)(1977, 2)
195 (1977, 13)
312 (Trench 21 1967 Trench 7, Cutting 3, Feature 20)

ii) Plot side boundaries

134 (Trench 7, Plot 2/2)
152 (Area 1, Plot 2/1)
188 (2) (Plot 2/4: 1977, 6c)
193 (Plot 2/5: 1977, 11)
198 (Plot 2/5: 1977, 16)
287-8(1) (Plot 2/6: 1977, 105-6)
297 (1977, 115: same as 134)
302 (Plot 2/7: 1967 Trench 5, Cutting 3, Feature 3)
317 (Plot 2/7: 1967 Trench 7, Feature 4)
321 (Plot 2/7: 1967 Trench 7, Cutting 6, Feature 19)
351 (Plot 2/3)

5. Structures and other features

i) Plot 2/1, 169, 169(2), 181, 182(2, 3) (stone floor, Building 2/1, Area 1)

ii) Plot 2/2, 299(1) (ditch; 1977, 117)

iii) Plot 2/3, 189(1), 291(1) (Building 2/3 and industrial floor: 1977, 7a and 109a and b)
186(2), 208(2) (industrial layer, 1977, 4b, 26)
128, 137, 138, 139 (Area 4: pit)
211 (postholes: 1977, 29)

iv) Plot 2/4, 203(1) (Building 2/4: 1977, 21a)

v) Plot 2/5, 184 (Building 2/5: 1977, 2)
199 (Building 2/6: 1977, 17)

vi) Plot 2/7 329 (Building 2/7, Area 5; 1967 Area 3, Cutting 7, Feature 2)
330, 336, 338 (? Building 2/7, Area 5; 1967 Area 3, Cutting 7, Feature 3).
331 (? Building 2/7, Area 5; 1967 Area 3, south of Cutting 7, Feature 3, on clay).
333 (? Building 2/7, Area 5; 1967, Area 3, Cutting 7, Feature 4)
334 (? Building 2/7, Area 5; 1967, Area 3, Cutting 7, Feature 5)

vii) Plot 2/8 45, 47, 48, 52 (postholes, Building 2/8, Area 3)
43 (pit, Area 3)

viii) Building 2/10, (Trench 25), 344 (1967, Area 5, Cutting 8, Feature 2)
345 (1967, Area 5, Cutting 9, Feature 3)
348 (1967, Area 5, Cutting 9)
342 (pit: 1967, Trench 20, Feature 18).

PHASE 3

1. Side ditches, Fleet Marston road

i) East side 74 (Trench 14)
115 (Trench 16)
121 (Trench 13)

ii) West side 78/116 (Trench 16)
119, 125-6 (Trench 17)
356 (Trench 14)

2. Ditches laid off Fleet Marston road, East side.

70, 71 (Trench 16)
72, 73 (Trench 15)

3. New side ditches, and reconstruction, Alchester road.

i) Eastern side
13 (area of reduced Alchester road, Area 3)
49 (area of reduced Alchester road, Area 3)

63 (area of reduced Alchester road, Area 3)
77 (area of reduced Alchester road, Area 3)
82 (area of reduced Alchester road, Area 3)
85 (area of reduced Alchester road, Area 3)
99 upper (Trench 19)
57 (4, 5)(make up Alchester road, Area 3)
127 (area of reduced Alchester road, Area 3)
140 (2) (area of reduced Alchester road, Area 3)
352 (Trench 1)

ii) Western side

68 (2, 3) (area of reduced Alchester road, Area 3)
87 (Area 4)
89 (Area 3)
113 (2)(Trench 18)
118 (Trench 1)
132 (3) (Area 4)
187 (1977,(5)
282 (1) (1977, 100 Y)

4. Other features

183 (1) (1977, 1)
203 (2)(limestone metalling west of Alchester road, 1977, 21b)
294 (pit; 1977, 112)

PHASE 4(a) * indicates features extending in use into Phase 4(b)

1. Recutting, side ditches, Alchester road

i) Eastern side

349 (Area 3)

ii) Western side

68(1) (Area 3)
81 (Area 4)
88 (Area 3)
113(3) (Trench 18)
132(2) (Area 4)

2. Additions to/replacement of surfacing, Alchester road

57(2, 3) (Area 3)
60 (Area 3)
206 (1977, 24)

3. Ditches, east of Alchester road.

Rearward plot boundaries

36 (Area 3)
92 (Trench 6)*
93/102 (Trench 5)
94 (Trench 4)
97 (Trench 3)
346/7 (Trench 25: 1967, Area 5, Cutting 9, Feature 4)
16 (Area 3)
53 (Area 3)

4. Ditches, west of Alchester road.

i) Rearward plot boundaries

107* (Trench 9)
167* and 168 (Area 1)
192 (1977, 10)
201 (1977, 19)
319 (Trench 23; 1967, Trench 7, Cutting 6, Feature 13)

ii) Plot side ditches

90, 104* (Area 4, Plot 4/3)
108 (Plot 4/2, Trench 9)
185 (Plot 4/4: 1977 (3))
200 (Plot 4/2: 1977, 18)
205 (Plot 4/6: 1977, 23)
283-5 (Plot 4/6: 1977, 101-3)
(302 (Plot 4/7: 1967, Trench 5, Cutting 3, Feature 3)
(321 (Plot 4/7: 1967, Trench 5, Cutting 6, Feature 19)

5. Ditch, South of Fleet Marston road

11 (3, 4) (Area 3)
122 (Trench 12)

6. Structures and other features

i) Plot 4/1

160 (Building 4/6a, Area 1)
143, 154 (1, 2), 155, 157 (2), 161 (1, 2)
163 (2) (Building 4/6b, Area 1)

ii) Plot 4/2

189 (2) (Building 4/1a: 1977, 7e)

iii) Plot 4/3

61, 105(4) (gully, Building 4/2a, Area 4)
105(2) (material dug out to form circular gully, Building 4/2a, Area 4)
129(2) (causeway across Alchester roadside ditch, Area 3)

iv) Plot 4/4

202 (ditch: 1977,20)

v) Plot 4/8 (all in Area 3)

17, 23 (drainage ditch N side of Building 4/5)*
30 (floor, Building 4/5) *
59 (causeway across roadside ditch to Building 4/5) *
33, 39, 40, 41 (postholes inside Building 4/5)
29 (east entrance, Building 4/5) *
38 (1, 2) (culvert, Building 4/5)*
31 (2, 3), 34, (furnaces/hearths, Building 4/5)
32 (hollow inside Building 4/5) *
2(1), 3, 12, 18, 22 (yard outside Building 4/5) *
7(1), 7(2, 4), 24, 27 (N-S drainage ditch)

* extend in use into Phase 4(b).

141 (ditch, Building 4/7)

PHASE 4b

1. Recutting, side ditches, Alchester road

i) Eastern side

58 (Area 3)
80, 140(1) (Area 3)
300 (Trench 23: 1967, Trench 5, Cutting 1, Feature 1)

ii) Western side

65 (Area 3)
75/76 (Area 4)
86(Area 4)
111 (Trench 19)
113(4) (Trench 18)
132 (1) Area 4
350 (Area 3)

2. Rearward plot boundaries, west of Alchester road

144, 163 (Area 1)
110, 179, (Trenches 8 and 9)

3. Recutting/alterations, plot boundaries, west of Alchester road

114 (and 177) (plot 4/2: Trench 10 and Trench 8)
131 (Plot 4/1: Trench 7)
188 (Plot 4/5: 1977, 6b)
197 (Plot 4/5: 1977, 15)

4. Structures and other features

Plot 4/1 Building 4/6c

169(1), 169(2), 181 (Area 1)
182,(1, 4) (Area 1)
172, 175 (internal boundary, Plot 4/1, Area 1)
96 (pit: Trenches 5 and 6)
146, 147, 148, 149, 150, 156, 158, 159 (pits: Area 1)
166, 170, 171, 173 (pits: Area 2)

Plot 4/2

164, 196 (ditches running from stylobate building, Building 4/1b: 1977, 14)
180 (furnace inside Building 4/1b)
207 (ditch running from Building 4/1b: 1977, 25)
208(1) (industrial layer, 1977, 26)

Plot 4/3

55, 56, 62, 66, 83, 105(3), 130, 136 (stone floor, Building 4/2b, Area 4)
105(1) (fill of gully around Building 4/2a, Area 4)
133 (furnace, Building 4/2b, Area 4)
64, 295 (pit, Area 4: 1977, 113)
129(1) resurfacing of causeway, Area 3)

Plot 4/6

286 (stylobate Building 4/3: 1977, 104)

Plot 4/7

330, 336, 338 (Area 5: 1967, Area 3, Cutting 7, Feature 3)
331 (Area 5: 1967, Area 3, south of Cutting 7, Feature 3, on clay)
333 (Area 5, 1967, Area 3, Cutting 7, Feature 4)
334 (Area 5: 1967, Area 3, Cutting 7, Feature 5)
335 (Building 4/4, Area 5: 1967, Area 3, Cutting 7, Feature 5)

Plot 4/8

1, 28, 14, 106 (drainage ditch south of Building 4/5)
31(1) (latest phase of furnace)
42, 54 (postholes)
37 (furnace/hearth)
25 (pit to north of Building 4/5)
44 (spur ditch east of Building 4/5)
7(3), 21, 26 (replacement N-S ditch)
5, 6, 6(2), 11(1, 2) (clayey spreads south of Building 4/5)

Details of ditches, Alchester road site, Towcester

Phases 1 and 2

Alchester road side ditches

Eastern side

4/9 (Area 3) (Fig. 5) Shallow, round bottomed. 420mm + deep, but very wide: 5m
Fill: light grey clayey earth (4)
Yellowish-brown sand
Black sooty earth (9)
Grey brown clay at bottom

84 (Trench 4) (Fig. 5) 3.5m wide, 900mm deep, round bottomed
Fill: 1. Light brown clayey earth
2. Yellow-brown clayey earth
3. Light grey powdery earth, stones
4. Dark brown clayey: charcoal flecks at bottom
5. Medium grey earth, many small gravel pebbles

91 (Trench 6) (Fig. 5) 2.94m wide, 940mm deep, round bottomed
Fill: dirty brown clay with layers of yellow clay

95 (Trench 5) (Fig. 5) 3.2m wide, 1m deep, round bottomed
Fill: 1. Medium brown sandy loam
2. Clean yellow sand - recut
3. Grey-brown gritty sandy
4. Grey-brown clay

120 (Trench 1) (Fig. 4) 2.4m wide (the result of recutting), 800mm deep, round bottomed
1. Yellow/brown clayey, small pieces of gravel
2. Slightly darker brown) recut
3. Light grey-brown clayey)
4. Grey sand, inclusions of clean yellow sand
5. Chocolate brown earth

Western side

98 (Trench 19) 3.44m wide, 820mm deep, round bottomed
Fill: 1. Dirty chocolate brown clayey, some pebbles, charcoal flecks
2. Bright reddish-brown sandy

112 (Area 4) 2.7m wide, 800mm + deep, irregular V-section
Fill: 1. Medium brown clayey earth
2. Lighter brown-grey clayey earth
3. Blue clay and reddish brown clay
4. Reddish brown clay
5. Grey-brown clay

113(1) (Trench 18) (Fig. 5) 2.14m + wide, 1.2m deep, V-shaped
Fill: uniform light brown sandy earth

123 (Trench 1) (Fig. 4) 1.5m wide, 1m deep, round bottomed
Fill: 1. Brown clayey) recut
2. Brown clay, white clay inclusions).

3. Grey clayey - recut inclusion
4. Dark brown clayey

124 (Trench 4) (Fig. 5) 2.3m wide, 980mm deep, V-shaped
Fill: 1. Darkish grey-brown clayey earth, some charcoal flecks
2. Brown-yellow clayey, small pebbles, some charcoal flecks
3. Grey sandy clay

174 (Area 2) 2.2m + wide, 750mm + deep, flat bottomed
Fill: 1. Ironstone sandy, some charcoal flecks
2. Cleanish medium grey clay, some charcoal flecks
3. 1 and 2 mixed, plus dirty chocolate brown earth

176 (Area 1) 2.7m wide, 620mm + deep, irregular double-V bottom
Fill: 1. Light yellowish-brown sandy earth) recut
2. Reddish brown sandy earth)
3. Yellow-grey clay
4. Yellow-brown clay

282 (Fig. 6) 2.5m wide, 750mm + deep, U-shaped
Fill: 1 and 2. Black industrial fill: a shallow recut
3. Yellow gritty clay silt
lower part rusty red and yellow clay.
Bottom iron stained

Additional side ditch, western side, Alchester road

117 (Area 2) (Fig. 5) 1.24m wide, 780mm deep, flat bottomed
Fill: 1. Grey-brown sandy earth, some charcoal flecks
2. Light brown sandy
3. Grey clay
4. Clean light brown sand

355 (Trench 1) (Fig. 4) 1.5m wide, 900mm deep, U-shaped
Fill: 1. Grey clayey earth
2. Brown clayey, lens of whitish clay
3. Grey clay

Phase 1. Land drains and ditches

Land drains

142 (Area 1) (Fig. 5) 880mm wide, 280mm + deep, double-V section
Fill: soft black organic earth (2) with lenses of whitish-light grey sandy clay (1) i.e. replaced subsoil

145 (Area 1) 1.1m wide, 100mm + deep, double-V section
Fill: soft black organic earth

162 (Area 1) (same feature) (Fig. 5) 1.06m wide, 520mm + deep, U-shaped
Fill: 1. Yellow clay and light grey-whitish sandy clay mixed i.e. replaced subsoil
2. Chocolate brown clayey
3. Dirty yellow clay and chocolate brown clay mixed - slippage from sides
4. Light grey sandy - slippage from sides

357 (Area 1) 660mm wide, 200mm + deep, flat bottomed fill: grey-brown clay. Lenses of light grey sandy.

151 (Area 1) (Fig. 5) 1.15m wide, 460mm + deep, double-V section
Fill: 1. Light brown clayey, pieces of limestone
2. Yellow clay and light grey-white sandy, i.e. replaced subsoil
3. Soft dark grey organic

186 (Fig. 16) 700mm + wide, 370mm + deep, W- profile with stakes, separated by a spit of natural 250mm wide, set at intervals of 150-200mm, with perhaps larger ones at intervals of 800mm. Very straight
Fill: black silt. Sterile except for the odd oyster shell

194 1m + wide, depth u/k. Sides sloping, flat bottom. One of a group of features with narrow drainage channels at bottom c. 250mm wide, but sometimes only 100mm. A maze of these features, some with straight, cut-off ends
Fill: red sand

287-8 (Fig. 6) 700mm wide, 700mm deep, U-shaped
Fill: 1. Black industrial fill 300mm thick. A recut, making the original still wider and shallower
2. Clean reddish yellow clayey iron stained silt 400mm thick

Structures and other features

165 (ditch around Building 1/2, Trench 8) 550mm wide, 160mm + deep, U-shaped
Fill: 1. Grey clayey, charcoal flecks, reddish brown ironstone
2. Grey clayey, charcoal flecks

PHASE 2

Ditches, east of Alchester road

i) Rearward plot boundary. 101 (Trench 6) (Fig.15) 1.08m wide, 620mm deep, V-shaped
Fill: 1. Dark brown clayey
2. Chocolate clayey and yellow clay

ii) Plot side boundary. 35 (Area 3) 900mm wide, 220mm + deep, V-section
Fill: reddish brown clayey
67 (Area 3) (same feature) (Fig. 15) 1.18m wide, 300mm + deep, U-section
Fill: reddish brown clayey, blotches of grey sandy clay towards bottom

Ditches, west of Alchester road

i) Rearward plot boundaries. 109 (Trench 9) 1.2m wide, 500mm deep, U-shaped
Fill: medium brown loam
178 (Trench 8) (Fig. 15) 540mm wide, 140mm + deep, shallow, flat bottomed
Fill: grey brown clayey, some lenses of yellow clay
183 700-800mm + wide, 430mm + deep, flat bottomed
Fill: 1. Dark grey clay - recut once

2. Pieces of limestone
3. Yellow clay

195 1.2m wide, 250mm + deep. Overlain by stone yard of Building 2/5
Fill: dirty grey clay

ii) Plot side boundaries. 134 (Trench 7) Ditch 560mm wide
Fill: grey clayey earth

152 (Area 1) (Fig. 14) 1.82m wide, 500mm + deep, irregular U-section
Fill: 1. Yellow clay and ironstone, a few flecks charcoal
2. As 1 but clay greyer in colour
3. Medium grey clayey, some flecks charcoal and yellow clay

188(2) 500mm + wide, 250mm + deep, U-shaped
Fill: dark grey clay

193 ?1m wide, depth u/k. T-shaped, so a ditch junction
Fill: dark grey clay

198 Details destroyed before recording possible

321 (Fig. 14) 1.98m wide, 457mm deep, double-V profile suggests recutting
Fill: dark loam

350 Ditch 400mm wide

PHASE 3

Side ditches, Fleet Marston road

i) East side. 74 (Trench 14) (Fig. 3: section skewed) 2.3m wide, 1m deep, U-shaped
Fill: 1. Light grey sandy
2. Hard chocolate brown clay

115 (Trench 16) (Fig. 14) 1.2m wide, 340mm + deep, U-shaped
Fill: 1. Medium brown sandy clay) recut
2. Very dark grey clayey earth)
3. Dirty yellow sandy clay
4. Dirty yellow and grey clay mixed

121 (Trench 13) 2.4m wide (skewed section), 860mm deep, U-shaped
Fill: 1. Light brown earth
2. White sandy, some yellow clay flecks
3. Medium brown clayey

ii) West side. 116 (Trench 16) (Fig. 14) 1.32m wide, 400mm + deep, U-shaped
Fill: 1. Dark brown clayey earth. Lens of light brown clay at bottom. A recut
2. Darker chocolate brown earth, flecks of yellow clay

119 (Trench 17) Complete width not ascertained, over 1.92m; 520mm + deep, U-shaped
Fill: 1. Medium brown clayey earth)
2. Darker brown clayey earth, many charcoal flecks) recut?
3. Greyish clay + ironstone sandy flecks

126 (Trench 17) (Fig. 15) Complete width not ascertained, over 1.7m; 720mm deep, U-shaped
Fill: 1. Dark brown clay)
2. Dark brown-grey clay with charcoal) recut?
3. Grey clay

356 (Trench 15) (Fig. 3) 1.2m wide, 800mm deep, U-shaped
Fill: 1. Brown clayey crumbly and white powdery: recent disturbance
2. Brown clayey

Ditches laid off Fleet Marston road, east side

70 (Trench 16) 800mm across, 200mm + deep, U-shaped
Fill: chocolate brown clay, flecks of charcoal

71 (Trench 16) Over 1m wide, 230mm deep
Fill: stiff light grey clay and blotches of yellow sandy clay, a few pebbles

72 (Trench 15) 260mm wide, 80mm + deep
Fill: chocolate brown clayey, some flecks charcoal

73 (Trench 15) 300mm wide, 100mm + deep
Fill: chocolate brown clayey, some flecks charcoal

New side ditches, Alchester road

i) Eastern side. 49 (Area 3) 900mm wide, 240mm + deep, U-shaped
Fill: 1. Light grey sandy, gravel
2. Brownish grey sand and charcoal

63/77,85/127 (Area 3) (Fig. 4) 3.6m wide, 420mm + deep, flattened U-section
Fill: 63/77/85 Dirty orange grey sandy clay, stones
127. Black clayey, stoneless

352 (Trench 1) (Fig. 4) 1.4m wide, 1.1m deep, V-shaped
Fill: 1. Brown clayey earth
2. Grey-brown clayey
3. Grey clay, yellow clay inclusions
4. Green-grey clay
5. Brown clay

ii) Western side. 68/2,3 (Area 3) (Fig. 4) 3.44m wide, 420mm + deep, flattened U-section
Fill: 68/2 Black stoneless clayey
68/3 Greenish yellow clay, stones at bottom

87 (Area 4) (Fig. 15) 1m + wide, 240mm deep, U-shaped
Fill: Light reddish brown earth, gravel at bottom

113(2) (Trench 18) (Fig. 4) 980mm wide, 760mm deep, U-shaped
Fill: greyish sandy earth, small pieces of gravel on S side

118 (Trench 1) (Fig. 4) 1.1m wide, 800mm deep, U-shaped
Fill: 1. Brown clayey earth
2. Light grey clayey earth

132/3 (Area 4) 500mm + wide, 200mm + deep, U-shaped
Fill: grey brown earth

187 500-600mm wide, 450mm deep
Fill: very hard gravel, rammed in.
Dark clay and gravel below

PHASE 4a

Recutting, side ditches, Alchester road

i) Eastern side. 349 (Area 3) (Fig. 4) 650mm + wide, 100mm + deep. Flat bottomed
Fill: dirty grey clay

ii) Western side. 68/1/88 (Area 3) (Fig. 4) 2.7m wide, 600mm + deep
Fill: 68/1 Dark grey-brown clayey
88 U-shaped bottom, dark grey mud

81 (Area 4) (Fig. 15) 1.54m wide, 400mm deep, U-shaped
Fill: light brown/yellowish earth, stones

113(3) (Trench 18) (Fig. 5) 640mm wide, 560mm deep, U-shaped
Fill: medium brown loamy, stones at bottom

Ditches, east of Alchester road

Rearward plot boundaries. 92 (Trench 6) 2.4m wide, 420mm deep, irregular bottom
Fill: stiff hard grey and yellow clay, flecks of charcoal

93/102 (Trench 5) (same feature) (Fig. 15) 2m wide, 500mm deep, U-shaped
Fill: 1. Dirty grey-green clay, hard, charcoal flecks, areas of yellow clay
2. Dirty grey-green clay, charcoal flecks

94 (Trench 4) (same feature) 1.74m wide
Fill: green-grey clay and stones

97 (Trench 3) (same feature) 1.8m wide
Fill: dirty grey clay

16 (Area 3) (Fig. 15) 1.74m wide, 600mm + deep, U-shaped
Fill: 1. Grey-brown clayey + charcoal
2. Dark grey clayey

53 (Area 3) (same feature) 1.1m wide, 140mm + deep, U-shaped
Fill: light brown sandy earth, grey clay

Ditches, west of Alchester road

i) Rearward plot boundaries. 107 (Trench 9) 900mm wide, 600mm deep, U-shaped
Fill: 1. Dirty brown earth
2. Grey clayey

167 (Fig. 15) 600mm wide, 200mm + deep, flat bottomed
Fill: lightish grey sandy clay, some lenses of yellowish clay

168 (Area 1) 600mm wide, 210mm + deep, U-shaped
Fill: uniform lightish grey clayey, some yellow clay

192 2m wide, depth u/k
Fill: dirty dark grey clay

201 1.1m wide, 350mm + deep, U-shaped
Fill: 1. Dark grey clay: ditch edged with stones, aligned along face of ditch (stones 150-

250mm long): ?recut
2. Blue clay lining

319 (Fig. 15) 940mm wide, 305mm deep, U-shaped
Fill: dark loam with charcoal: dirty clay below

ii) Plot side ditches. 90 (Area 4) 1.44m wide, 400mm + deep, U-shaped
Fill: 1. Brown sandy earth, many flecks charcoal
2. Slightly darker sandy earth, charcoal flecks

104 (same feature) (Area 4) (Fig. 16) 1.3m wide, 300mm + deep, U-shaped
Fill: brown sandy earth, much charcoal, stones at bottom

108 (Trench 9) 2.10m wide, 640mm deep, U-shaped
Fill: 1. Medium brown loam
2. Stiff grey clay

188(1) 600mm + wide, 300mm deep
Fill: dark grey clay

200 700mm + wide, 400mm + deep
Fill: black industrial material. Overlain by black marshy area

205 800mm wide, 350 mm deep, U-shaped
Fill: dirty dark grey clay

283-5 400mm wide, 300mm deep, U-shaped
Fill: dark grey clay

302 1.04m wide, 304 mm deep, flat bottomed
Fill: dark loam with dirty clay below

Ditch, S of Fleet Marston road

11 (Area 3) (Fig. 16) 1.10m wide (expands to 3.7m at its junction with 16), 1.2m deep, flat bottomed
Fill: 1. Stiff reddish brown clay and charcoal, lenses of orangy sand
2. Grey clay (does not appear on section)
3. Light yellow sandy, soft yellow sand inclusions (i.e. slippage from sides)
4. Dirty yellow green sandy clay

122 (Trench 12) (same feature) 1.08m wide, 300mm + deep, U-shaped
Fill: light brown earth, with below light grey earth with patches of yellow clay at the bottom

Structures and other features:

i) Plot 4/1. 160 (Building 4/6a, Area 1) (Fig. 16) 440mm wide, 150mm + deep, flat bottomed
Fill: medium grey-brown clay, some flecks charcoal. Light grey-yellow clay at bottom

143 (Building 4/6b, Area 1) (Fig. 16) 730mm wide, 200mm + deep, U-shaped
Fill: medium grey clayey, a few flecks charcoal. Lens of white/light grey sandy clay

154 (same feature) 1.2m wide, 560mm + deep, U-shaped
Fill: grey-brown clayey, occasional flecks of charcoal
This a recut of 154/2 - this was 600mm + wide, 270mm + deep, U-shaped
Fill: light grey clayey, chocolate brown clayey below

155 (same feature) (Fig. 16) 700mm wide, 230mm + deep, U-shaped
Fill: a uniform medium grey clayey, some lenses of dirty yellow clay, a few charcoal flecks

157/2 (same feature) 1.48m wide, 280mm + deep, U-shaped
Fill: mixture of reddish brown clayey and grey clay, some lenses of yellow clay

161 (same feature) 1.73m wide, 500mm + deep, U-shaped
Fill: 1. Medium grey clay, a few flecks of charcoal and yellow clay
2. As 1 but more yellow clay especially on E side. Some lumps of whitish sand

ii) Plot 4/3. 61, 105(4) (circular gully, Building 4/2a, Area 4) 500mm wide, 200mm deep, flat bottomed
Fill: grey clayey earth

iii) Plot 4/4. 202 c.2m wide but oblique cut makes certainty impossible; 500mm deep
Fill: dark clay silty. Revetted on SW downhill side with stakes at 450mm centres. Stakes c. 120mm diameter

iv) Plot 4/8. 17/23 (drainage ditch N side of Building 4/5, Area 3) (Fig. 16) 900mm wide, 300mm deep, V-shaped
Fill: 17. Slimy black clayey, charcoal
23. Brown, yellow, green clay mixed

7 (N-S drainage ditch, Area 3) 1.76m wide, 460mm + deep, U-shaped
Fill: 1. Dark brown-grey earth with charcoal
2. Reddish brown clay
3. (on N face only) Red sandy
4. Dark grey clay, patches of yellow clay, stones

24 (same feature) (Fig. 15) 1m + wide, 510mm + deep, U-shaped
Fill: 1. Brown clay
2. Orange clay
3. Grey gravelly
4. Medium grey clayey silt and charcoal

141 (ditch around Building 4/7, Area 3). 1.4m wide, 340mm + deep, U-shaped.
Fill: chocolate brown earth, patches of grey clay.

PHASE 4(b)

1. Recutting, side ditches, Alchester road

i) Eastern side. 80 (Area 3) (Fig. 4) 720mm wide, 240mm + deep, U-shaped
Fill: dark grey sticky clay, flecks of charcoal

ii) Western side. 75/76 (Area 4) (Fig. 15) 1.54m wide, 260mm deep, U-shaped
Fill: 75. Hard, compact pink and white gravel
76. Grey earth

111 (Trench 19) 840mm wide, 520mm deep, flat bottomed
Fill: light brown clayey fill, gravel pebbles

113(4) (Trench 18) (Fig. 5) 1.14m wide, 500mm deep, U-shaped
Fill: dark brown loamy, small gravel and some larger stones at bottom

132/1 (Area 4) 940mm wide, 360mm + deep, V-shaped
Fill: darkish chocolate brown earth

350 (Area 3) (Fig. 4) 1m wide, 180mm + deep, flat bottomed
Fill: dark grey clayey

2. Rearward plot boundaries, west of Alchester road

144 (Area 1) (Fig. 16) 1.34m wide, 360mm + deep, U-shaped
Fill: 1. Medium grey clayey
2. Dirty yellow clayey

110 (Trench 9) 780mm wide, 370mm deep
Fill: medium brown loam

179 (Trench 8) 1.23m wide, 430mm deep, U-shaped
Fill: stiff dark grey clay

3. Recutting/alterations, plot boundaries, west of Alchester road

114 (Trench 10) 760mm wide
Fill: dark grey clay, much charcoal

177 (Trench 8) (Fig. 15) 1.55m wide, 380mm + deep, irregular U-shape
Fill: dark grey clay with some patches of yellow clay

131 (Trench 7) 1.32m wide, 920mm deep, U-shaped
Fill: 1. Brown clayey
2. Black organic silt

185 ?1.5m wide, 400mm deep, U-shaped. Cut through stony level of Phase 2
Fill: dark grey clay, tiles

197 950mm wide, 350mm deep, U-shaped
Fill: dark grey clay

Structures and other features

Plot 4/1. 172 (internal boundary, Area 1) 1.4m wide, 650mm + deep, irregular bottom
Fill: 1. Grey clayey, some reddish brown specks of ironstone
2. As 1 but more reddish brown
3. Dark grey clayey, flecks of charcoal
4. Yellowish sandy, charcoal flecks

175 (same feature) (Fig. 16) 1.95m wide, 670mm + deep, U-shaped
Fill: 1. Light grey clayey - some reddish brown sandy slippage on N side
2. Dirty brown clayey, flecks charcoal, patches of yellow clay

Plot 4/2. 164 (ditch running from stylobate building Building 4/1b, Trench 8) 902mm wide, 270mm + deep, U-shaped
Fill: 1. Grey clayey and reddish brown ironstone flecks
2. Grey clayey, charcoal flecks, stones

196 (ditto) ?1m wide, 500mm deep, U-shaped
Fill: black industrial material. Black marshy area on top

207 (ditto) ?1m wide, depth u/k; wide, U-shaped profile. Had butt-end on NW with stakes round it; this represented a contraction of the original ditch length
Fill: black industrial material. Substantial stakes on S side of ditch, at 400-600mm centres. Stakes were up to 350mm high, 150-200mm in diameter

Plot 4/8. 1 (drainage ditch S of Building 4/5) (Fig. 16) 1.4m wide, 600mm + deep, flat bottomed
Fill: 1. Grey clayey, flecks of charcoal
2. Light grey sandy
3. Dirty grey clayey

14 (same feature) (Fig. 16) 1.6m wide, 600mm + deep, flat bottomed
Fill: 1. Darkish grey-brown clayey, charcoal
2. Light sandy yellow-brown

21 (replacement N-S ditch, Area 3) (Fig. 15) 1.66m wide, 280mm + deep, U-shaped
Fill: 1. Brown clay
2. Grey gravelly
3. Orange clay
4. Grey clay

LIST OF COINS, ALCHESTER ROAD SUBURBS, TOWCESTER

by C.T.P. Woodfield

Context	Location	Coin No.	Date	Description	Mint	Ref
PHASE 2, c.175-c.270						
320	Alchester road, west side ditch, upper level	DM 44	330-337	... CONSTANTINOPOLIS (Intrusive)		
152	Area 1, Plot 2/1 side boundary	AB 727	335-341	R: 1 standard (Intrusive)		
181	Plot 2/1, stone floor of Building 2/1	AB 767	C.2	Sest ?Antoninus Pius R: illeg.		
		AB 768	146-75	Sest FAUSTINA JNR R: FORTVNA S/C		
		AB 769	C.2	Sest ?Antoninus Pius R: illeg.		
184	Plot 2/5, Building 2/5	CW 28	219	Den ELAGABALUS		
		CW 30	227	Den SEVERUS ALEXANDER (base) R:PM TRP VI COS II PP		C.305
199	Plot 2/5, Building 2/6 (over cobbles)	CW 34	196-198	Den CARACALLA R: MARS ULTORI		C.154
329	Plot 2/7, Building 2/7	DM 33	c 270	Ant Radiate, type unclear		
		DM 20		Min		
		DM 15	353+	Fel Temp type		
		DM 12	270+	Irregular, Tetricus type		
		DM 19	341-8	VICTDDAVGG type		
		DM 17	337-41	PAX PVBLICA		
		DM 8	348-50	Fel Temp Phoenix type		
		DM 6	353+	Irregular Fel Temp		
		DM 27	341-8	VICTDDAVG type		
		DM 26	268-70	CLAUDIUS II		
		DM 25	337-41	GLORIA EXERCITVS		
		DM 61	351-53	VICTDDAVG		
330 336 338	Plot 2/7, area of Building 2/7	DM 69	C.4	Min		
		DM 68	271-3	Ant TETRICUS I		
		DM 23	C.4	Min		
		DM 22	341-8	POP ROMANUS		
		DM 21	341-48	VICT DD AVG		
		DM 19	341-48	VICT DD AVG type		
		DM 18	341-48	VICT DD AVG type		
		DM 17	337-41	PAX PVBLICA		
		DM 16	330-335	VRBS ROMA		
		DM 14	330 +	VRBS ROMA		
		DM 13	330 +	CONSTANTINOPOLIS		
		DM 10	353-61	FEL TEMP (FH type)		
		DM 5	330 +	GLORIA EXERCITVS		
		DM 44	335-37	GLORIA EXERCITVS		
		DM 43	335-37	GLORIA EXERCITVS		
		DM 42	330-37	CONSTANTINOPOLIS		
		DM 40	C.4	Minim		
		DM 39	353 +	FEL TEMP		
		DM 38	341 +	Irregular Vict DD Augg		

Context	Location	Coin No.	Date	Description Mint Ref.
		DM 37	C.4	Minim
		DM 32	330-35	CONSTANTINOPOLIS
		DM 28	335 +	Irregular Gloria Exercitus
		DM 24	270-73	Ant TETRICUS I
		DM 77	335 +	Irregular Gloria Exercitus
		DM 66	C.4	Minim
333	Plot 2/7, area of Building 2/7	DM 29	69-79	VESPASIAN
		DM 30	319	VICTORIA AVG
		DM 31	293-96	Ant ALLECTUS
		DM 34	C.4	House of Constantine
		DM 35	286-91	Ant CARAUSIUS
		DM 36	341-48	VICT AVG
		DM 41	335-37	GLORIA 1 Standard
		DM 43	287-93	Ant CARAUSIUS
		DM 46	330-37	VRBS ROMA
		DM 52	C.4	Irregular
		DM 53	Late C4	H of Theodosius
		DM 54	C.4	Minim
		DM 58	C.4	Minim
334	Plot 2/7, area of Building 2/7	DM 45	353 +	Minim. Fel Temp type.
		DM 55	353 +	Minim. Fel Temp type
		DM 56	341 +	Irregular Vict DD Aug type
		DM 57	330-35	VRBS ROMA
		DM 59	330 +	Irregular Urbs Roma type
		DM 62	C.4	Minim
		DM 63	341-48	VICT DD AVG
		DM 67	287 +	Irregular Carausius
		DM 73	330-35	GLORIA EXERCITVS
		DM 74	353 +	Minim. Fel Temp type
		DM 75	C1-C2	Den Irregular issue
		DM 65	324-30	CONSTANTIUS I commemorative
				Comment: The evidence of the coins suggests that these levels (prefix DM) were not differentiated from the topsoil which contained an abundance of C.4 coins.
PHASE 3	c. 270-330 AD			
183	Plot 4/3, Ditch west of Alchester road, rearward plot boundaries	CW 31	c.270	Ant O: Rad hd. R: Stg figure
294	Pit in Plot 2/3	CW 1	268-70	Ant R: Illeg
		CW 2	268-70	Ant R: CTVS AVG Figure stg.
		CW 3	268-70	Ant R: Emperor (?) stg facing with caduceus and patera
				Comment: This group, found cemented together in a

Context	Location	Coin No.	Date	Description	Mint	Ref.
		in a stack are probably all of Claudius II with varying reverses, and at least two have silver enriched surfaces. It is possible that this group was not current at the time but were kept together as a small hoard of attractive and potentially valuable silvered coins.				
63	Alchester road, recutting of side ditch, eastern side	AB 525	195	Den SEPTIMUS SEVERUS R: TRPIIIIMPVCOSII Captive (EF condition ?Heirloom)		C65
77	Alchester road, recutting of side ditch, eastern side	AB 582	330-335	CONSTANTINOPOLIS)s((From surface layer)		
PHASE 4a	c.330-c.355/60 AD					
68(1)	Alchester road, recutting of ditch, west side.	AB 541	320-24	CONSTANTINE I R: BEATATRANQUILLITAS		
60	Resurfacing of Alchester road	AB 475 AB 474	C.4 C.4	Irreg. House of Constantine Minim (10) illeg.		
16(1)	Ditch east of Alchester road, rearward plot boundary	AB 438	337-341	CONSTANTIUS II R: 1 standard	TRS LRBC I 130	
16(2)	Ditch east of Alchester road, rearward plot boundary	AB 226	341-46	VICTORIAE type		
90	Plot 4/3 northern side ditch	AB 653	307-337	CONSTANTINE I/LICINIUS R: Soli Invicto (?) type.		
104	Ditto	AB 639	306-37	CONSTANTINE I R: illeg		
185	Plot 4/4 side ditch	CW 24 CW 25 CW 26 CW 27	330-35 C.4 337-41 317-26	CONSTANTIUS II 2 std Minim (11) CONSTANTINOPOLIS CRISPUS R: VOTIS XX	TR( ) LR[illegible] I.64 STR	
201	Ditch west side of Alchester road, rearward plot boundary	CW 36	330-35	CONSTANTIUS II		
200	Plot 4/2, side ditch	CW 35	337-41	THEODORA R: PAXROMANA	TRS. LRBC I 113	

Context	Location	Coin No.	Date	Description	Mint	Ref.
11(4)	Ditch south of Fleet Marston road	AB 167	337-41	Irreg CONSTANTINOPOLIS		
189(2)	Plot 4/2,Building 4/1a	AB	C.4	Irreg		
61	Plot 4/3,Building 4/2a	AB 652	330-35	CONSTANTINE II R: 1 standard	TRP.	LRBC I 53a
154	Oval enclosure, Building 4/6b	AB 787	351-2	Irreg MAGNENTIUS/DECENTIUS VICTORIAEDDNN (mirrored)		
		Comment:	Mirrored legends are known but not common			
30	Plot 4/8, floor of Building 4/5	AB 192 AB 219	C.4 330-35	H of Constantine R: 2 standard	 illeg.	*
38	Building 4/5 culvert	AB 310 AB 359 AB 360	 330-41 330-35	(19) H of Constantine R: Wolf and twins R: 2 standard	 Arles	* LRBC I 378/9
59	Causeway over Alchester road to Plot 4/8	AB 458 AB 464 AB 465 AB 473 AB 477 AB 478 AB 479 AB 480 AB 482 AB 483 AB 484a AB 484b AB 485 AB 486 AB 487	335+ 335-41 335-41 C.4 later C4 late C4 330-35 341+ C.4 341-46 C.4 341-46 C.4 330-35 c. C4	Irreg R: 1 standard type R: 1 standard R: 1 standard Irreg (1?) Fel Temp type O: diad bust r CONSTANTINE II R: 2 standards Irreg Victoriae DD type Irreg (17) Constantius/Constans Victoriae DD Victoriae DD Minim (9) CONSTANTINE I 2 standards H of Constantine	 TRP TRP LRBC I 78/80	* LRBC I 139
189(2)	Plot 4/2,Building 4/1a	CW 12	C.4	Irreg (12)		
31(2)	Building 4/5, first phase of furnace	AB 354 AB 401 AB 402 AB 403 AB 404 AB 405 AB 406 AB 407	330+ 351-53 C.4 C.4 C.4 C.4 C.4 C.4	Irreg Victory on prow type Magnentius/Decentius Victoriae DDNN type Minim (8) Irreg (13) FH type Irreg (15) FH type Minim (8) Minim (8) Minim (9)	 D D 	

Context	Location	Coin No.	Date	Description	Mint	Ref.
31(3)	Building 4/5, first phase of furnace	AB 305	337-41	1 standard	.TRP.	LRBC I 107 but O.legend 15
		AB 306	341+	?irreg 1 standard		
		AB 307	341-46	VictoriaeDD		
		AB 309	346-50	?irreg Phoenix		
		AB 316	346+	Irreg (12) FH type		
		AB 317	C.4	Irreg (12)		
		AB 350	C.4	Minim (11)		
		AB 352	351-53	MAGNENTIUS	TRP	LRBC 2.58
		AB 353	348+	Victoriae DDNN Irreg.Victoriae DDNN		
		AB 355a	C.4	Minim (7)		
		AB 355b	C.4	Minim (8)		
		AB 356	352-4	Constantius II	FH4	
		AB 357	337+	H of Constantine or later		
		AB 424	337-41	Irreg Veiled hd/Quadriga		
		AB 425	350-51	MAGNENTIUS	A/TRP	LRBC 2.50
		AB 426	346-50	FELICITAS REIPVBLICAE FEL TEMP hut		
		AB 428	350-51	MAGNENTIUS FELICITAS REIP (2)	RPLG	LRBC 2.211
		AB 429	346-50	CONSTANTIUS II FEL TEMP hut	TRS	LRBC 2.30
32	Hollow inside Building 4/5	AB 318	C.4	Minim (7.5)		*
34	Hearth inside Building 4/5	AB 312	C.4	Minim (8)		
		AB 313		(14)		
		AB 317	346-50	CONSTANS. R:Galley	TRP	LRBC 2.41
		AB 370	C.4	Minim (11)		
		AB 371	350+	Irreg (13) FH type	D	
		AB 372	350+	Irreg (12.5) FH type		
		AB 373	341-46	H of Constantine Victoriae DD	D	LRBC I 145-7
		AB 374	C.4	Minim (7)	M	
		AB 375	341-46	H of Constantine Victoriae DD	TRP	LRBC I 137-8
		AB 376		Irreg (20) large and thick flan		
		AB 377	351-61	H of Constantine FH3/4	FSIS	
2(1)	Plot 4/8, yard outside Building 4/5	AB 62	317-324	CONSTANTINE II		*
		AB 63	?335-41	(14)		
		AB 64	C.4	Minim (8)		
		AB 65	?340+	(15) H of Constantine		
		AB 66	335-41	1 standard		
		AB 67	330+	? Helena		
		AB 75	287-89	Ant CARAUSIUS R: Pax	MLXXI	(Residual)
		AB 75 bis	265-70	Ant VICTORINUS R: Pietas		(Residual)
		AB 88	mid/ lateC4	(14.5) ? irreg.		

Context	Location	Coin No.	Date	Description	Mint	Ref
2(1) Contin.		AB 89	341+	VICTORIAE DD		
		AB 95	Mid C4	Irreg (19)		
		AB 111	337-41	1 standard		
		AB 112	330-41	Constantinopolis/Wolf	?Trier	
		AB 113	330-341	CONSTANTINOPOLIS		
		AB 123	350-51	MAGNENTIUS/Felicitas		
		AB 155	C.4	Minim		
		AB 236	322-23	R: CAESARVMNOSTRORVM	?Thessalonica	
3	Plot 4/8, yard outside Building 4/5	AB 74	351-54	Constans/Gratian	R:FH3	*
		AB 79		May not be a coin		
		AB 85	287-93	Ant: ?Carausius	(Residual)	
		AB 91	308-37	CONSTANTINE I R:Genio		
		AB 94	335-41	1 standard		
		AB 106	330-35	2 standards		
		AB 107	346-50	CONSTANS R:Hut(2)		
		AB 108	330-41	CONSTANTINOPOLIS	TRP. LRBC I 59	
		AB 109	early-mid C.4	(16)		
		AB 110	335-41	1 standard		
		AB 136	330-35	URBS ROMA		
		AB 137		(16)		
		AB 138	337-40	CONSTANTINUS		
		AB 159		Minim (7)		
		AB 160	335-41	1 standard		
		AB 161	341	Irreg R: Victoriae DD type		
		AB 162	335+	Irreg 1 standard type		
		AB 163	335-41	1 standard		
		AB 164	341-46	?Victoriae type		
		AB 169	348+	Irreg? ?FH type		
		AB 168	341-46	CONSTANS R:VICTORIAEDD	$\frac{\epsilon}{\text{TRP}}$ LRBC I 157	
		AB 190	253-68	Ant R:)PVD(	(Residual)	
		AB 216	335-41	1 standard	RP.	
		AB 217		(20)		
		AB 176	mid C4	Irreg (13)		
		AB 181	C.4	H of Constantine		
		AB 184	C.4	(12)		
		AB 185	341-46	CONSTANTIUS II R: Victoriae DD		
		AB 185 bis	C.4	(12)		
		AB 186	335-41	CONSTANTIUS II 1 std		
		AB 187	351-53	Magnentius/Decentius R: VICTORIAEDDNN		
		AB 188	360+	O:Brockage Constantinian portrait R: ?Fel Temp FH3 type		
		AB 177	C.4	(14)		
		AB 178	341-46	Victoriae DD		
		AB 179	335-41	1 standard	TRS	
		AB 180	335-41	1 standard	TRS	
		AB 182	C.3	Irreg radiate		
		AB 183	335-41	1 standard	TR(?)	
		AB 218	C4	Minim (9.5)		
		AB 235	335-41	CONSTANTIUS II 1 std		

Context	Location	Coin No.	Date	Description	Mint	Ref
3 (contd)		AB 126	350-353	Magnentius/Decentius		
		AB 127	330- 35	2 standard	?Nicomedia	
		AB 129	351- 53	VictoriaeDDNN		
		AB 319	?98-117	Den ?Trajan		
		AB 361	335- 41	1 standard	ARL	
		AB 362	330- 35	CONSTANTINE II 1 std	.PLG	LRBC I 187
		AB 431	337- 41	HELENA PAX PVBLICA	TRP	LRBC I 128
		AB 432	337- 41	H of Constantine 1 std		
		AB 433	330- 35	CONSTANTINOPOLIS		
		AB 434	335- 41	1 standard		
		AB 439	341- 46	CONSTANS Victoriae (2)		
		AB 410	335- 41	1 standard		
		AB 441	330- 35	CONSTANTINOPOLIS		
		AB 86	69- 81	Den Titus or Vespasian		
12	Plot 4/8, Yard outside Building 4/5	AB 130	330- 35	2 standards		
		AB 170	C.4	(13)		
		AB 220	307- 24	Follis LICINIUS SOLI INVICTO COMITI	/P	
		AB 221	367+	Irreg II of Valentinian Gloria Rom (8) type		
		AB 222	C.4	(16)		
		AB 237	C.4	Minim		
		AB 128	330- 35	2 standards		

Context	Location	Coin No.	Date	Description	Mint	Ref.
18	Plot 4/8, yard outside Building 4/5	AB 165	C.4	Minim (12)		*
		AB 165 bis	C.4	Minim (9)		
		AB 166	330-35	CONSTANTINUS II 2 std		
		AB 191	mid C4	Irreg? FH type		
		AB 193	mid C4	Irreg? FH type		
7	Plot 4/8 north-south ditch	AB 77	341-46	Constantius/Constans		
		AB 78	341-46	CONSTANS		
PHASE 4b c 355-370+						
58	Alchester road, recut of side ditch eastern side	AB 457	352-54	H of Constantine	FH?4	
		AB 462	C.4	Minim (9): Grid of lines (Fig.44)		
		AB 463	C.4	(14)		
65	Alchester road, recut of side ditch western side	AB 543	317-37	CONSTANTINE II as Caesar R: BEATTRANQUILLITAS	PLON	C.10
		AB 544	335+	Minim (11) 1std type		
132	Alchester road, recut of side ditch, western side	AB 678	?253-68	Ant ?Gallienus. R: Dianae?		
114	Plot boundary west of Alchester road	AB 651	351-53	DECENTIUS R:Victoriae(1)	TRP	LRBC 2.57
188	Plot 4/5, side ditch	CW 33	337-341	Constantine I or Constans	*PLG(?)	
172	Plot 4/1, internal boundary	AB 788	337-41	1 standard .TRP*		LRBC I.? (not recorded)
172(3)	Plot 4/1, internal boundary	AB 755	330-35	?Constantius I 1 std	TR.S	LRBC I.60-62
		AB 757	C.4	(18)		
169	Plot 4/1, Building 4/6c	AB 743	306-24	CONSTANTINE I Victories. VOT X	PLN	
		AB 744	335-41	Constantius/Constans 1 standard		
		AB 746	337-41	HELENA/R:PAX PVBLICA		
		AB 747	341-46	CONSTANS. R:Victoriae DD	D TRP	LRBC I 147
		AB 748	341-46	CONSTANS. r:Victoriae	TRS	LRBC I 147
		AB 749	346-54	?Constantius II R: Fel Temp FH(2)		
		AB 750	335+	Irreg 1 std type		
		AB 751	335-41	CONSTANS. 1 std		
		AB 784	330+	Irreg Wolf and twins type		
		AB 785	C.4	(15)		
		AB 838	350+	Irreg Gloria Rom (1) type		
		AB 838a		fragments		
96	Pit, Plot 4/1	AB 658	351-3	MAGNENTIUS Victoriae DDNN	?AMB	
		AB 654	330-35	CONSTANTINOPOLIS	CONS	
		CW 7	341-46	H of Constantine		
		AB 7	341-46	H of Constantine		
181	Plot 4/1 Building 4/6c	AB 766	330-35	CONSTANINOPOLIS	TRS(	
		AB 832	335-41	H of Constantine 1 std.		

Context	Location	Coin No.	Date	Description	Mint	Ref.
146(1)	Pit, Plot 4/1	AB 725 AB 720	330-41 C.4	CONSTANTINOPOLIS (15)		
148	Pit, Plot 4/1	AB 722	346+	Irreg (17) FH type		
158	Pit, Plot 4/1	AB 729	341-46	CONSTANS VICTORIAE DD	? TRS	
159(2)	Pit, Plot 4/1	AB 731 AB 730	335-37 337-41	CONSTANTINE II. 1 Std THEODORA. PIETAS ROMANA		
166(2)	Pit, Plot 4/1	AB 763	330-41	H of Constantine. 2 std	?Trier	
173	Pit, Plot 4/1	AB 782	346+	Minim (10.5) FH type		
164	Plot 4/2, surface	AB 732	306-24	CONSTANTINE I VICTORIAE LAETAE	STR	
164	Plot 4/2, ditch	AB 721	295-305	Follis DIOCLETIAN GENIO POPULI ROMANI	TR	C.128
207	Plot 4/2, ditch	CW 37	305-09	Follis MAXIMINUS II as Caesar R: SAC MON VRB AVGG etc.		RIC 123b
		CW 38	346-50	CONSTANTIUS II FEL TEMP Galley		
		CW 39	320-24	CONSTANTINE I BEATTRANQUILLITAS		
		CW 28	320-24	CONSTANTINE I BEATTRANQUILITAS Altar	PLON	C.17-30
208(1)	Industrial deposit Plot 4/2	CW 32	306-24	CONSTANTINE I VICTORIAE shield	PTR	RIC 173
62	Plot 4/3, Building 4/2b	AB 533 AB 513 AB 524	mid C4	Irreg (14) (16.5) Minim (10)		
66	Plot 4/3, Building 4/2b	AB 530	341-46	H of Constantine Victoriae DD	?Trier	
		AB 531	341-46	Victoriae DD		
		AB 553	341-46	Victoriae DD	? Trier	LRBC I 149(?)
		AB 554	314-17	follis CONSTANTIN I SOLI INVICTO COMITI	T/F PLN	C.536(?)
		AB 555	360+	irreg ?Salus Reip type		
		AB 556	C.4	Minim (10)		
		AB 557	330-35	H of Constantine. 2 std		
		AB 558	330-41	CONSTANTINOPOLIS		
		AB 561	C.4	Minim (7)		
		AB 579	330-35	VRBS ROMA Wolf	TRP	LRBC I 52
		AB 583	351-53	MAGNENTIUS/DECENTIUS Victoriae DDNN (2)	TRS	LRBC II 56-9
		AB 584	335-41	1 standard		
		AB 585	330-35	CONSTANTINE II as Caes 2 standards	TRS•	LRBC I 56
		AB 586	C.4	Minim (9)		

Context	Location	Coin No.	Date	Description	Mint	Ref.
66 contin.	Plot 4/3, Building 4/2b	AB 587	C.4	Minim (6) Little worn		
		AB 607	330-35	CONSTANTIUS II 2 stds	TRS	
						LRBC I 64
		AB 625	324-350	(15)		
		AB 431	330-41	VRBS ROMA Wolf		
		AB 432	C.4	Minim (9)		
		AB 433	?383+	?Irreg Valentinian/Theodosius ? Gloria Rom		
		AB 434	330-41	VRBS ROMA Wolf		
		AB 435	346-50	Constantius II/Constans FH ?4		
		AB 436	324-30	PROVIDENTIAAVGG Gate	PTRE	
						LRBC I 38
		AB 437		Minim (11)		
		AB 438	341+	VICTORIAE DD	?irreg	
		AB 469	C.4	Minim (11)		
		AB 476	317-326	CRISPUS PRINCIPIAIVVENTVTIS	PLN	C.105?
		AB 523	260-268	Ant GALLIENUS NEPTVNACONSAVG Hippocamp		C.668
		AB 288	C.4			
		AB 294	330-37	VRBS ROMA Wolf		
		AB 297	330-37	VRBS ROMA Wolf		
83	Plot 4/3, Building 4/2b	AB 623		Irreg (10) R: buckle shape		
		AB 624	C.4	Minim (7)		
		AB 626	C.4	Minim (7)		
		AB 627	346+	?Irreg (14) FH type		
		AB 628	268-70	Ant CLAUDIUS II VIRTUSAVG		C.318
		AB 629	330+	Irreg (13) Standard type		
		AB 630	309-13	Follis CONSTANTINE I PRINCIPIIVVENTVTIS	PLN	C.429
		AB 631	C.4	Minim (10)		
		AB 632	330+	Minim (9) Standard type		
		AB 633	330+	?Irreg 2 standards type		
		AB 640	350-51	?Irreg CONSTANTIUS II/MAGNENTIUS FH2		
		AB 641	C.4	(12)		
		AB 680	330-35	VRBS ROMA Wolf	TR.P	
						LRBC I 65
136	Plot 4/3, Building 4/2b	AB 679	330+	Irreg (10) 2 standard type		
64	Pit, Plot 4/3	AB 521	337-41	H of Constantine. 1 std	.AS	
		AB 608	330-35	Constantius/Constans 2 standards	PCO(	
		AB 606	330-35	CONSTANTINOPOLIS		
14(1)	Plot 4/8, Building 4/5, recut drainage ditch south of building.	AB 125	330-35	CONSTANTINE II/CONSTANS 2 standards	TR.P	LRBC I 60-4
		AB 153		(10-11)		
		AB 100	C.4	Irreg. (13)		
		AB 101	337-41	CONSTANS 1 standard		
		AB 102	C.4	(8-10)		
		AB 103	337-41	1 standard		

Context	Location	Coin No.	Date	Description	Mint	Ref.
14(1) Contin.		AB 104	341-46	Constantius/Constans Victoriae DDNN		
		AB 114	?C.4	?irreg (13)		
		AB 147	341-46	Victoriae DDNN type		
		AB 148	346-50	CONSTANS Fel Temp. Phoenix		
44	Spur ditch to east of Building 4/5	AB 364	330+	Irreg (15) Wolf and twins copy		
		AB 365	365-78	H of Valentinian. Gloria Romanorum		
31(1)	Plot 4/8, Building 4/5, latest phase of furnace	AB 238	341-46	CONSTANTIUS/CONSTANS Victoriae DDNN		
		AB 239	337+	1 standard		
		AB 131		(17)		
		AB 132	Late C4	(8)		
		AB 131bis	330-41	CONSTANTINOPOLIS		
		AB 105	330-35	2 standards		
		AB 272	C.4	(11)		
		AB 273	C.4	Minim (8) Wolf and twins type		
		AB 274	C.4	Irreg (14)		
		AB 275	C.4	Irreg (10.5)		
		AB 276	mid C4	FH type		
		AB 277	C.4	Minim (7)		
		AB 278	C.4	Minim (7)		
		AB 279	C.4	Minim (7)		
		AB 299		(12)		
		AB 308	C.4	Minim (9)		
		AB 351	346-50	CONSTANTINE II/CONSTANS Fel temp N/RP		LRBC 2.591-2 or 598
		AB 378		(12)		
		AB 379	337+	1 standard		
		AB 380	C.4	Minim (8)		
		AB 381	C.4	Minim (8)		
		AB 382	351-2	DECENTIUS ? Victoriae DDNN		
		AB 388	C.4	Minim (10)	D	
		AB 389	C.4	Minim (7)	D	
		AB 390	C.4	Minim (7.5)	D	
		AB 391	C.4	Minim (8-10)		
		AB 392	C.4	Irreg (10)		
		AB 393	C.4	Minim (8)		
		AB 394	C.4	Irreg (11)	D	
		AB 395	Mid C4	Irreg (13) FH type		
		AB 396	C.4	Minim (8)		
		AB 397	C.4	Minim (6)		
		AB 398	C.4	Minim (6)		
		AB 399	C.4	Minim (9)	D	
		AB 400		Thick piece of bronze (7)		
		AB 408	324+	?Helena. Securitas Reip?		
		AB 409	352-54	CONSTANTIUS II FH3	TRP	LRBC 2.72
		AB 410	C.4	Minim (9)		
		AB 411	C.4	Minim (8)		
		AB 412	C.4	Minim (9)	D	
		AB 413	C.4	Minim (9)		
		AB 414	C.4	Minim (9) attached to iron ?nail		
		AB 415	C.4	Minim (9) 1 standard type		
		AB 416	C.4	Minim (8)		

Context	Location	Coin No.	Date	Description	Mint	Ref.
31(1) Contin.		AB 419	C.4	Irreg (12) FH Type		
		AB 417	C.4	Irreg (12)		M29
		AB 418	late C.4	Minim (8)		
		AB 420	C.4	Minim (9) FH type		
		AB 421	C.4	Minim (10)		
		AB 422	341-46	H of Constantine. Victoriae DDNN		
		AB 423	C.4	Minim (9) Wolf and twins type		
		AB 427	346-50	H of Constantine Phoenix		
		AB 105	330-41	CONSTANTINOPOLIS		
		AB 105 bis	330-35 ?	2 standards		
		AB 224	C.4	Minim (10)		
		AB 234	C.4	Irreg		
		AB 415	335+	Minim (10) Wolf and twins type		
		Comment: This deposit is significant for the number of small size mid-late C.4 derivatives, suggesting that it was in operation after 360 but the absence of late coins suggests the use was relatively short-lived. There is also a number in a distinctive style, hinting that the furnace might have been used for the illicit production of small change.				
42	Posthole Building 4/5 Plot 4/8	AB 315	330- 41	VRBS ROMA Wolf		
21	Replacement, N-S ditch Plot 4/8	AB 189	307- 24	LICINIUS GENIO POP ROM	London	
25	Pit to N of Building 4/5	AB 242	C.4	Minim (8)		
		AB 243		(11)		
		AB 244	C.4	Minim (10)		
		AB 280		Quarter of coin only		
		AB 281	330- 37	CONSTANTINOPOLIS	⚒TRS	LRBC L 77
		AB 283	324- 41	H of Constantine		
		AB 284	C.4	Minim (11)		
		AB 285	C.4	Minim (5)		
		AB 286		metal 2.5-3mm ?coin		
5	Clayey spread S of Building 4/5 Plot 4/8	AB 69	C.4	Minim (9)		
6	" "	AB 71	335+	Irreg (14) FH type		
		AB 71bis		fragment of coin		
		AB 72	335- 41	CONSTANTINE II 1 standard	?Lyon	
		AB 76	330- 35	H of Constantine 2 standards	TR.S	LRBC I 60
		AB 233	C.4	Minim (6-7)		
		AB 257		Minim (6)		
11(1)	" "	AB 245	C.4	(22) thick flan		
		AB 154	C.4	Minim (12)		

UNSTRATIFIED COINS

Area 3, surface of Colchester road	AB 439	C.4	Minim (10)
	AB 440	351-53	Magnentius/Decentius Victoriae type 2
	AB 441	330-37	VRBS ROMA
	AB 442	?	
	AB 443	330-35	CONSTANTINOPOLIS
	AB 453	346-50	Constantius II/Constans Phoenix 2
	AB 454	late C4	Irreg ?H of Valentinian
	AB 455	?	
	AB 461	330-35	CONSTANTINE II 1 std)P(
	AB 466	306-37	Follis Constantine/Licinius SOLI INVICTO COMITI
	AB 467	C.4	(14)
	AB 481	330+	H of Constantine

Topsoil, 1974-76 excavations	AB 3	306-37	CONSTANTINE I
	AB 4	328-30	CONSTANTINE I Providentiae Trier
	AB 34	C.4	
	AB 36	351-54	MAGNENTIUS
	AB 34 bis	C.4	frag Siscia
	AB 47	C.4	
	AB 48	Late C.4	
	AB 49	C.4	Minim (8)
	AB 50	C.4	Irreg
	AB 52	341-46	H of Constantine
	AB 54	324-30	H of Constantine
	AB 57	C.4	
	AB 363	C.4	Minim (10)

AB 430	335+	Irreg I standard type
AB 124	C.4	Minim (9)
AB 265	C.4	Irreg Constantinopolis Type D
AB 267	335-41	1 standard
AB 268	335-41	1 standard
AB 289	C.4	Irreg (11)
AB 290	324-28	Helena. Pax Pvblica
AB 291	346-50	H of Constantine Phoenix
AB 292	337-41	1 standard
AB 293	C.4	Minim (8)
AB 581	337-41	1 standard
AB 532	355+	Minim (10) Fel Temp type
AB 724	early C2	Sest ?Trajan
AB 786	306-24	CONSTANTINE I SOLI INVICTO COMITI
AB 756	330-35	CONSTANTIUS II 2 stds TRP
AB 735		(18)
AB 736	C.4	Minim (11) ..IV..

Context Location	Coin No.	Date	Description	Mint	Ref.
Topsoil, 1974-76 contin	AB 737	341-46	CONSTANTIUS/CONSTANS Victoriae	D / TRP	
	AB 738	C.4	Minim (6.5)		
	AB 734	C.4	Minim (8)		
Ditch 159(2)	AB 731	337-41	CONSTANTINE II		
	AB 730	337-41	THEODORA PIETAS ROMANA		
	Note: this ditch is Phase 1 so these coins are clearly intrusive (cut by Phase 4b pit at this point)				
1977/8 watching brief: topsoil over Building 4/1b	CW 4	337-41	1 standard CONSTANS	I / PLG	LRBC I 253
	CW 5		Illeg.		
	CW 6	341-46	CONSTANTIUS II ? Victoriae DDAVGGQNN	?G / PARL	LRBC I 444?
	CW 7	350-75	H of Valentinian		
	CW 8	330-35	VRBS ROMA Wolf	* PLG	LRBC I 205
	CW 9	350+	Irreg FH 3 type		
	CW 10	352-60	FEL TEMP FH3		
	CW 11	320-24	CONSTANTINE I VIRTUS EXERCIT VOT XX	N/S	C.252
	CW 13	C.4			
	CW 14	C.4			
	CW 15	C.4			
	CW 16	330-35	CONSTANTINOPOLIS	⚜ / TRP	LRBC I 86
	CW 17	350+	Irreg FH type		
	CW 18	320-24	CONSTANTINE I BEATTRA NQLITAS	F/B / PLN	C.10 var
	CW 19	330-35	CONSTANTINE II 2 standards	TR.S	LRBC I 64
Topsoil over ditch 185	CW 20	330-35	CONSTANTIUS II 2 standards	TR(.P or .S)	LRBC I 64
Land drain, Area 3	AB 74 bis	C.4	Minim	Intrusive	
	AB 90	late C4	Victoria type.	"	

Note+ The coin numbers are those allocated by the excavators.

DM: 1966 excavations;
AB: 1974-76 excavations;
CW: 1977-8 watching brief.

*denotes Phase 4a contexts extending in use into Phase 4b.

ANALYSIS OF COIN

by G C Morgan

A metallographic examination was carried out on a polished section of one coin, 1974 SF 413 (from the upper layer (1) of Furnace 31, Building 4/5, Phase 4b). The crystal structure was revealed by etching in alcoholic ferric chloride and picric acid solutions in succession. This showed a distorted dendritic structure of a copper/lead alloy. This appeared as a copper matrix with interdendritic lead.

The elements were determined by an x-ray analysis of the same section on the electron microscope. This showed the dendrites to be copper and the interdendritic material to be lead in the approximate proportions Cu 85, Pb 15. Tin and zinc were not detected. Silver was not determined.

SAMIAN WARE FROM DEPOSITS OF PHASES 3 AND 4

amalgamated reports by Joanna Bird and Hedley Pengelly;
with notes on the stamps by Brenda Dickinson and B R Hartley

PHASE 3

1. Western side ditch, Fleet Marston road

126 (2)	Walters 81, CG, Ant.

2. New side ditches, Alchester road

i) Eastern side

13	Dr 37, CG, mid-late Ant.
63	Dr 18/31, CG, Ant. Dr 36, CG, 2nd cent. Walters 79, CG, later 2nd cent. CG sherd, 2nd cent.
127	CG sherd, 2nd cent.

ii) Western side

87	Walters 79, CG, later 2nd cent.

3. Other features

294 (pit)	Scrap, CG, 2nd cent.

PHASE 4a

1. Alterations to Alchester road surface

206	Dr 79 - Tg range. Flat dish with grooves instead of the more normal rouletted circle found on the floor of 79R's, TgR's, etc. E.G., probably Rheinzabern. Late 2nd or early 3rd cent.

2. Ditches, east of Alchester road

Rearward plot boundary 102. Dr 27, SG, Flav.

3. Ditches west of Alchester road

i) Rearward plot boundaries

167	Dr 31, CG, Ant.
319	Dr 38, slightly burnt, Ant.

ii) Plot side ditches

90 (Plot 4/3)	Dr 31, CG, Ant.

104 (Plot 4/3) Dr 37, CG. Broken ovolo, beaded tongue. Had.-Ant.

4. Structures and other features

i) Plot 4/1

154 (Building 4/6b) Dr 31, CG, Ant.

ii) Plot 4/3

61 (circular gully, Building 4/2a) CG sherd, 2nd cent.

iii) Plot 4/4

202 (enclosure ditch) Dish fragment. CG. Slightly burnt. Probably mid to late Ant.

iv) Plot 4/8

3 (yard outside Building 4/5) Bowl sherd, CG, mid-later 2nd cent.

7 (2) (N-S drainage ditch) Dr 31, CG, Ant.

24 (N-S drainage ditch) Dr 42 dish, barbotine leaves, SG, mid-late 1st cent.

27 (" " ") Dr 33, CG, 2nd cent.

PHASE 4b

1. Recutting, side ditches, Alchester road

i) Eastern side

58 Dr 37, CG. Panel design with medallion or festoon. Had.-Ant.
Dr 37, C/EG, later 2nd cent.; worn CG sherd, 2nd cent.

300 Fragment of an enclosed jar (Déch 72 etc) with 'cut-glass' facets (cf O & P, Pl. LXVII). Probably late Ant.
Curle 15, CG, Ant.

ii) Western side

76 Two CG sherds, 2nd cent.

86 Dr 33, CG, Ant.
Dr 37, CG, Ant.

132 (1) CG sherd, 2nd cent.

2. Rearward plot boundaries west of Alchester road

179 Dr 18/31, CG, Ant.
Dr 18/31, CG, early 2nd cent.

3. Recutting, plot boundaries west of Alchester road

131 (Plot 4/1) Dr 33, CG, Had.-Ant.

185 (Plot 4/5) Dr 31, CG, Ant.
Dr 38, flange, EG, Ant.
Tiny scrap, 2nd cent.

197 (Plot 4/5) Dr 31R, CG, mid to late Ant.

4. Structures and other features

Plot 4/1

i) Internal boundary

175 (2) — Lud Tg probably, EG, later 2nd-early 3rd cent.
CG sherd, possibly Walters 79; later 2nd cent.

ii) Pits

96 — Dr 31R, CG, later 2nd cent.
Dr 37, CG. Probable panel design with double medallion or festoon. Early-mid 2nd cent.
Dr 37, CG. Broken small ovolo, with rosette tip. Had.
CG sherd, 2nd cent.
CG sherd, 2nd cent.
Dr 46, CG, mid 2nd cent.

146 — CG sherd, 2nd cent.

170 — Dr 33, CG, Ant.
Dr 37, CG, Had.

171 — Dr 33, EG, later 2nd-early 3rd cent.

173 — Dr 37. The ovolo is blurred, but is probably R. B38, used by X-9 ('Medetus-Ranto') of Martres. For the same festoon and astragalus, with the panther 0.1566, see S & S Pl. 31, no. 368. c AD 100-125
Two CG sherds, 2nd cent.
CG sherd, later 2nd cent.
Lud Tg, CG, later 2nd cent.

Plot 4/2

196 (drainage ditch) — Dr 31, CG, Ant.
Dr 31, CG, burnt. Ant.

Plot 4/3, Building 4/2b

55 — Dr 18/31, CG, early-mid 2nd cent.

56 — Walters 80 probably, CG, later 2nd cent.

62 — Dr 31, CG, Ant.

66 — Dr 18/31 or 31, CG, mid-later 2nd cent. ATILIANIO on Dr 33. Die 2b, Atilianus of Lezoux. Atilianus' output is mainly mid-late Ant., but he may have occasionally made 27. He made 31R, 79 and 80, and occurs at Pudding Pan Rock. c AD 160-190
Dr 37 in the style of Caratillus of Lezoux. His ovolo, with beads and astragalus, as S & S Pl. 96, no. 3; the deer may be that on *ibid*, no. 1. The dolphin is probably 0.2394A. c AD 140-170
Dr 18/31, CG, mid 2nd cent.
Dr 18/31, CG, mid 2nd cent.
Dr 18/31, CG, Ant.
Dr 33, CG, 2nd cent.

	Dr 33, CG, mid 2nd cent. Dr 33, CG, Ant. Dr 33, CG, Ant. Dr 36, CG, 2nd cent., very worn Dr 45, CG, later 2nd cent. CG sherd, 2nd cent.
83	Dr 31, CG, late 2nd cent. Dr 33, CG, Ant. Dr 36, CG, Ant. CG sherd, 2nd cent.
105 (3)	Dr 18/31 or 31, CG, Ant. Dr 33, CG, Ant.
130	SG sherd, 1st cent. Two CG sherds, 2nd cent.
136	Dr 33, CG, Ant. Dr 33, CG, Ant. CG sherd, 2nd cent.
64 (pit)	Two SG sherds, 1st cent. Two CG sherds, 2nd cent. CG sherd, mid-later 2nd cent. Dr 33, CG, Ant. Dr 18/31 or 31, CG, mid-later 2nd cent. Dr 37, CG, a fragment from below the decoration. Ant. Walters 79 probably, later 2nd cent.
Plot 4/7	
335	Dr 37, a fragment from below the decoration. Ant.
Plot 4/8	
1 (drainage ditch, Building 4/5)	Dr 31R, CG, later 2nd cent. Dr 45, CG, later 2nd cent. Dr 45, CG, later 2nd cent.
7 (3) (replacement N-S ditch)	Dr 29, SG. Scroll in lower frieze; the arcades contain a pair of bell-shaped flowers on tendrils (as H Pl. 55, no. 43) at the base of a formal arrangement. c AD 50-70
6 (clayey spread)	Walters 79, CG, later 2nd cent. Dr 33, CG, Ant.
11 (" ")	Dr 18, SG, Flav. Dr 30, SG, pre-Flav. Dr 36, CG, early 2nd cent. Dr 37, CG, early 2nd cent. CG sherd, 2nd cent.

From a drain trench dug at the eastern end of the site excavated in 1967 (in the Link Way/Sandyholme Road area, around SP 69054825).

Dr 33, CG, two, one slightly burnt, Ant.
Dr 36, CG, broken across a large rivet hole, late Ant.
Fragment of a large, flat platter or stand (cf. O & P, Pl. LXVI, 4, from Silchester). These unusual vessels are common to South, Central and East Gaul, though relatively few are known; some are stamped. This particular example appears to be in EG fabric, and dates from the end of the 2nd century.

Form 37. Many pieces, some adjoining, from an eroded bowl pierced for rivets. The simple scheme of panels is complete and gives saltires with corded bifid leaves (basically Rogers 1974, G390) and circles alternating with: (ia) medallion with 'cushion' (ibid. U2); (ib) bird (O. 2267A); (iia) festoon with crane (D. 991 and 1006, O.2202); (iib) erotic group (close to O M). This bowl is by an anonymous Hadrianic - to early - Antonine potter of Lezoux, and has various points of contact with, primarily, X-5 who used the ovolo (Rogers 1974, B31), circles, medallion with 'cushion' and festoon with crane, together with Docilis who used both the 'cushion' and the leaf and some work of an anonymous mould-maker (X-9) producing for the 'Medetus-Ranto Group'. It is perhaps best to assign this bowl tentatively to X-5, but with caution, since its relatively spaceous design is quite unlike the majority of his work which he tends to clutter up with small decorative details to utilize as much space as possible on the bowl (compare S and S, Pl. 67 with Pl 31, 373 in the style of X-9) (Fig 17, 1).

Form 37 pierced for at least one rivet. The ovolo, though worn, is undoubtedly the one with beaded tongue (Cinnamus 3B) used at Lezoux by Cinnamus ii, Cerialis ii, Sacer i, Anunus ii, Paullus iv and others (cf. Simpson and Rogers 1969, Fig 1). c. AD 140-170.

Form 37. The use of a straight line in conjunction with the ovolo (Rogers 1974, B223) is common to both Pugnus and Secundus v, but the placing of partial, often blurred, impressions of a small dolphin (close to D. 1057, O. 2401) in the corners of panels is diagnostic of the latter. c AD 140-175.

Unstratified illustrated samian (Fig 17)

2. Form 37. CG in the early style of Sacer of Lezoux. The upper zone has a continuous festoon with birds O.2252 and O.2298, the lower one bundles of leaves (Rogers L 9) in two overlapping impressions; acanthus tips (ibid, K23); lion (O.1404) and bear (O.1627). Cf S and S Pl. 82, 6 except that the pendants in the festoon are beaded like the Saalburg bowl (ibid, Pl. 84, 14) and end in tri-lobed buds (Rogers G71). c AD 120-145.
Unstratified from the area of features 297-299.

5. Form 30. CG. The ovolo is Rogers B223. Used in conjunction with a straight line (here it overlaps), this ovolo occurs in the work of Pugnus or Secundus (cf S and S Pl 154, 16, which also gives the Neptune and the bead-row). c. AD 145-170.
Unstratified from the area of features 282 and 287.

7. Form 37. CG. Both the fabric and the poor light orange-brown slip are slightly burnt. No precise parallel has been found for the ovolo replacement of poorly moulded, damaged and abraded cross-like ornaments with straightish upper arms and more strongly bowed lower ones. Ricken 1934, Taf. XII, 64 is similar but larger. Antonine or early 3rd century. Unstratified from the area of feature 297.

POTTERY FABRIC TYPE SERIES, TOWCESTER.

Taken from Brown and Alexander 1982, 356. NB. some of the fabrics and forms do not occur in the Alchester road suburb.

1. Medium reddish/orange buff surfaces and break (5YR 7/4 - 5YR 7/6), hard smooth, uniform, sandy. Decoration consists of rough casting, burnishing, rouletting; sometimes the external surface is a darker, greyish brown (5YR 4/2). Pale cream slip occasionally. Mostly bag shaped beakers but occasional bowls, jars and lids.

2. Pinkish (2-5YR 7/2), uniform, hard, slightly uneven surface with sand grains plainly visible. Lids, beaker.

3. Light buff surfaces (5YR 7/4), grey core and sometimes grey interior; soft, smooth, mica dusted.

4. Dull orange/buff surfaces (2-5YR 6/4) and break, soft, smooth. Lids.

7. Rather coarse, rough, sandy, reddish brown surfaces (2-5YR 6/2), thickish grey core, mica dusted.

8. Medium orange/buff surfaces (5YR 7/6), grey core, soft, smooth, fine sandy inclusions. Lids, but mainly imitation samian shapes.

9. Softish orange (7-5YR 8/3) surfaces, sandy, thickish grey core. Beakers.

10. Hard orangy reddish buff fabric (5YR 7/3 - 6/8), finer than 8, sometimes reduced surfaces. Beakers.

12a. Lower Nene Valley colour coated ware.

12b. A lower Nene valley fabric, reddish orange (10R 6/1), black lustrous slip. Beakers.

13. Oxfordshire colour coated ware.

14. Other colour coated wares: (c) Cologne; (f) North Gaul fabric 1; (g) North Gaul fabric 2; (h) Eastern Gaulish.

15. Black burnished ware, category 1.

15. Light bluish grey surfaces (N 7); margins and often inside surface a lighter grey. Thin core can be buff. Fine, hard, smooth.

17. Very hard, sandy, light grey body; slate grey shiny surfaces (5PB 5/1 - 3/1). Necked jars, bowls.

18. Dark to medium grey surfaces (7-5 YR 6/1 - 7-5 YR 6/2), sometimes with buffish tinge or buff margins. Burnished generally hard, fine glistening sandy temper. Jars, bowls with reeded rims, beakers.

19. Medium grey surfaces (10 YR 5/1 - 10 YR 6/1). Hard, rough feel, coarse sand inclusions plainly visible. Channel rim jars, necked jar.

20. Medium to dark grey surfaces (10 YR 4/1 - 10 YR 6/1), mostly uniform but sometimes with dark core. Very hard, smooth. A variety of jars, bowls, lids. The common rather featureless grey ware of the Nene Valley and elsewhere.

21. Hard, dense grey sandy fabric with plentiful inclusions of haematite. Hand burnished on outside to give a smooth, dark grey (N4) finish. Mainly copies of BB1 forms.

22. Medium to dark grey surfaces (N 5-N6), sometimes with a blotchy steel blue tinge (5 PB 5/1), hard, rough sandy feel. Sometimes burnished, Upper Nene valley including Ecton. A variety of jars and bowls.

23. Exterior surface medium greyish/buff (10 YR 5/1); light buff core and interior (10 YR 8/2). Hard, fairly smooth but sandy. Reeded rim bowls, channel rim jars, necked jars, lids.

24. Black, dark grey surfaces (2-5 YR 3/1 - 2-5 YR 4/1), lighter grey core, can be softish, sandy. Wide mouthed and necked jars.

26. Very dark grey surfaces (5 YR 2/1), buff/reddish brown core, sandy. Necked and channel rim jars. ? Caldecotte, Bucks.

27. Highgate Wood fabric type C.

28. Softish bluish grey (N7) rather coarse sandy fabric sometimes with black slip.

30. Coarse grey ware (7-5 YR 4/1), often with a brownish tinge or margin, softish, sandy with large grains frequently visible.

33. Light buff/brown granular surfaces (7-5 YR 7/3), hard, gritty, sandy, roughish feel. Sometimes a grey core. Reeded rim bowls, jars.

34. Brownish grey surfaces (7-5 YR 5/2), buff core, hard, sandy, finer than 33. Channel rimmed jars.

35a. Medium reddish buff surfaces (5 YR 6/4 - 5 YR 7/4), grey in patches, sometimes grey core. Mostly hard, lumpy with roughish uneven feel, sparse shell inclusions. Generally thick, scoring and rilling. Large storage jars, channel rim jars, wide mouthed bowls.

35b. Orange/buff surfaces (5 YR 6/4 - 5 YR 7/4), generally a thick grey core, smooth but sometimes irregular surface owing to large quartz, limestone and grog inclusions. Softish, friable. Sometimes burnished. Large jars, necked jars.

36. Orange/light buff (5 YR 7/4 - 5 YR 7/6), sometimes grey core. Softish rough and sandy. Flagons, reeded rim bowls, channel rim and necked jars, lids, cheese press, face urns, imitating Samian forms. Verulamium and Upper Nene areas.

40. Reddish brown/orange surfaces (5 YR 6/4), sometimes grey core, very hard, smooth, sandy; cream or pinkish cream slip (10 YR 8/2). Oxfordshire white colour coated ware.

41. Yellowish cream fabric (7-5 YR 8/4), uniform, hard, smooth, sandy. Channel rim and necked jars, bowls, flagons.

42. Cream (7-5 YR 8/2), hard, smooth, sandy. Flagons.

43. Parchment ware.

44. Shell tempered ware:

(a) Salmon (YR 6/6), soft, frequent large white shell fragments, often scored. Large storage jars, necked jars.

(b) Reddish brown (10 YR 5/4), dense, spiky shell fragments on surface, give a rough feel.

(c) Hard, shell visible but surfaces smoothed down, dark reddish brown, often rilled (2-5 YR 6/3 - 2-5 YR 6/4). Surfaces can be greyish (2-5 YR 6/1). Cooking pots, plain bowls, flanged bowls. Of the type made at Harrold, Beds.

45. Amphorae. Mostly a light yellowish buff (7-5 YR 8/3), rough feel, sandy inclusions plainly visible. Some fragments are a light brown/orange (5 YR 6/4) however and a few have a thick grey core. Most are of Dressel 20 form and come from the Guadalquivir region of Spain, where they were used principally for the carriage of olive oil.

Notes on imported colour coated ware from the 1977-8 watching brief

by R P Symonds

Three small non-joining rim sherds, probably of one vessel. Cornice rim, similar to that of a Dech. 74 'hunt-cup' (cf. Lambrick 1980, Fig 18, no 12), except for the presence of a single branch of scroll-like barbotine (under the colour-coating) which appears just below the rim. These two elements probably date the sherds to between 120 and 180 AD, and they are most likely to be from Central Gaul, probably Lezoux (Fig 20, 29). 189, Building 2/3, Phase 2.

Small rim sherd of a beaker which belongs in the 'Rhenish' ware tradition, but is not really otherwise identifiable. 189, Building 2/3, Phase 2.

A body-sherd from a folded beaker, probably from Trier. Date: c. 200-275 AD. 202, Plot 4/4, Phase 4a.

A body-sherd of a beaker, probably from Trier. Date: c. 200-275 AD. 208, industrial layer, Plot 2/3, Phase 2.

Two body-sherds of two beakers. The one with a redder fabric is probably from Trier (cf. Lambrick 1980, Fig 22, no 7). Date: c. 200-275 AD. The one with a whiter fabric is virtually unidentifiable, and could either be continental, in which case it might be Central Gaulish, or it could possibly be from the Nene Valley: given the level of vagueness, it is not very dateable. 282, Alchester road side ditch, west side, Phase 2.

Sherds of two beakers. One of these, accounting for all but one of the sherds, is probably a Central Gaulish beaker with rouletting and just a trace of barbotine decoration (under the colour-coating). Date: 120 - end of 2nd C. The other sherd is probably British in origin, but the source is not obvious, and the sherd is therefore not dateable. 287-8, ditches. Phase 1.

One sherd of a beaker, probably British in origin and therefore not dateable. 288, ditch, Phase 1.

Rim of Dr 40, Central Gaulish, probably from Lezoux, but almost as likely to be from one of several other workshops including Les Martres de Veyre, Clermont Ferrand, Vichy - Terre Franche, Toulon sur Allier and Yzeure - St Bonnet. Date: 120 AD to end of 2nd C. 189, Building 2/3, Phase 2.

A ROMAN MIRROR FROM ST LAWRENCE ROAD, TOWCESTER, NORTHAMPTONSHIRE

by G.C. Morgan

Department of Archaeology

University of Leicester

During the excavation of the above site in 1974, a wood backed Roman mirror was found. Although broken and mineralised, it retains its original polish and surface detail.

The burial conditions were very wet with clay and much waterlogged wood. The mirror itself had a two-ply wooden backing, oak about 3mm thick and an unidentifiable diffuse porous wood about 1mm thick.

The chemical analysis of the mirror was as follows:-

Cu	59.234%
Sn	22.923%
Pb	15.04%
	97.199

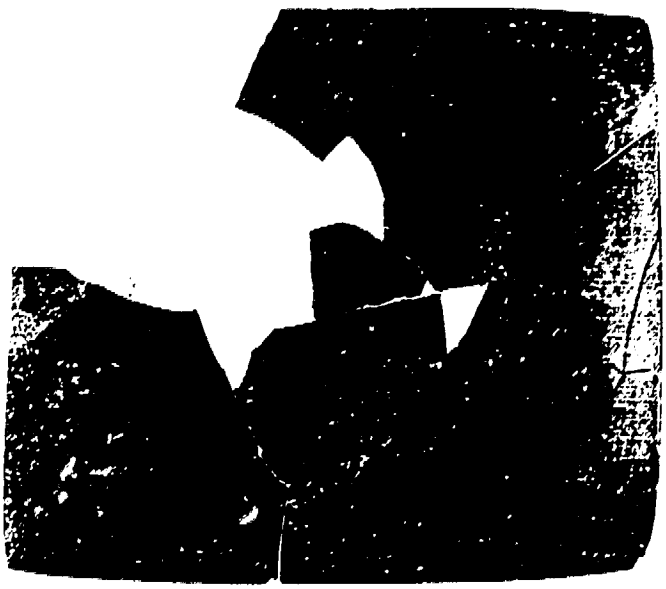
leaving 2.801% as oxides and trace elements.

The hardness was 322 'Vickers', which is about twice as hard as a cast 10% Sn bronze.

X-ray probe analysis showed the presence of various other elements such as As, ? and Fe which are quite common trace elements in ancient bronzes. The metal maps show clearly the heterogeneity problems of analysis. A small sample was removed from the centre of the mirror, about 2mm x 1mm and about 0.8mm thick. Metallographic examination shows that the mirror was originally cast and subsequently polished on one side. The numerous surface casting imperfections, such as blow holes, are still visible on the polished face. The metal is generally homogeneous, although surface depletions and local concentrations of impurities are quite obvious. X-ray diffraction analysis of the corrosion products was not successful, the sample apparently being rather amorphous.

Only a few very blurred lines were obtained. The corrosion products/patina appeared to be identical on both sides of the mirror, despite one side being polished and the other as cast. The depth of corrosion does vary with the original porosity of the metal, the cast surface being more corroded than the polished surface.

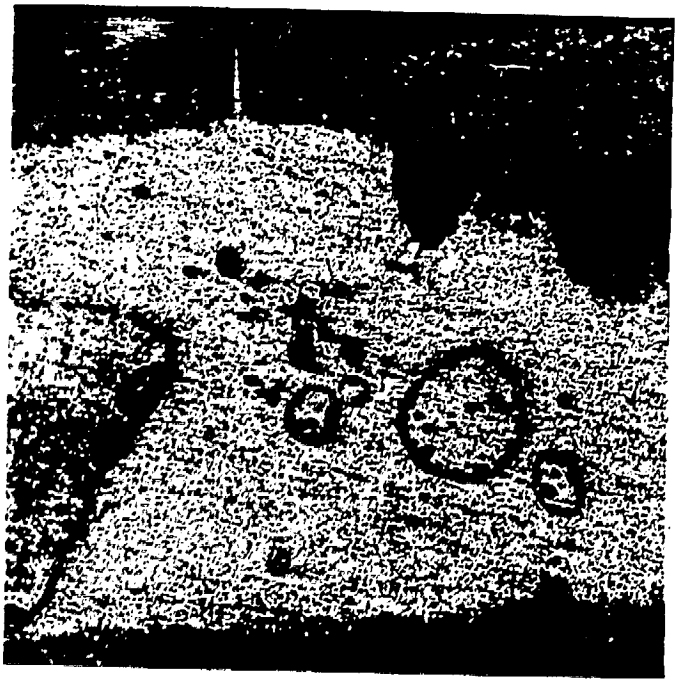
The conditions of burial must have been more or less continuously waterlogged, in view of the preservation of large amounts of timber. Although not recorded, a slightly acid, anaerobic environment with a high tannin content might be expected. The inhibiting effect of poly-phenols (tannins) may have contributed to the 'amorphous' patina on the mirror.



The true colour of the mirror is a dark grey/green.

The following optical and electron micro-graphs show the metallurgical and elemental nature of the mirror section (1.8mm thick).

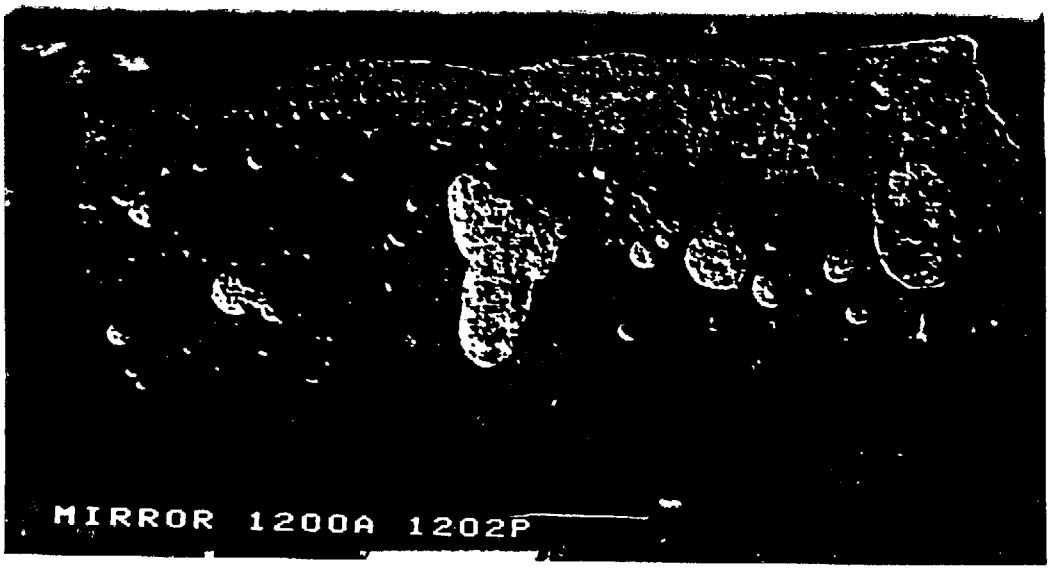
1) Polished section of the mirror, cast surface upwards.



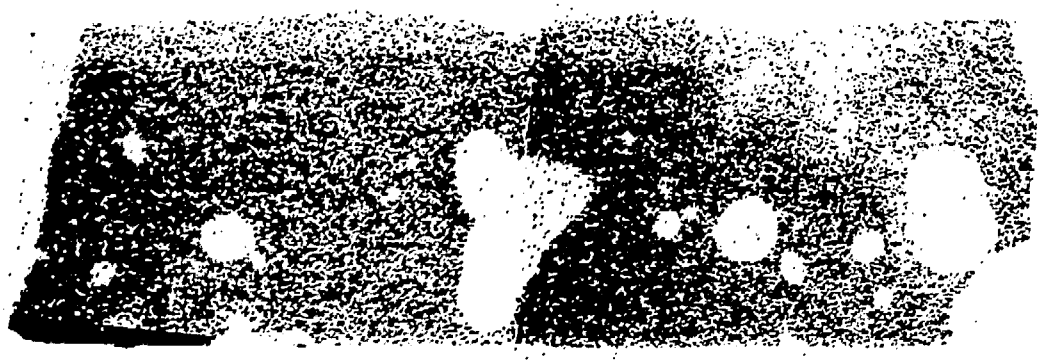
2) Enlargement of the above section, etched in $FeCl_3$ soln.

3) Further enlargement of the section, showing the fine dendritic structure and a light spot of a high copper phase (pink), due to redeposition through corrosion.

Fig. M1 Towcester. Alchester road suburbs: the mirror.



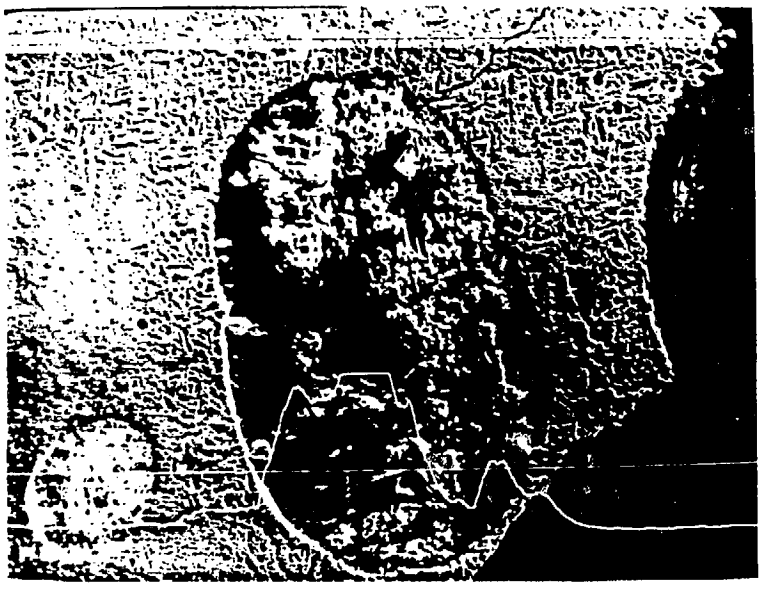
4) Electron micro-graph of the mirror section as in 1. The porous cast surface is not as clear as the optical micro-graph.



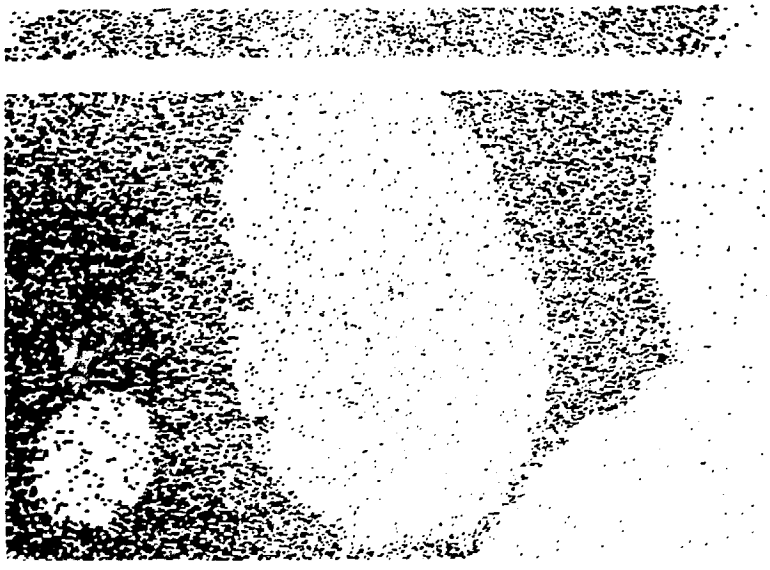
5) Metal map showing the copper distribution. Note the porous cast surface and the non copper voids.

6) Metal map showing the lead distribution.

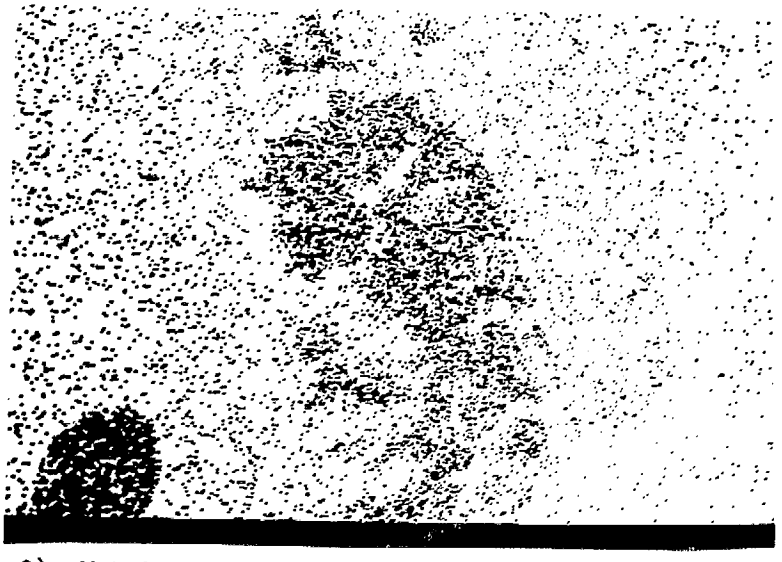
Fig. M2 Towcester, Alchester road suburbs: the mirror.



7) Enlargement of 4 with an Fe concentration graph across a feature.



8) Metal map of 7 showing the Cu distribution.



9) Metal map of 7 showing the As ? distribution.

Fig. M3 Towcester, Alchester road suburbs: the mirror.

FLINT (Fig M4)

The flints found during the excavations of 1974-6 have been reported on by Mrs Elizabeth Healey as follows:

The seven flints recovered during the excavation of the site were from residual or surface contexts. They include a fragment of a leaf-shaped arrowhead, a core-rejuvenation flake, a piercer, and four flakes.

The flakes all have some areas of cortex and two are patinated; one may have been mechanically struck. Three are unretouched and the fourth has edge damage in a concave area, which may have been occasioned in use.

The piercer (1) has a short point with light retouch and is not unlike the piercers from the primary levels at Windmill Hill (Smith 1965, 93).

The core-rejuvenation flake (2), is of Mesolithic character and has been struck along the face of the core at 90° to the existing platform.

The leaf-shaped arrowhead (3) is represented by a basal fragment. It has been bifacially worked with flat flaking on both sides, although one is more regularly worked. It is probably of Neolithic date, although chance finds of leaf-shaped arrowheads may be Bronze Age in date (Green 1974, 106, fn 36).

The flints then have elements of both Mesolithic and Neolithic traditions.

LIST OF FLINTS FOUND IN THE SERIES OF EXCAVATIONS

Illustration No	Description	Context	SF Number
1	Piercer	Topsoil	1975 673
2	Core rejuvenation flake	97, Phase 4a	1975 685
3	Leaf shaped arrowhead	25, Phase 4b	1974 264
	Flake	Topsoil	1975 605
	Flake	75, Phase 4b	1975 595
	Flake	170, Phase 4b	1976 834
	Flake	67, Phase 2	1975 562
	Thin flake	Surface find, area of SP68864807	1977 watching brief
	Flake	Unstratified over Building 4/1b	1977 watching brief

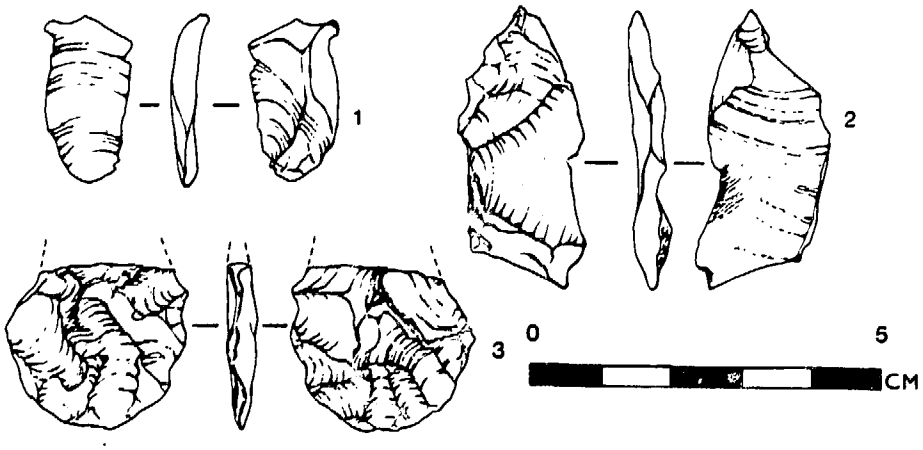


Fig. M4 Towcester, Alchester road suburbs: flints.

ADDITIONAL IRONWORK (Figs. M 5-7)

13. Knife, common type*. Topsoil, Area 1. 1976 Sf 733.
14. Knife. 96, pit , Phase 4b. 1975 SF 682.
15. Knife. 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
16. Top of spatulate-headed linch pin?* 282 (1), Alchester road side ditch, Phase 2.
17. Another? 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
18. Ring headed pin, or possibly a bucket handle. 336, Building 2/7, Phase 2, or Phase 4b. 1967 IW 19.
19. Ring headed pin probably*. Topsoil, Area 3. 1974 SF 23.
20. Possibly a wall hook with plate for attachment*. 171, pit, Phase 4b. 1976 SF 799.
21. Key? 83, Building 4/2b, Phase 4b. 1975 SF 663.
22. Key from barb spring padlock.* 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
23. Loop headed pin. 61, Building 4/2a, Phase 4a. 1975 SF 671.
24. As 23. 1975 SF 705.
25. Loop headed pin?* 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
26. Hook?* 63, side ditch, Alchester road, Phase 3. 1975 SF 548.
27. Hook. Base of topsoil, Trench 25. 1967 IW 17.
28. Chain fragment*. 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
29. Strip, or possibly a bucket binding*. 327, side ditch, Alchester road, Phase 2. 1967 IW 26.
30. Probably fragment of binding, but could also be part of a lock hasp. As above.
31. Binding fragment? 336, Building 2/7, Phase 2, or Phase 4b. 1967 IW 19.
32. Binding fragment?* 282 (1), side ditch, Alchester road, Phase 2.
33. Socket for attachment of a tool to handle? Topsoil, Area 3. 1974 SF 11.
34. Buckle. 169, Building 2/1, Phase 2, or Building 4/6c, Phase 4b. 1976 SF 739.
35. Dog*. 338, Building 2/7, Phase 2, or Phase 4b. 1967 IW 23.
36. Part of a dog? 282 (1), side ditch, Alchester road, Phase 2.
37. Part of a dog?* 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10.
38. Heel of hippo sandal* (see *Verulamium* I, Fig. 63, 29 (Frere 1972)). 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 12.

39. Part of hippo sandal. 336, Building 2/7, Phase 2, or Phase 4b. 1967 IW 19.

40. Part of loop headed pin. 169, Building 2/1, Phase 2, or Building 4/6c, Phase 4b. 1976 SF 764.

41. Might be part of a Type 1 hippo sandal*. 287 (1), ditch, Phase 2.

42. Nail of Type 1 (Manning 1974, 173). 330, Building 2/7, Phase 2, or Phase 4b. 1967 IW 10. Most of the 130 or so nails found in these excavations were of this type and size.

43-45. Bent nails of Type 1. 44 comes from Ditch 287 (1): 45 from Ditch 195. These belong to Phase 2 but the majority of the nails come from deposits which belong or could belong to Phase 4b, Building 4/2b (52), or from the area of Building 4/6c (10) and 4/4 (16) (these could however be 2nd century because of the mixed stratigraphy at those points). Several are bent like these. There is therefore a suggestion that the stylobate buildings of Phase 4b were weatherboarded, but the possibility that some of the 2nd century timber buildings were so covered should also be borne in mind.

46-47. Nails of Type 2, lost head variety. 46 comes from the surface of the Alchester road in Trench 22, 1967 IW 14, and 47 from 331, Building 2/7, Phase 2, or Phase 4b (1967 IW 24).

48. Binding with nail through it*. 294, pit, Phase 3.

49. What was probably a decorative iron boss, 500mm in diameter, with a raised centre portion 250mm in diameter and 9mm high. Like Shakenoak IV, Fig. 63, 481, where late 4th century (Brodribb *et al* 1973). Base of ploughsoil over Building 4/1b, Phase 4b.

* denotes the incorporation of comments by Professor W H Manning.

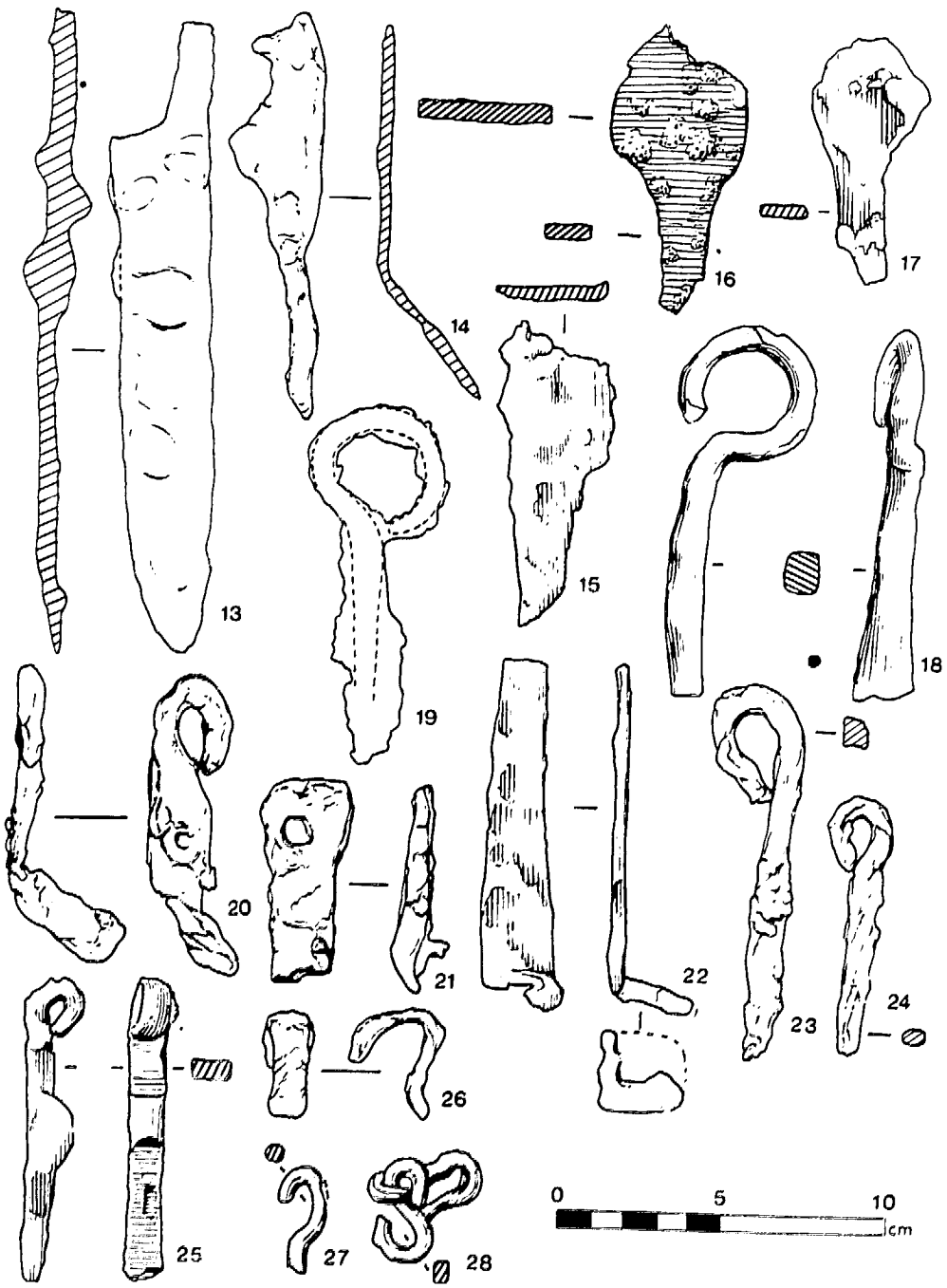


Fig. M5 Towcester, Alchester road suburbs: ironwork.

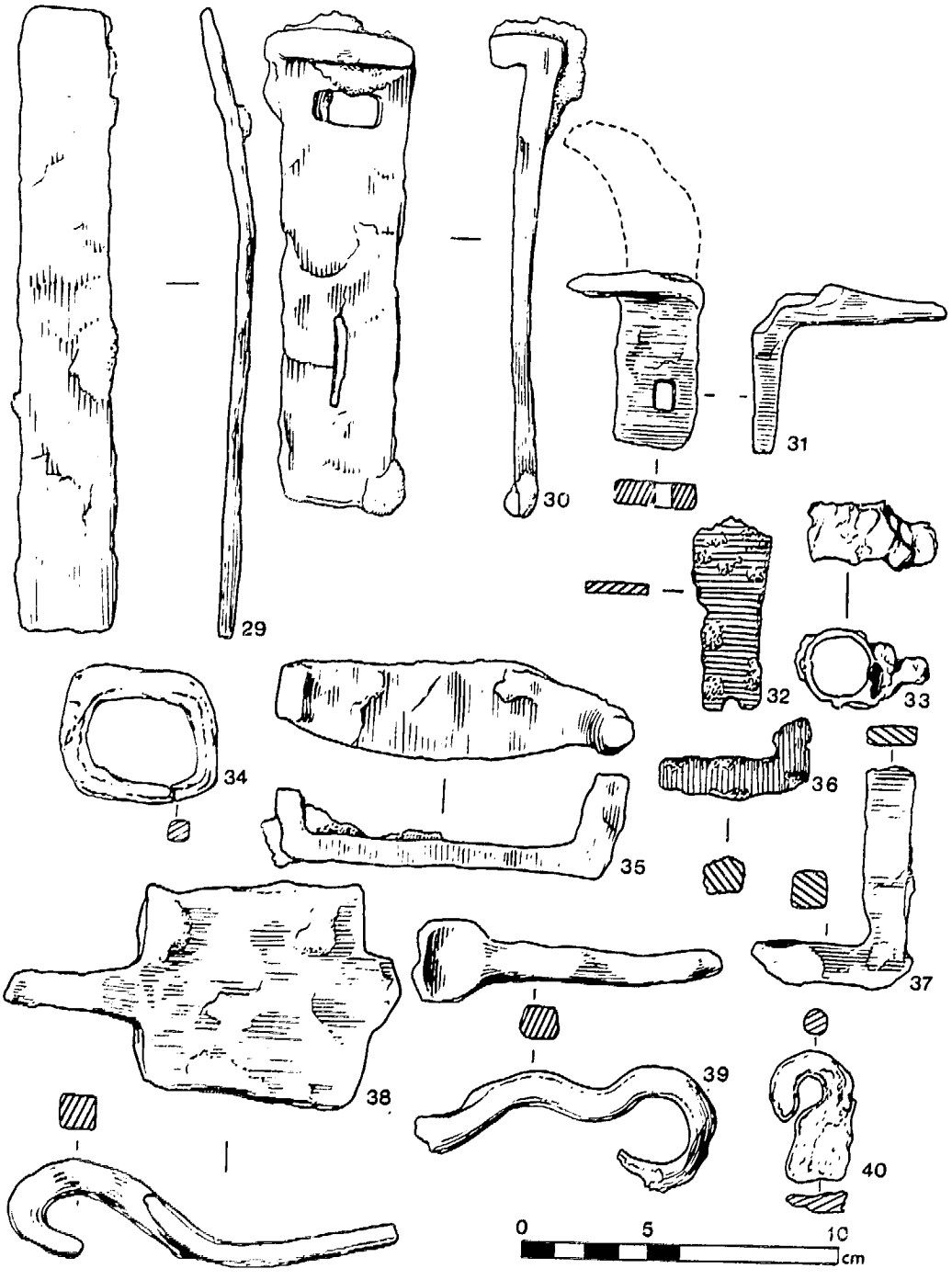


Fig. M6 Towcester, Alchester road suburbs: ironwork.

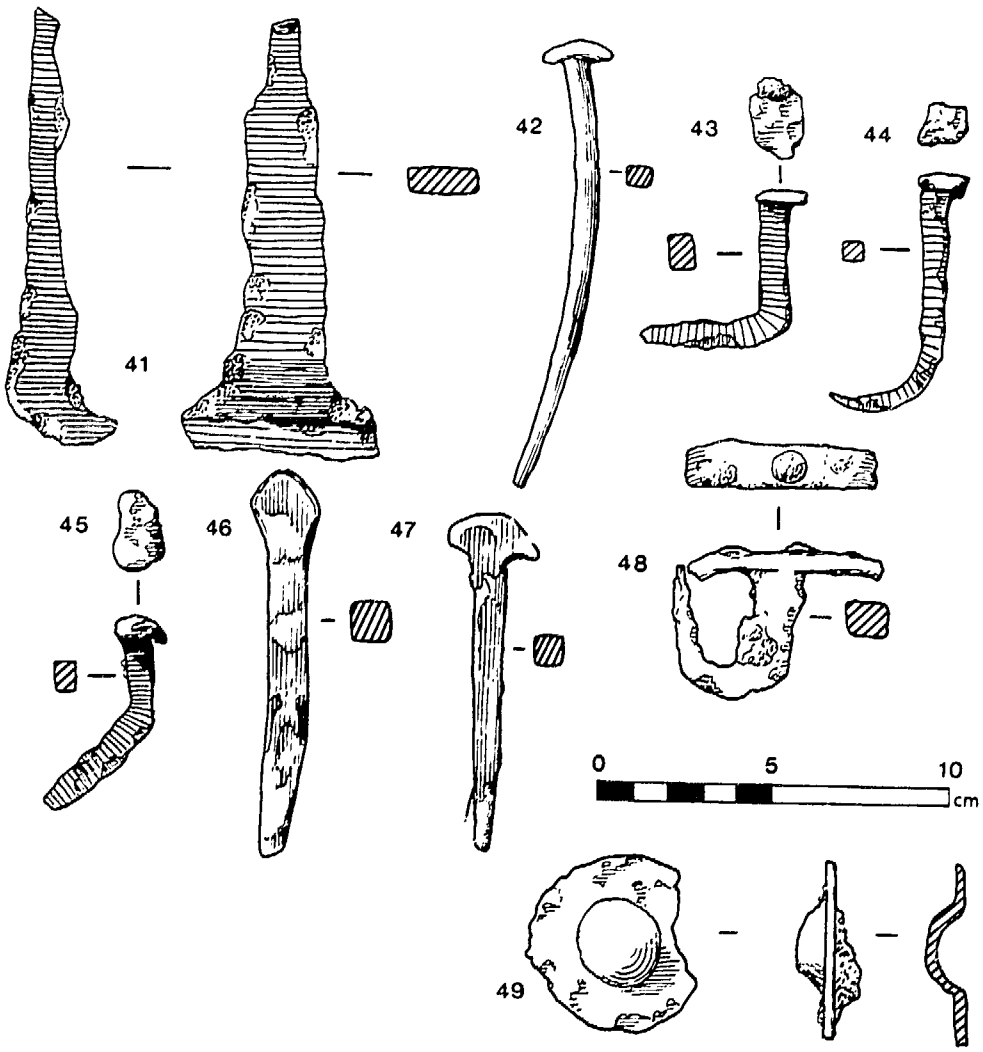


Fig. M7 Towcester, Alchester road suburbs: ironwork.

JET AND SHALE (Fig M 8)

1. Jet bead. 104, ditch, Phase 4a. 1975 SF 672

2. Similar bead. 185, ditch, Phase 4b. For a similar bead dated to c 280-90, Verulamium I, Fig 57, 226 (Frere 1972).

3. Jet bracelet. 101, ditch, Phase 2. 1974 SF 37.

(Unill) Fragment of turned shale bowl, from near base. 185, ditch, Phase 4b.

(Unill) Fragment, shale bracelet, 196, ditch, Phase 4b.

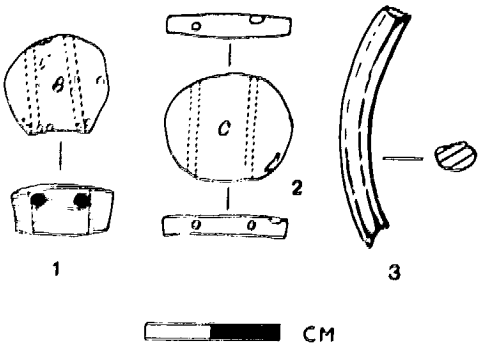


Fig. M8 Towcester, Alchester road suburbs: objects of jet.

LEATHER (Fig. M 9)

(a) From the excavations of 1974-76 (all unill.). The following notes were supplied by the late J H Thornton.

1. Part of a shoe bottom unit - either an insole or more probably one of the intermediate sections between sole and insole. Numerous nail holes, and thongs. 44, ditch, Phase 4b.

2. Possibly a small fragment of the waist of a shoe bottom unit consisting of three layers of leather. 26, ditch, Phase 4b.

3. A heel stiffener from the back of a shoe and possibly part of the shoe quarter itself. The stiffener, as usual, has the grain side inwards and the lasting margin is moulded inwards. 38, culvert, Building 4/5, Phase 4a/b

4. Very fragmentary multi-layered shoe bottom unit consisting of parts of the insole, intermediate sections and stiffener. Very little, if any, of the sole remains. The intermediate sections or fillers are smaller and show some thonging. There are also some nail holes but it is not possible to discern the pattern.
This specimen appears to follow the normal Romano-British method of making a multi-layered shoe bottom unit by thonging together insole and middle sections and then nailing on the sole at the same time enclosing the lasting margin of the upper. (See Thornton 1973). 170/1, pit, Phase 4b.

5. Three thong fragments. 3, yard, Building 4/5. Phase 4a/b.

6. Thong fragment. 16 (2), ditch, Phase 4a.

(b) From the 1977 watching brief (Fig. M 9)
Miss J Swann, Keeper, Shoe Collections, Northampton Museum, reports:

> Leather sole and part of one-piece triangular stiffener of right foot, typical Roman *caliga* (army boot). There appear to be two layers: sole and insole, with impressions of hob nails round the outside of the sole, with a centre row in forepart-waist and under heel, with an intermediate row either side in forepart and under heel. Only part of the head of one nail survives (in the waist). 248mm long x 93mm at tread. Standard Roman army type which could range from the 1st-4th centuries. 207, ditch running from Building 4/1b, Phase 4b.

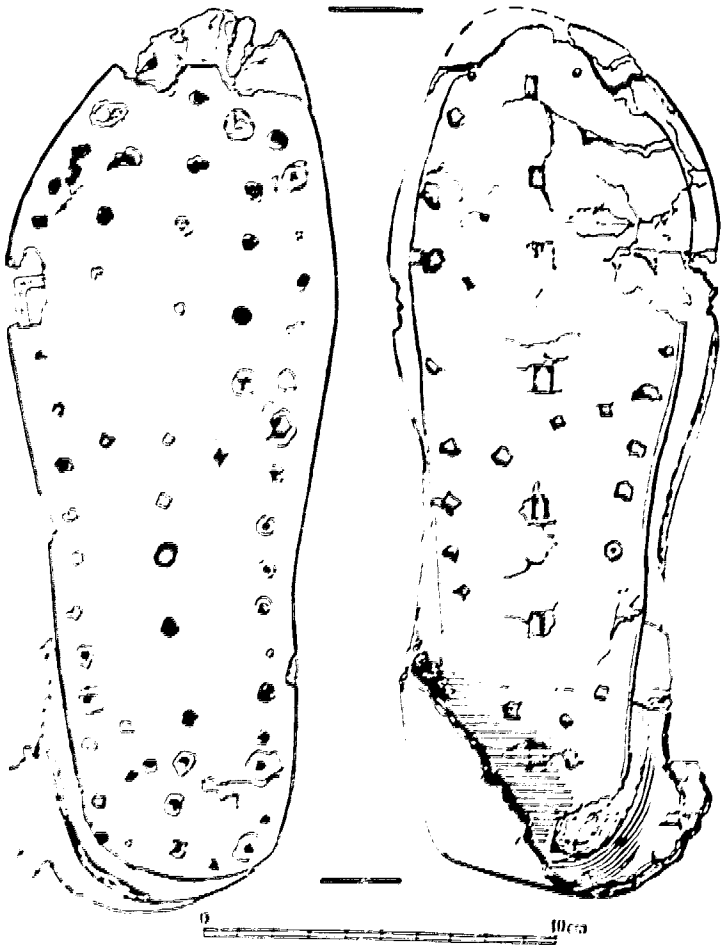


Fig. M9 Towcester, Alchester road suburbs: shoe from Ditch 207, Phase 4b.

QUERNS (Figs M 10-11)

The following table lists the quern fragments found during the excavations. All were of Millstone Grit (those found in the 1974-76 excavations were identified by Dr T Ford, Department of Geology, University of Leicester; those found in 1977 by Mr Gordon Osborne, and Dr D T Moore, Department of Mineralogy, British Museum (Natural History)). Most of the fragments seem to have been used as hardcore for floors or yards.

Radius mm	Max thickness mm	Description	Context	Phase	SF No	Illustration No
210	44	Top	Pit 39	2	707	
140	47	Bottom	Pit 294	3		3
230	45	Bottom	Pit 294	3		7
-	26	Top	Ditch 92	4a	645	
290	47	Bottom	Yard 3 Building 4/5	4	240	2
-	33	Top, small frag	" "	4	412	
-	17	Top, tiny frag	" "	4	240	
210	22	Top, two frags	" "	4	66	
-	18					
-	29	Small frag	" "	4	413	
-	29	Top	" "	4	415	
210	22	Top	Yard 22 Building 4/5	4	349	
250	30	Top, two	Floor 30			
-		joining frags	Building 4/5	4	311	
-	80	Bottom	Furnace 34 Building 4/5	4a	421	
180	32, 28	Top two frags,	Furnace 34	4a	420	8
-		(one scored)	Building 4/5			

Radius mm	Max thickness mm	Description	Context	Phase	SF No	Illustration No
-	-	Small battered fragment	Posthole 33 Building 4/5	4a	387	
-	35	Top, scored	Furnace 31 Building 4/5	4b	322	
210	29	Top	66, Building 4/2b	4b		5
230	29	Top	"	"		6
-	39,40	Two bottom frags	"	"	643	
250	17	Top	130, Building 4/2b	4b	848	1
260	26	Bottom	"	"	850	4
-	38	Lump	"	"	845	
180	35	Top	"	"	846	
-	30	Top	"	"	849	
-	33	Lump	"	"	844	
210	30	Top	"	"	847	
230	24	Top	Ditch 16	4b	196	
-	34	Top, small frag	Layer 208	2 or 4b		
-	45	Top	"	"		
-	30	Top, small frag	Ditch 172	4b	715	
230	29	Two bottom frags	Topsoil	-	348	

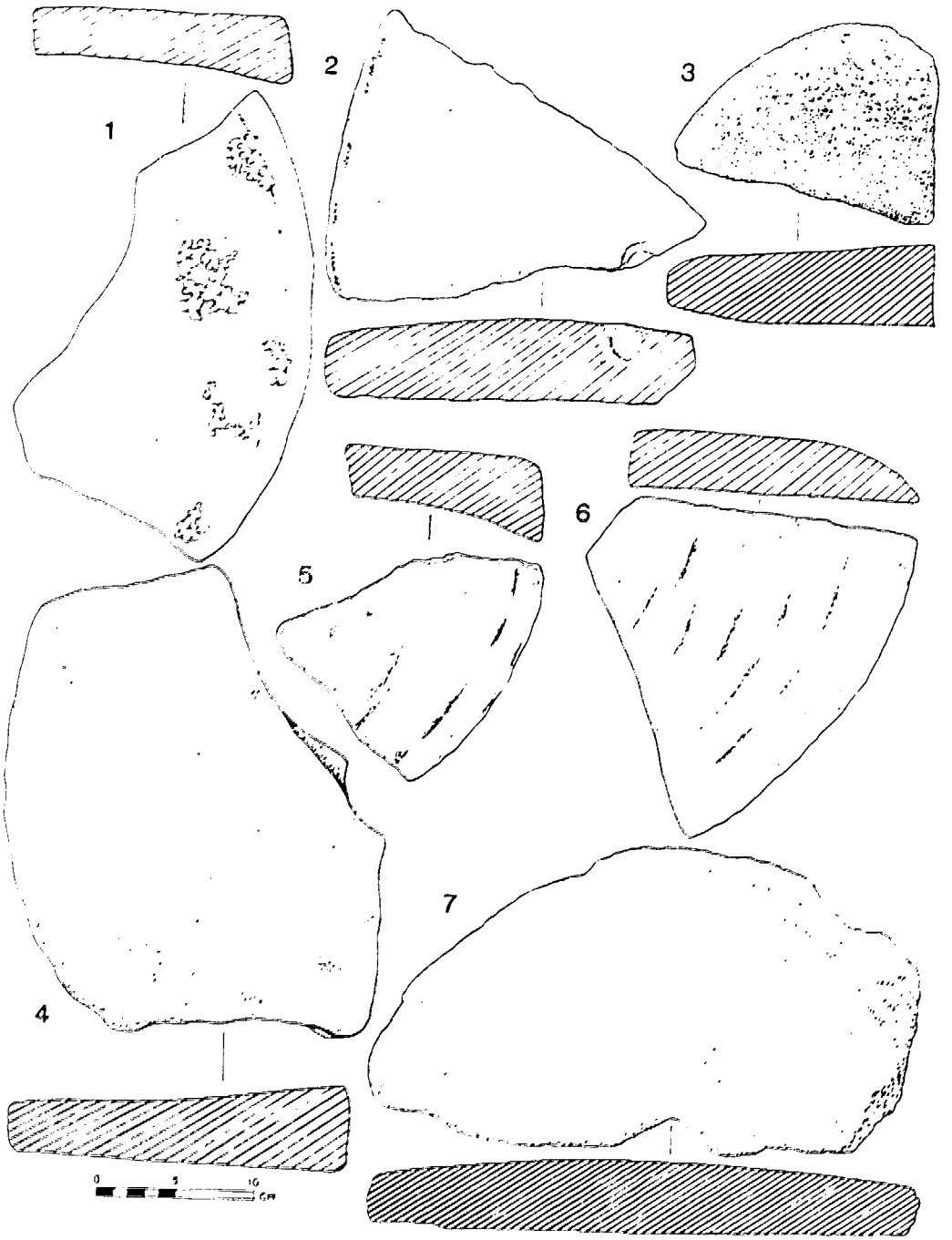


Fig. M10 Towcester, Alchester road suburbs: querns.

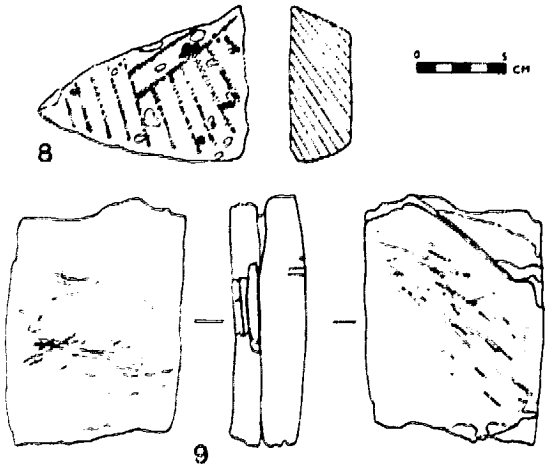


Fig. M11 Towcester, Alchester road suburbs: querns and stone object.

SPINDLE WHORLS (Fig. M12)

All in pottery fabric 12a, Nene valley colour coated ware.

7. Buff fabric, dark brown colour coat, 104, ditch, Phase 4a.

8. Cream fabric, brown colour coat. 181, Building 4/6c, Plot 4/1, Phase 4b.

9. Cream fabric, brown colour coat. 12,yard outside Building 4/5, Phase 4a/b.

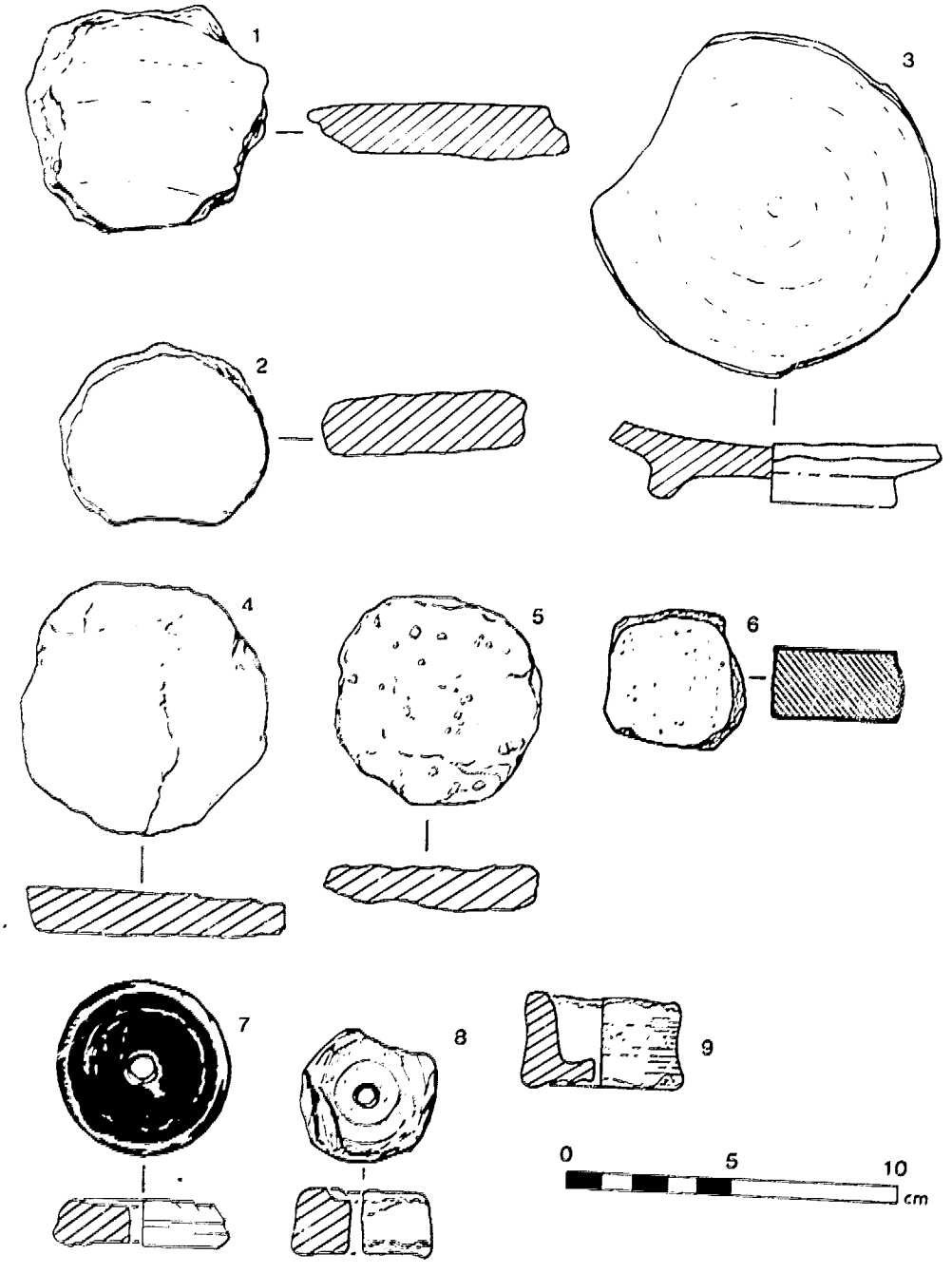


Fig. M12 Towcester, Alchester road suburbs: discs of stone and pottery, and spindle whorls.

DISCS OF STONE, TILE OR POTTERY (Fig. M 12)

Several discs of stone, tile or pottery were found, ranging in diameter from 40 to 105mm; they were too small and inaccurately cut to have been lids, and in any case none of them had smoke-blackened edges. They are perhaps best thought of as counters, or more probably for use in some such game as quoits (Woodfield 1981, 105).

1. Pottery fabric 35b. 104, ditch, Phase 4a.

2. Pottery fabric 35b. Surface, Alchester road.

3. Eroded: pottery fabric 13. 129 (2), causeway, Area 3, Phase 4a.

4. Limestone. 34, hearth/furnace, Building 4/5, Phases 4a/b.

5. Limestone. Topsoil, 1974 excavations.

6. Tile: fabric relates to pottery fabric 25. 183, ditch, Phase 3.

BUILDING MATERIALS (Fig.M. 13)

1. Ceramic tiles

The fabric types described in Brown and Alexander 1982 (47-8) have been used in the analysis of the tile fragments from these excavations. Table 1 provides a breakdown of the fragments by fabric, type and phase. This shows that the bulk of the tiles found come from Phases 2 and 4b, when the buildings on the site were rectangular. The possibility must therefore be entertained that some were tiled, although the problem of residuality in the later levels should not be forgotten, as well as the strong possibility that tile fragments, possibly old ones, were brought in from elsewhere as hardcore for yard surfaces, e.g. the flue tiles from Phase 4b.

The assistance of Mrs J. Hastings in processing the tiles is gratefully acknowledged.

Fabric 1 (shell tempered) makes a poor showing; a contrast with the later Roman levels on the Grammar School site. The following tile types were noted:

(a) Imbrex tiles mostly 13-15mm thick.

(b) Tegulae ranging in thickness from 14 to 21mm but mostly 17-19mm, with flanges of external height from 33-44mm. The flange tops are rounded.

Fabric 2 (resembles Pottery Fabric 35b). The commonest tile fabric. The evidence from this site suggests but does not conclusively prove that it was being made in the 4th century as well as in the late 2nd/3rd centuries.

(a) Imbrex tiles ranging in thickness from 11-18mm but mostly 12-15mm.

Illustrated pieces:

2. Has reddish brown paint and wavy line decoration at end similar to that employed on tiles of Fabric 3. 38, culvert, Building 4/5, Phases 4a and b.

3. Unusual oval ? tally mark as well as wavy decoration. 96, pit, Phase 4b.

(b) Tegulae ranging in thickness from 15-24mm but mostly 17-20mm with flanges of external height from 39-50mm but usually within the range 42-48mm. The flanges can have rounded or squared off tops.

(c) Flue tiles. Illustrated pieces:

4/6 Box tiles with straight combing. Locations: 4: 38, culvert, Building 4/5, Phases 4a and b; 6: 64, pit, Phase 4b. A few smaller fragments with similar straight combing from Phase 4.

9. Box tile with wavy combing. Topsoil over 208.

10. Box tile with wavy combing: scratched lines on underside might be letter W.and cross the break. Topsoil over 184.

(d) Building tiles. The fragments from Phases 2 and 4a are 39-44mm thick; from 4b, thinner 29-32mm.

(e) Other fragments.

14. Tile fragment with smoothed bevelled edges and upper surfaces; underside rough. 6, ditch, Phase 4b.

15. Fragment of flat tile with hole. Underside rough. 3, yard, Building 4/5. Phases 4a and b.

17. Curved fragment, possibly from an antefix. Topsoil, 1974 excavations.

Fabric 3 (reddish sandy) Almost as plentiful in Phase 4b as Fabric 2, but probably residual from Phase 2.

(a) Imbrex tiles ranging in thickness from 11-18mm but mostly 12-15mm. The one complete example (1: from 99, Alchester road side ditch, Phase 2) is 430mm long. Thirty fragments have wavy line decoration at the end.

(b) Tegulae 17-24mm thick, with flanges 40-46mm length. The tops of the flanges are generally squared off.

(c) Flue tiles. Illustrated pieces:

5, 8, 11. With straight combing. 5: 130, Building 4/2b, Phase 4b; 8, 11, topsoil over Building 4/1b. Other fragments with similar straight combing from Phase 4 contexts.

7. Straight scoring with single lines. 344, Building 2/10, Phase 2.

(d) Building tile fragments 36-42mm thick.

Fabric 4 (hard, dense reddish brown)

(a) Imbrex tiles mostly 12-14mm thick.

(b) Tegulae 18-22mm thick, with flanges, usually squared off on top, with an external height of 40-46mm.

(c) Flue tiles. Illustrated pieces:
12, 13. With straight combing. 12 from 183, ditch, Phase 3;
13 from 329, Building 2/7, Phase 2.

(d) Building tiles, Fragments 32-44mm thick.

Fabric 5 (very coarse)

Building tiles 33mm thick, fragments only.

2. Stone tiles

16. Of limestone, not Stonesfield; from 203, Building 2/4, Phase 2. A fragment from a similar tile from 181 (Building 2/1, Phase 2, or Building 4/6c, Phase 4b).

3. Tessera

Grey limestone tessera, no mortar traces, 32 x 20 x 20mm, topsoil over Building 4/1b.

TABLE 1 , TILES, ALCHESTER ROAD SUBURBS.

FABRIC	PHASE 1	PHASE 2	PHASE 3	PHASE 4a	PHASE 4b
Imbrex					
Fabric 1	-	1	-	2	6
Fabric 2	-	18	-	6	79
Fabric 3	8	20	4	18	125
Fabric 4	-	2	-	3	26
Total	8	41	4	29	236
Tegula					
Fabric 1	-	4	1	1	12
Fabric 2	-	73	-	12	93
Fabric 3	1	10	-	3	19
Fabric 4	-	2	-	1	6
Total	1	89	1	17	130
Flue tile					
Fabric 1	-	-	-	-	-
Fabric 2	-	1	-	1	10
Fabric 3	-	1	-	3	17
Fabric 4	-	4	-	-	5
Total	-	6	-	4	32
Building tile					
Fabric 1	-	-	-	-	-
Fabric 2	-	2	-	1	7
Fabric 3	-	-	-	-	10
Fabric 4	-	2	-	1	11
Fabric 5	-	-	-	-	3
Total	-	4	-	2	31
Other fragments					
Fabric 1	-	-	1	-	14
Fabric 2	4	52	2	11	168
Fabric 3	10	19	4	5	49
Fabric 4	1	2	-	10	16
Total	15	73	7	26	247
Total fragments each fabric					
Fabric 1	-	5	2	3	32
Fabric 2	4	146	2	31	357
Fabric 3	19	50	5	29	220
Fabric 4	1	12	-	15	64
Fabric 5	-	-	-	-	3
Total each phase:	24	213	12	78	676

Total number of tiles and fragments: 1,003

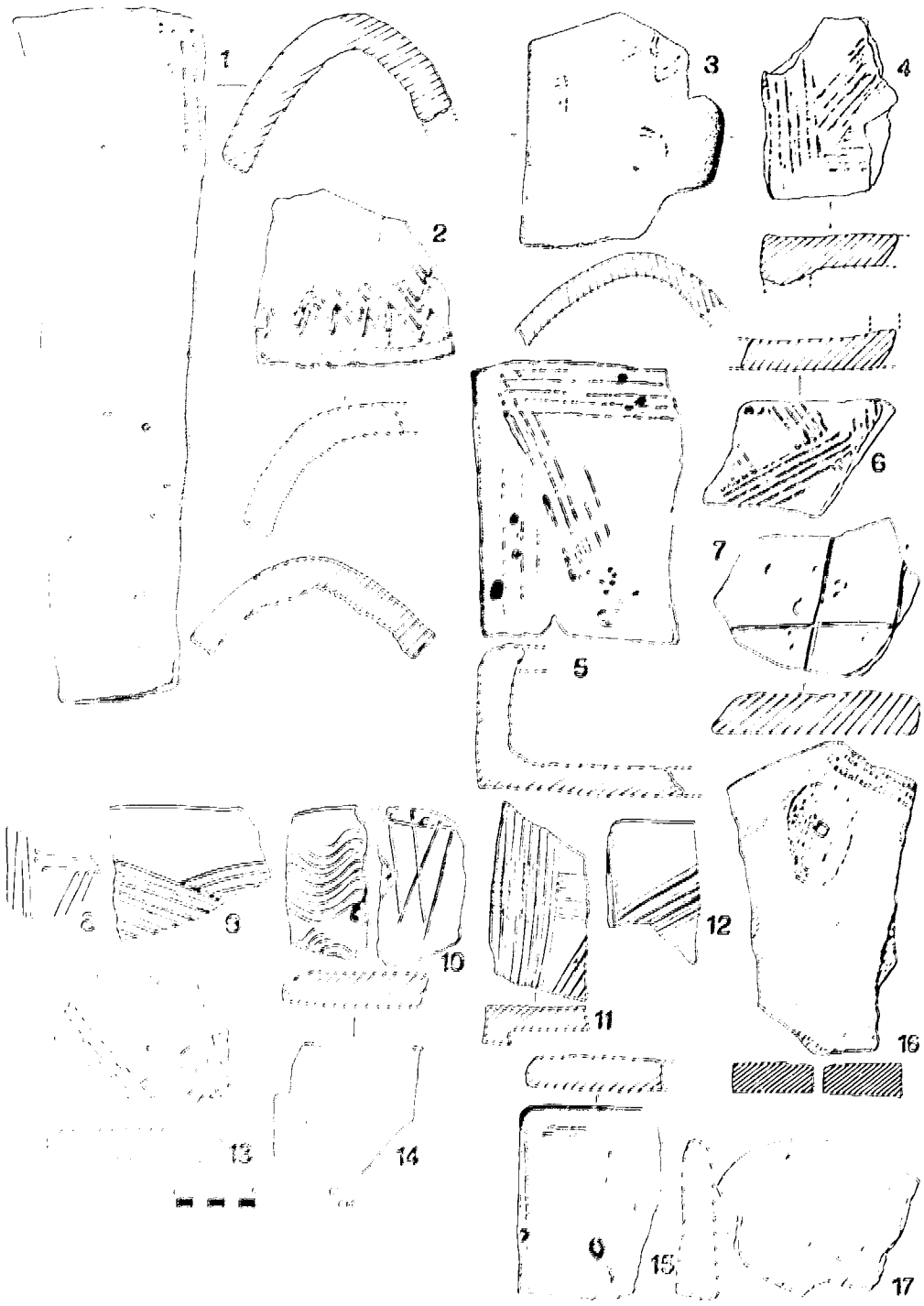


Fig. M13 Towcester, Alchester road suburbs: tiles.

THE ARCHITECTURAL MASONRY

by C.T.P. Woodfield.

The excavations produced four significant pieces of architectural worked stone. These appear to have been selected and brought to the site for secondary use, as there was little other evidence for quality freestone. One piece, the frieze, bore the imprint of a circular post on its rear face, the upper side as it lay in building 4/2b, and the others (except the column drum) may well have served similarly as pads for timber supports. The stone of all four pieces is of a better quality limestone than obtainable locally, the column shaft being a dense buff uneven grained shelly limestone, and the other three being in a well formed oolite from the Lincolnshire Limestone series. Comparison of chips with known specimens in the Institute of Geological Sciences suggested the shaft originated in the Bath area, and the remainder from the north Northamptonshire area, possibly from the Ketton district.

Three of the stones have already been described in the context of the finds of architectural masonry from Northamptonshire (Woodfield 1978); they are summarised below:-

(a) Section of lathe turned column shaft with distinct entasis, 248-260mm diameter, 360mm broken length, with one dowel hole with the impression of a dome headed dowel in the mortar (pl.6). Estimated original height of the full column 1,430mm (4ft.8½ ins.) (Building 4/2b).

(b) Moulded section of plinth or cornice corona, comprising an abacus, fillet cavetto and two lower fillets. Depth 240mm, broken length 440mm.

Top surface worn smooth in its original setting (Building 4/2b).

(c) Section of large scale frieze bearing in relief a reversing acanthus tendril scroll (pl.8). Length of scroll 646mm, depth 300mm. Face is weathered (Building 4/2b).

(d) Square building block of quoin stone, 325 x 360mm x 135mm thick, with two adjacent faces finished, and possible slight chamfer. Top and bottom faces have rough radial cuts, perhaps as mortar key (Building 4/6c: this is the westernmost of the two stylobates here; pl.7).

By their varying scales the stones are unlikely to have come from one building, but as they are all of imported material, the implication is that there was more than one building of civic scale and classical appearance in Towcester. The frieze would be appropriate to a Corinthian order of the scale of surviving Gaulish temples, and the plinth block is not in scale inconsistent with this. The column shaft however belongs to a smaller scaled structure such as a verandah colonnade or a funerary monument. Capitals of small scale columns have been found elsewhere in Towcester, and the well known terminal mask now in the British Museum, from Towcester or Wood Burcote nearby, reinforces the evidence for substantial funerary monuments.

The reuse of the four stones in the fourth century industrial suburb suggests that the major monuments were by then in a state of decay and that the authorities charged with their care were no longer functioning. It may be that the buildings were obsolete in a nominally Christian world, or equally likely, there had been an effectual breakdown in civic identity.

GLASS FROM THE 1967 EXCAVATIONS

Phase 2

1. Three pale green and one colourless body fragments. 329, Building 2/7. 1967 G3.

2. Two blue-green, one pale green, two green and one colourless body fragments. 330, Building 2/7 (alternatively some or all might belong to Phase 4b). 1967 G4.

3. Pale green body fragment. 333, as 2 above. 1967 G6.

4. Two pale green body fragments. 344, Building 2/10. 1967 G7.

5. Two pale green body fragments. 342, pit, 1967 G10.

Phase 4a

6. Spout from jug, bluish green glass. 319, ditch. 1967 G9.

Phase 4b

7. One colourless, one green, one dark green body fragment and piece of indented base with footring, bluish green. 335, Building 4/4. 1967 G8.

8. Fragment of bluish green ribbed handle. 300, Alchester road side ditch. 1967 G1.

GLASS FROM THE 1977 EXCAVATIONS

by Denise Allen,

PHASE 2

1. Rim fragment of a bottle of blue-green glass. Rim folded outward, upward and inward and flattened, diam. c. 470mm.282(2), Alchester road side ditch.

2. Indeterminate fragments of blue-green glass from 195 (rearward plot boundary, W of Alchester road), 287 (side ditch, Plot 2/6), 291 (industrial layer, Plot 2/3).

3. Two indeterminate fragments of colourless glass from 188 (side ditch, Plot 2/4).

PHASE 3

4. Body fragment of a prismatic bottle of blue-green glass. Bottles with cylindrical and prismatic bodies were extremely common during the later 1st and earlier 2nd centuries, and continued to be used at least until the end of the 2nd century (Charlesworth 1966). 183,ditch.

PHASE 4a

5. Fragment of greenish glass, with many pinhead bubbles: characteristic of the later Roman period. 200, side ditch, Plot 4/2.

PHASE 4b

6. Body fragment of a prismatic bottle of blue-green glass. Also neck fragment, with elongated bubbles, of an unguent bottle, flask or bottle, of blue-green glass. 196, ditch, Plot 4/2.

Unstratified over Building 4/1b

7. Two small rim fragments of greenish-colourless glass, with many pinhead bubbles within the metal. Rims outflared and fire-rounded and thickened. One small rim fragment of a similar metal to above, outflared, broken off flat and unworked. These three rim fragments are probably from bowls or beakers, the commonest shape for the latter during the later 3rd and 4th centuries being a truncated cone, as exemplified by a piece from a grave at Wint Hill, Somerset (Harden 1960, 51-2, figs 8-9). The unworked rim type was the most common at this time. Fire-rounded rims were employed during much of the rest of Roman period, and replaced unworked rims towards the end of the 4th century. Greenish metal with many pinhead bubbles is also characteristic of the later Roman period; two more indeterminate fragments from this level.

8. Two fragments, blue-green glass.

Unstratified over 186, Phase 1 ditch

9. Small flat pale green fragment with one fire-rounded edge extant, probably a piece of a double-glossy, cylinder-blown window pane. 4th century.

THE REMAINDER OF THE WOOD

by G.C. Morgan

The wood is generally representative of open woodland. The variety of sizes suggests both mature trees and undergrowth, although structural timbers (80+mm diam) were probably selected. The use of small diameter wood or twigs in field drains has a long history.

The diameters given are estimated minimum diameters of the growing wood. The identification of poplar is tentative as poplar and willow are very similar.

Fig M14 indicates the location of the larger pieces.

PHASE 1

Eastern side Alchester road, Area 3 Hazel, pointed, shaped, 75mm diam, 50mm long (S269)

Land drains

157. Twig, 40mm diam., oak (*Quercus* spec)
Twig, 20mm diam., oak (S295)
Hazel (*Corylus avellana*), 10-20mm diam.
Peat-like material (S325)

PHASE 3

Eastern side, reduced Alchester road, Area 3

Maple (*Acer campestre*), circular stake, 200mm long, 90mm diam. (S225)

Western side, reduced Alchester road, Area 3

Oak, circular stake, 400mm long, 100mm diam. (S226)

PHASE 4(a)

Recutting, side ditches, Alchester road, western side

68(1). Oak branch, 460mm long, 40mm diam. (S213)

Rearward plot boundary, east of Alchester road

16(1). Roots, unidentifiable wood (S176)
Row of posts along E side of ditch. Oak, wedge shaped section, 500mm long, 100mm diam. (B4, W5)
Maple, 240mm long, 140mm diam. (B4, W8)
Field maple, stake end, 310mm long, 80mm diam. (B4, W6) (Fig. M 15, 2)
Poplar type (*Populus* spec), peg cut to chisel end, with bark, 270mm long, 50mm diam. (B4, W3)
Poplar type, branch with shaped end, 260mm long, 45mm diam. (B4, W7)
Poplar type, broken peg based on quartered branch, 360mm long, 100mm diam. (B4, W9) (Fig. M 15, 1)
Oak, slow grown, split branch with bark, possibly oblique cuts on end, 320mm long, 60mm diam. (B4, W2)

Oak, axe cut flakes 200mm long (B4, W4)
Hawthorn type (*Crataegus* spec), fragment, 370mm long, 165 mm wide (B4, W1)
Poplar, branch, 75mm diam. (B4 W1)
Oak, two pieces of plank?, 180mm diam (B4, W1)

16(2) Oak, split, 50mm diam.
Hazel, 60mm diam., split
Hazel, 10mm diam., twig
Hazel, 15mm diam., twig
Poplar, 40mm diam., fragment
Poplar, 20mm diam., twig
Poplar, 15mm diam., twig
Maple, 10mm diam., cut twig (S42)
Oak, wedge shaped piece, 137 x 20mm
Hazel, 20mm diam., twig
Hazel, 15mm diam., twig
Hazel, 10mm diam., twig
Hazel, 30mm diam., twig
Oak, ?shaped, 80mm diam.
Poplar branch, 100mm diam., with bark (S105)

Ditch, S of Fleet Marston road

11(3) Maple branch 80mm diam S59

11(4) Hazel, fragments, compressed, 10, 15, 30mm diam. (S39)

Structures and other features

Plot 4/3 (Area 3) 129(2) (Causeway across roadside ditch)
Oak plank, 150 x 120mm (S261)
Oak, wedge shaped, 500mm diam., 140mm wide (S270)

Plot 4/8 (Area 3)
17 (circular ditch, Building 4/5) Oak twig, 30mm diam.
Hazel twig, 15mm diam. (S40)
38 (culvert, Building 4/5) (i) Wood from which the culvert was constructed:
(a) Stakes. Oak, 390mm long, 150mm diam (W44/2)
Oak, 330mm long, 70mm diam., three cuts to missing point visible (W44/12)
Poplar type, with bark, branch shaped at one end, 370mm long, 50mm diam. (W44/8)
Poplar, worked branch with cuts at both ends, 310mm long, 55mm diam (W44/4) (Fig. M 15, 3)
Oak stake end, very eroded, cut to point all round, 50mm long, 80mm diam. (W44/6)
Poplar, cut branch, with bark, 320mm long, 65mm diam. (W44/9)
Oak, branch, 460mm long, 80mm diam. (W44/5)
Poplar type, with bark, 50mm diam (W44/4)
Oak, with bark, 50 mm diam (W44/11)
Oak, stake with cut end, 50mm diam (W44/10) (Fig. M 15, 4)
Hazel, stake with cut end, 50mm diam. (W44/3)
Ash, end of stake, 90mm diam. (W44/7)
Poplar, branch, 410mm long, 60mm diam. (W44/1)
(b) Radials. Oak, squared plank, 950mm long, 270mm wide, 40mm thick (W44/15) (section, Fig. M 15, 6)

Oak, slow grown, two planks with cut ends, 310 and 200mm long, 130 and 110mm wide, 30mm thick (W44/17-18) (Fig. M 15, 11, 12)

(ii) Pieces of wood lying within the culvert:
Hazel, 25mm diam., charcoal
Oak fragment, flat section, 120mm diam.
Oak strip, 22 x 14 x 95mm long
Maple, 20mm diam., twig
Maple, quartered, 30mm diam.
Maple, cut twig, 30mm diam.
Maple, cut twig, 20mm diam.
Poplar fragment, 40mm diam.
Blackthorn (*Prunus spinosa*) twig, 7mm diam. (S148)
Ash (*Fraxinus excelsior*) twig, 30mm diam.
Ash twig, 10mm diam.
Oak twig, 60mm diam., partly burnt
Hazel twig, 20mm diam.
Hazel twig, 15mm diam.
Hazel twig, 30mm diam.
Poplar twig, 5mm diam. (S147)
Oak fragment, 120mm diam.
Oak, cut twig, 20mm diam.
Hazel twig, 30mm diam.
Hazel twig, 25mm diam.
Hazel twig, 15mm diam.
Ash fragment, 80mm diam.
Ash, shaped twig, 20mm diam.
Poplar, cut twig, 100mm diam.
Poplar twig, 40mm diam. (S138)
Oak twig, 20mm diam.
Oak fragment, 60mm diam.
Blackthorn twig, 40mm diam.
Hazel twig, 20mm diam.
Hazel twig, 10mm diam.
Maple twig, 15mm diam.

7(4) (N-S drainage ditch)
Hazel, stick with cut ends, 20mm long, 8mm diam. (S41)
Poplar type, branch, flattened, 260mm long, 40mm diam. (W11)
Hazel, branch fragments, 35mm diam. (W12)

Simple plank foot bridge over Ditch 7
Oak, very decayed fragments of quartered branch, 60mm diam. (W15)
Ash, branch, no bark, 380mm long, 45mm diam. (W16)
Oak branch, 700mm long, 200mm diam. (W31)
Oak, split branch, 300mm long, 80mm diam. (W14)
Oak, split branch, 930mm long, 180mm diam. (W16)
Field maple, branch, 550mm long, 60mm diam. (W17)
Oak, half branch, very decayed, 80mm diam. (W14)
Oak, end of plank, roughly cut parallel to rays, 150mm long, 30-60mm wide (W13)

3, 18 (yard outside Building 4/5)
Oak, split branch, 80mm diam.

Oak twig, 15mm diam.
Poplar, split branch, 60mm diam.
Poplar, split branch, 50mm diam. (S127)
Oak, branch fragment, 120mm diam.
Oak twig, 40mm diam.
Oak twig, 20mm diam.
Hazel twig, 15mm diam.
Poplar fragment, partly burnt, 15mm diam. (S63)
Oak fragment, dehydrated (S6)
Oak, branch fragment, 120mm diam. (S33)
Ash fragment (W26)
Oak, fast grown, plank, very decayed, 250mm long, 150mm wide, 40mm thick (W27)
Oak, split length, 960mm long, 120mm diam. (W25) (section, Fig. M 15, 10)
Oak, slow grown, plank, 610mm long, 150mm wide, 28mm thick, cut parallel to radius (W24) (section, Fig. M 15, 5)
Oak, quarter of branch, 550mm long, 100mm diam. (W29)
Oak, split branch, 1.9m long, 110mm diam. (W29)
Oak branch, 60mm diam.
Oak branch, 40mm diam.
Poplar branch, shrunken, dried in antiquity, 100mm diam.
Oak peg, 90mm long, 20 x 30mm section
Oak branch, 35mm diam.
Oak branch, 25mm diam.
Oak twig, fast grown, 60mm diam.
Ash fragment, slow grown, 100mm diam.
Ash twig, 20mm diam.
Hazel twig, 15mm diam.
Poplar type fragment, 100mm diam.
Poplar twig, 20mm diam.
Field maple fragment, 15mm diam.
Poplar fragment, 30mm diam. (and charcoal)
Blackthorn fragment, 15mm diam.
Hazel fragment, 10mm diam. (and charcoal) (S89)

PHASE 4(b)

Recutting, side ditches, Alchester road

Western side. 65. Oak, plank, 200mm diam., 170mm wide (S191)

Structures and other features

Plot 4/2

207 (drainage ditch running from Building 4/1b), Oak stake, 140mm diam.

Plot 4/3 (Area 4)

64 (pit). Oak fragment, 20-40mm diam.
Poplar fragments, 30mm diam.
The whole sample appears to have dried out and been re-soaked in antiquity.
129(1) (resurfacing of causeway, Area 3). Oak fragment, dried.

Plot 4/8 (Building 4/5)

1 (drainage ditch) Oak fragment (S129)
14 (drainage ditch). Oak, split branch, 60mm diam.

Oak twig, 20mm diam.
Elder (*Sambucus nigra*) twig, 15mm diam. (S52)
Poplar, 10mm diam. (S77)
Blackthorn, 10mm diam. (S57)
Oak branch, 110mm long (S64)
Small retaining stakes:
Maple, 14mm long, 40mm diam. (S177)
Hazel, 14mm long, 40mm diam. (S178)
Ash, 14mm long, 40mm diam. (S179)
Hazel, stake, compressed wood, 14mm long, 20-30mm diam. (S180)
14 (2). Oak, cut branch, 120mm diam.
Oak, split twigs, partly burnt, 40mm diam.
Oak twig, 20mm diam.
Maple twig, 40mm diam. (S49)
Maple twig, cut, 40mm diam.
Ash plank, 80mm diam.
Ash, cut/split twig, 30mm diam. (S34)
Ash, squared, 80mm diam.
Oak, two split branches, 60mm diam.
Oak twig, 40mm diam.
Hazel twig, 15mm diam.
Poplar twig, 15mm diam. (S60)

31 (1) (latest phase of furnace), Oak fragments, 10 and 80mm diam.
Blackthorn fragment, 10mm diam. (S126)

21 (replacement N-S ditch). Oak fragment, 210mm long, 100mm diam.
Oak fragment, 210mm long, 50mm diam.
Oak fragment, 160mm long, 100mm diam.
Oak fragment, 8mm long, 10mm diam.
Maple fragment, 8mm long, 15mm diam. (S83)

Simple plank bridge over Ditch 21. Oak, split branch, 80mm diam. (W18) (section, Fig. M 15, 8)
Oak plank, 125mm long, cut from wood 500mm diam. (W19)
Oak fragment, 440mm long, 110mm wide (W22)
Oak plank, 1.14m long, 170mm wide, 50mm thick (W20) (section, Fig. M 15, 9)

44 (spur ditch running from circular ditch around Building 4/5)
Oak stake, no bark, 59mm long, 55mm diam. (W2)
Poplar, split, 200mm diam. (W5)
Oak post, 950mm long, 240mm diam. (W3)
Oak, 580mm long, split log, 100mm diam.
Oak, 760mm long, 160 mm diam. (W7)
Oak, fast grown, part of branch, 320mm long, 200mm diam. (W6)
Oak, split, 1.47m long, 190mm wide, 240mm diam. (W23)
Poplar, forked piece, 50mm long, 150mm diam. (W30)
Poplar fragment, 210mm long, 160mm diam. (W30)
Oak, 500mm long, 200mm diam. (W28)
Oak, shaped pile fragments, 400mm long, 220mm diam. (W8)
Oak lump showing cuts, 110mm diam. (W9)
Oak fragment, 200mm diam. (W1)

Oak, two plank fragments, 105mm long, 28mm thick (W1)
Oak, tapering fragment, 25mm diam. (W1)
Poplar, fragment of branch, oblique cut at one end, 470mm long, 35mm diam. (W21)

UNPHASED

100 (Marshy area, Trench 25) Oak branch, 1m long, 120mm diam. (S219)
103 (Marshy area, Trench 26) Oak, split branch, 900mm long, 120mm diam. (S229)
Oak, squared timber, 850mm long, 280mm sq. (S228) (section, Fig. M 15 , 7)
Oak fragment, 370mm long, 120mm across (S230)

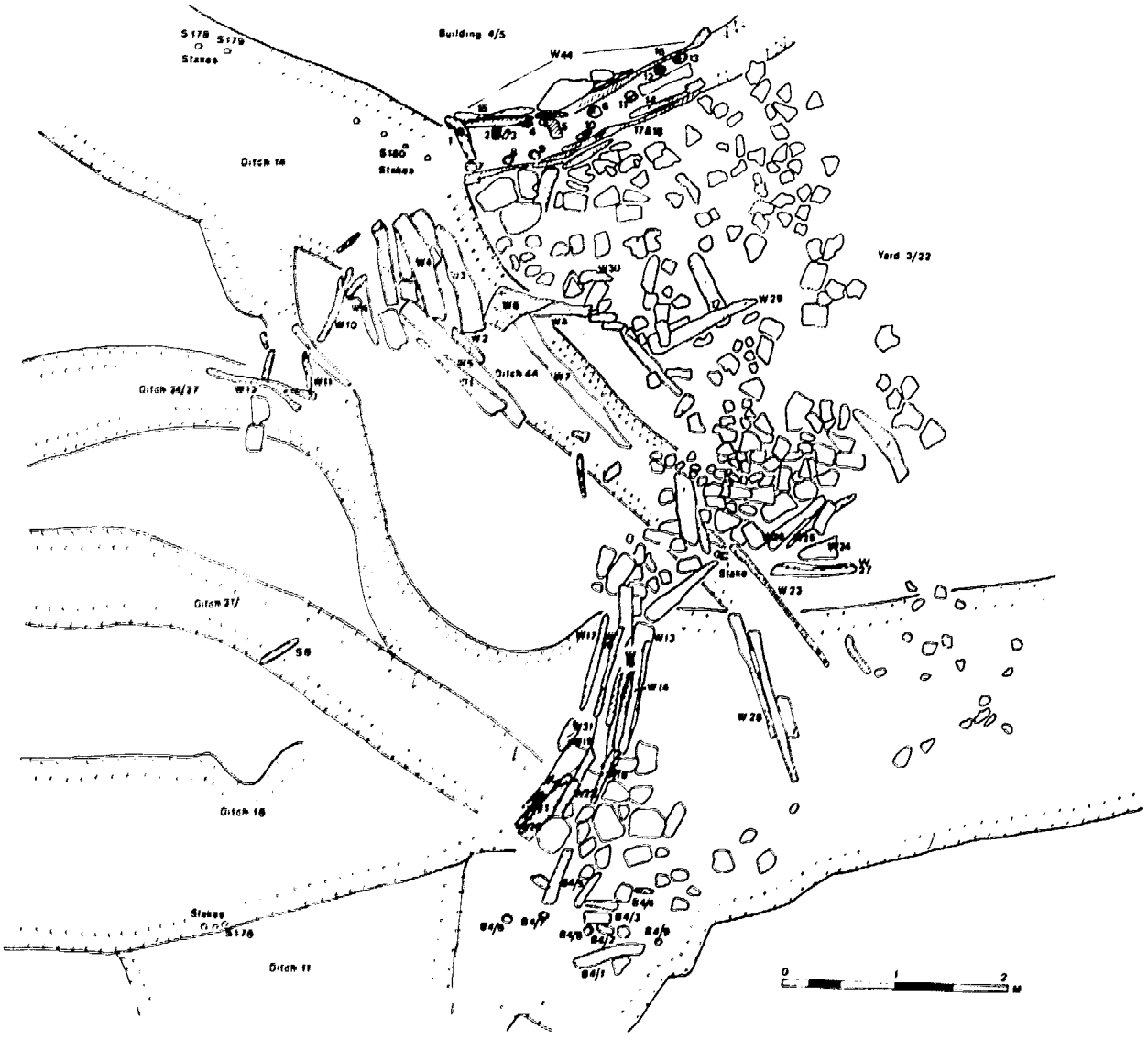


Fig. M1/4 Towcester, Alchester road suburbs: sketch plan to show location of wood.

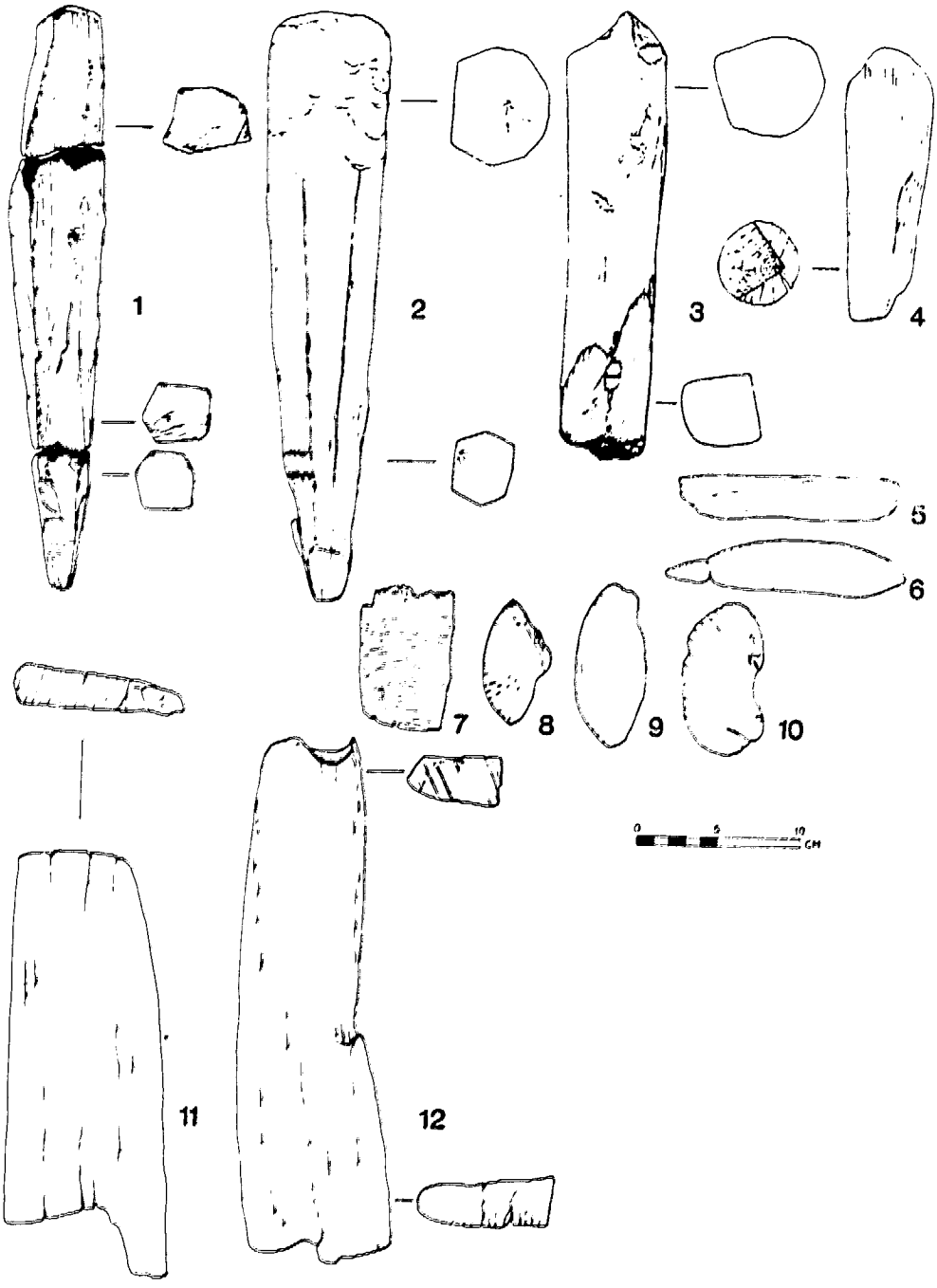


Fig. M15 Towcester, Alchester road suburbs: wood.

ANIMAL BONES FROM THE 1967 EXCAVATIONS

by R T Jones,

Ancient Monuments Laboratory, Department of the Environment

PHASE 2

Alchester road side ditch, western side

327 Horse first molar left, one calcaneum right, splint bone left; sheep jaw left; pig scapula right (1967 AR 9).

Plot side boundary, west of Alchester road (or Phase 4a)

321 Horse 1st phalanx; ox pelvis frag (1967 AR 4)

Building 2/7

329 Sheep femur right; red deer second premolar right, red deer first molar right, second molar right (1967 AR 2). This level contained intrusive post medieval material.

331 Horse jaw right, two premolars, one first phalanx, one horse metatarsal; pig ulna, left part of palate; sheep tibia right. (1967 AR 8; could belong to Phase 4b).

Building 2/10

344 Ox metacarpal right (1967 AR 1)

342, pit. Ox skull, ox right and left jaws, ox horn core, left; some fragments, ox radius right; horse mental symphysis, with canines, aged about 10 years; teeth were the molars of two individuals (1967, AR 10)

PHASE 4a

Ditch, east of Alchester road

346 Ox astragalus left; pig scapula left, sheep metacarpal left (1967 AR 6)

Towcester St. Lawrence Road: The Animal Bones.

by

Sebastian Payne.

(MS completed April 1979)

1. Introduction

In Table 1, the identified bones from the St Lawrence Road site are listed by phase. Just over half the identified bones are of cattle, around a quarter are of sheep/goat, and the remainder are mostly of pig and horse. Most of the phased and dated bones are from Phases 4a and b, both dated between c 330 and 370+ / AD; as the bones from both these phases seem very similar, and some of the remaining samples seem rather more heterogeneous, the sample from Phases 4a and b will be described and discussed in rather more detail than the remainder of the bones.

In Table 2 (whole sample) and Table 3 (Phases 4a and b), counts are given for the different parts of the skeleton for each species (species group in the case of sheep/goat). As in most bone samples from archaeological sites, there are considerable differences in the relative frequencies of the different parts of the skeleton in each species, even when allowance is made (in the n/f counts) for the greater number of some kinds of bones (eg phalanges) in the skeleton. Some of these differences, eg the scarcity of proximal tibiae and humeri relative to distal tibiae and humeri, can be simply accounted for by differential preservation; others, eg the scarcity of incisors and premolars relative to molars, or the scarcity of carpals, tarsals and phalanges relative to metapodia, can most readily be explained by recovery bias, and reflect the lack of sieving during excavation. These sources of bias are mentioned here, at the outset, as they can affect data and conclusions in so many ways. Differential destruction not only affects some parts of the skeleton more than others, but also affects juvenile bones more than adult ones, and some species, notably pig, more than others. Recovery bias affects smaller bones and animals more than larger ones, and again juveniles more than adults (Payne 1975). Thus the percentages given in Table 1

for horse and cattle are probably too high, and those for sheep/goat, and even more for pig, are probably too low.

Butchery marks will be described in the individual sections for each species. But one general observation is that there was no burnt bone, and not even any bones with burnt ends, suggesting that meat was either cooked off the bone or boiled, rather than being roasted.

2. Species and descriptions

2.1 Ovis and Capra

Both sheep and goat are present; but as Table 4 shows, sheep is much commoner than goat. More than 50 postcranial bones can be identified with more or less confidence as sheep, while only one, a distal humerus[1], is probably goat. Two of the five horncores, on the other hand, were goat; a reasonable explanation for this apparent discrepancy could be that most of the sheep may have been hornless: no hornless frontals were found at this site, but there are two in the slightly earlier Roman sample from the Park St site, only a mile away (Payne in Lambrick 1980).

Postcranial measurements (Table 5) show that the sheep were of small to medium size.

Data on age at death, based on the mandibular dentition, are given in Tables 6 and 7. While the mandibles are few, and rather broken, the total sample of mandibular teeth, including loose teeth, is reasonably large (Table 7). Analysis of such fragmentary material presents difficulties, but it is clear enough that the Phase 4a-b sheep were killed fairly young, ie mostly in the second to fourth years. Thus the ratio of third milk molars (m_3) to fourth premolars (P_4), excluding unworn/unerupted premolars, suggests c 50% kill-off before the end of the second year, and the abundance of second molars in early wear (ie before the infundibula

1 From phase 4a; unusual in having a well-developed supratrochlear foramen, but otherwise clearly cf. Capra.

are isolated) as compared with the relative scarcity of first molars in early wear (I was unable to distinguish the loose first and second molars reliably) suggests that most of these younger animals were killed in the second year. The high proportion of third molars in early wear (Table 7.3) suggests that most of the remaining animals were killed during the third and fourth years; a conclusion supported by the absence of molars with erased infundibula (with the single exception of the third molar of the probably intrusive animal in phase 4b: see notes on Table 5): the anterior infundibulum in the first molar is often erased in the fifth year. A kill-off pattern of this kind, peaking in the second to fourth years, indicates that meat production played an important role in the sheep husbandry; and the relatively small number of first year animals suggests that the provision of winter feed did not present too great a problem, and that lamb meat did not command so great a premium as it does today.

The presence of some older mandibles and molars with erased infundibula in the samples from surface and other contexts may indicate a different pattern; but alternatively may simply indicate that these samples are much more heterogeneous, including some bones from older animals that died on the site after it was abandoned, lay around on the surface, and were incorporated into the upper levels.

A few of the sheep/goat bones have butchery marks; these include fairly light cut-marks in typical places for disarticulation (eg across an astragalus, and across the proximal end of a metacarpus), and heavy chop-marks (eg diagonally across a scapula near the glenoid, and through long-bone shafts).

The relative frequencies of the different parts of the skeleton (Tables 2,3) seem simply to reflect preservation bias (eg low counts for maxillae, proximal humeri and tibiae, and distal femora) and recovery bias (eg low counts for premolars, incisors, carpals, tarsals and phalanges); explanations involving off-site disposal of the most valuable joints of meat have been invoked for

similar results at other sites (eg Chaplin 1969), but seem unnecessary in this case.

Two mandibles of older animals, one from Phase 4a and one from Phase 4b, show minor pathology, with uneven wear, periodontal porosity of the alveolar bone, and loosening of the teeth in their sockets; and the old and probably intrusive animal in Phase 4b has shed M_1 and M_2 some time before death, and their alveoli have sealed over.

2.2 Bos

Cattle bones were abundant; their size, as shown by the postcranial measurements listed in Table 8, was rather variable, and measurements may fall into two groups. Thus nine distal metacarpi are between 48.7 and 55.0, while the remaining four are between 64.7 and 75.9 (Bd); similarly nine distal tibiae fall between 55.7 and 62.3, with the last two at 68.5 and 69.3 (Bd). One obvious possibility is that the smaller animals were cows, and the larger ones bulls or bullocks, but samples are too small to make further analysis useful. Several horncores were found, some relatively small and slender, probably from cows, and some rather larger and stouter, presumably from bulls or bullocks.

Data on age at death, based on the mandibular dentition, are given in Tables 9 and 10; as in sheep/goat, the mandibles are rather fragmentary. As with the sheep, most of the cattle mandibles and teeth in the Phase 4a-b sample are of fairly young animals, probably up to $\underline{c}$ 5 years: thus while many of the first molars have joined bovine pillars, in only half of the second molars is the bovine pillar even in wear, and nearly all the third molars have unworn bovine pillars. Again as with the sheep, meat production is obviously important, the emphasis being on killing subadults or young adults, ie for a good return of meat for feed rather than for veal. Once again there are more older animals in the sample from surface and other contexts.

Butchery marks are frequent, and mainly rather heavy, produced by a cleaver or by a heavy knife used with a chopping action. Some of the marks are for disarticulation (eg across astragali and calcanea, across distal metapodia, and across the anterior face of the distal condyle of the humerus), others were presumably made during defleshing (eg along scapulae, often slicing off parts of the edge of the glenoid). The relative frequencies of the different parts of the skeleton (Tables 2, 3) again show considerable variation, but again nothing that cannot readily be explained either by differential preservation or by recovery bias: the overall pattern is similar to that for the sheep/goat bones, reflecting the close similarity of their skeletons, but higher counts for some smaller bones such as incisors and phalanges are to be expected in view of their larger size. The virtual absence of sesamoids is to be noted in this context: it is difficult to explain except by recovery bias, as the proximal sesamoids articulate closely with distal metapodia and with proximal first phalanges, both of which are abundant. The very high count recorded for pelves is caused by the way in which they have broken, giving large numbers of acetabular fragments, each with only a quarter or a third of the circumference; the inflated count this gives should be discounted.

Three phalanges have exostoses; and a fragmentary proximal metatarsus from a surface context has ankylosed with the lower tarsals. One third molar from Phase 4a has a reduced third cusp.

2.3 Sus

Pig bones are rather less abundant; the few postcranial measurements are given in Table 11, and dental measurements are listed in Table 12. These show considerable variation even after allowance has been made for reduction in tooth length in older animals as a result of wear; the three largest teeth may be from wild boars, but reliable data for British wild boars are rather scanty.

Virtually all the mandibles and teeth are from juveniles or subadults (Tables 13 and 14); kill-off peaks between the first molar coming into wear and the third molar coming into wear, ie between c 6 months and 2 years using modern figures for dental eruption, or between c 1 year and 3 years using eighteenth-century data (Silver 1969); either way this covers the best time yet for meat yield.

Butchery marks include heavy chop-marks and lighter cut marks as in the cattle. Figures for the relative frequencies of the different parts of the skeleton stand as a marked contrast to those for the sheep/goats and the cattle: mandibles and maxillae are far commoner than any postcranial bone. This has been observed at other sites as well, and is probably to be accounted for by the softness of sub-adult pig bone and the ease with which it can be destroyed, rather than by any particular oddity of butchery or carcass disposal.

No pathological or abnormal pig bones were found.

2.4 Equus

The large number of equid teeth showed typical horse morphology: in the upper cheekteeth protocones tend to be long and asymmetric, and premolars show a strong 'pli caballin'; in the lower cheekteeth the valley between the metaconid and the metastylid is broadly U-shaped. Nothing was encountered to suggest the presence of either donkey or mule.

The few complete long-bones (postcranial measurements are given in Table 15) suggests fairly light animals, of around 13 to 14 hands. The fact that the long-bones are often more complete than those of the cattle, coupled with the general absence of butchery marks (the only exception being three transverse cuts near the distal end of a metapodial, which could have been caused during skinning), suggests that the horses may not normally have been eaten.

Two second premolars show what may be wear from poorly-fitted bits[1]: one, an upper tooth from Phase 4b, has a medio-lateral groove across the anterior part of the occlusal surface; the other, a lower tooth from a surface context, has the anterior corner of the tooth bevelled off diagonally.

2.5 Canis

Dog bones were rather scarce; the small number of measurements (Table 16) indicate dogs of medium to large size. None of the dog bones show any butchery marks. Two of the sheep/goat bones had been chewed, presumably by dogs; but this is rather a low proportion compared with most sites.

2.6 Lepus

A distal humerus (Bd 13.6) was found in Phase 4b, and a rather small synarthrosed proximal radius (Bp 7.8) and ulna also in Phase 4b.

2.7 Capreolus

A mandible and a metacarpus (GL 149.9, SD 12.3, Bd 20.8) were found in Phase 4a, and a distal tibia in a surface context.

2.8 Cervus

A rather battered third phalanx from Phase 4b is provisionally identified as red deer; there were also a couple of pieces of antler.

3. Discussion, and comparison with Park St site

Most of the bone in the Phase 4a-b sample from the St Lawrence Road site seems to be normal domestic rubbish, including both the more edible and the less edible parts of the animals consumed, which were mainly sheep, cattle and pigs. While the figures given in Table 1 would indicate that cattle were about twice as frequent as sheep, and four times as common as pigs, the very clear indications of bias suggest that these figures may be misleading. Any attempt at a correction can only be a guess: tentatively it may be suggested that sheep were at least as abundant as cattle, and may well have been rather more frequent (eg note counts

1. I am indebted to Dr Juliet Jewell for this suggestion.

for molars in Table 3), and pigs, on the basis of the counts for mandibles and maxillae, may have been as frequent as cattle.

All three species show essentially similar age distribution data: nearly all animals were killed as later juveniles or young adults, suggesting that the inhabitants may have been buying-in animals from surrounding villages or farms rather than raising them for their own consumption.

The scarcity of wild animal bones suggests that hunting was either uncommon, or singularly unproductive. The dog and horse bones show no butchery mark or other indication that they were eaten, and may be from animals that died naturally.

Only about a mile away, the Park St site, excavated by George Lambrick of the Oxford Archaeological Unit (Lambrick, 1980), produced samples of bones from first/second century and Medieval and later contexts (ibid,). As Table 17 indicates, sheep were apparently rather commoner in the earlier Roman levels at Park St, and cattle commoner in the later samples. While the actual figures have to be treated with caution, as they are affected by recovery bias, the indication of relative change away from sheep to more cattle is probably reliable, and may perhaps be related to more intensive land use, with a shift from sheep grazing to more arable cultivation, with the consequent need for more plough animals: in each case what we are seeing in these samples are the surplus animals, fattened for meat and sold to the local town.

But while both sites seem, at least in the Roman period, to be 'urban' in this sense, the St Lawrence Road samples are normal mixed domestic rubbish, while the early Roman sample from the Park St site seems to be mainly buther's shop debris, with rather low counts for most of the bones from the more meaty parts of the carcass, and very high counts for mandibles, metapodia and scapulae with defleshing marks. This suggests that the Park St site had a buther's shop, while the St Lawrence Road site may not have had a specialist butcher.

Some differences can also be seen in the animals. The later Roman sheep are clearly larger than the earlier Roman sheep, presumably reflecting stock improvement over the Roman period (Table 18). By contrast, the later Roman pigs may be a little smaller (Table 19); data for cattle are inconclusive, partly because samples are small at Park St,and partly because the cattle at both sites are rather variable. Some genetic change could be suggested by the fact that third molars with reduced posterior cusps are frequent in the early Roman sample (5 out of 24), but scarce in the St Lawrence Road sample (1 out of 36) and in the Medieval sample - but samples are small, and this is quite likely to be an oddity in a single family of cattle. Very small dogs were found in the early Roman sample, but not at St Lawrence Road; and no goats were found at Park St. Wild animals were scarce at both sites.

Finally the earlier and later samples from the St Lawrence Road site seem to be rather more heterogeneous; the Phase 2 sample has more horse bones than usual, and the surface sample seems to be a mixture of more Phase 4a-b material and the remains of animals that died naturally on the abandoned site.

PHASE	Ovis/Capra and cf Ovis/Capra	Bos and cf Bos	Sus and cf Sus	Equus and cf Equus	Canis and cf Canis	Lepus and cf Lepus	Capreolus and cf Capreolus	cf Cervus	TOTAL
1	3	8	1	6	.	.	.	.	18
2	6	13	2	21	.	.	.	.	42
3	13	37	3	7	.	.	.	.	60
4a	199 (26%)	401 (53%)	113 (15%)	36 (5%)	8 (1%)	.	2	.	759
4b	105+(10) (25%)	250 (55%)	47 (10%)	37 (8%)	5 (1%)	2	.	1+	457
Surface & unphased	60	132	18	27	1	.	1	+	239
TOTAL	396	841	184	134	14	2	3	1	1575

TABLE 1 - Towcester St Lawrence Road, counts of identified bones, by phase.

The following are counted: single teeth (when at least half the tooth is present - fragments are ignored); jaws and jaw fragments which contain one or more teeth (of which at least half is present, as above); and all appendicular bones which have preserved at least part of an articular or fusion surface (acetabulum only for the pelvis, glenoid only for the scapula). All other bones, including ribs, vertebrae, horncores, skull fragments, edentate jaws and long-bone shaft fragments without fusion or articular surface are excluded; the presence of a species is indicated by a + in the absence of a countable specimen. The bracketed Ovis/Capra specimens in phase 4b may be intrusive; see footnote to Table 5.

Phase 1	late Flav	-	c	170
2	c	170	-	c	270
3	c	270	-	c	330
4a	c	330	-	c	355
4b	c	355	-	c	370+

	Maxilla	Maxillary milk molar	Maxillary premolar	Maxillary molar	Mandible	Mandibular milk molar	Mandibular premolar	Mandibular molar	Incisor	Canine	Scapula (glenoid)	Humerus proximal	Humerus distal	Radius proximal	Radius distal	Ulna proximal	Carpals	Pelvis (acetabulum)	Femur proximal	Femur distal	Patella	Tibia proximal	Tibia distal	Astragalus	Calcaneum	Naviculocuboid	Other tarsals	Metapodia proximal	Metapodia distal	Proximal sesamoids	Phalanx 1	Phalanx 2	Distal sesamoids	Phalanx 3
Ovis/Capra and of Ovis/Capra	5	2	3	65	26	7	5	102	3		11	.	24	10	6	8	1	16	8	.	.	1	23	8	9	.	.	32	13	.	15	1	.	.
+ teeth in jaws		2	4	5		12	28	35	.																									
n/f	2.5		(1.8)	(11.7)	13.0		(8.7)	(22.8)	(0.4)		5.5	0.0	12.0	5.0	3.0	4.0	0.1	8.0	4.0	0.0	0.0	0.5	11.5	4.0	4.5	0.0	0.0	8.0	3.3	0.0	1.9	0.1	0.0	0.0
Bos and of Bos	9	6	18	51	34	9	12	37	27		39	4	29	31	12	22	17	57	14	5	2	6	25	27	32	14	.	67	55	1	104	79	.	32
+ teeth in jaws		.	8	14		10	35	71	1																									
n/f	4.5		(5.3)	(10.8)	17.0		(11.0)	(18.0)	(3.5)		19.5	2.0	14.5	15.5	6.0	11.0	1.4	28.5	7.0	2.5	1.0	3.0	12.5	13.5	16.0	7.0	0.0	16.8	13.8	0.1	13.0	9.9	0.0	4.0
Sus and of Sus	20	1	.	5	32	.	1	2	18	18	7	1	6	3	4	14	.	4	2	.	.	.	5	5	5	1W 1C	.	12A 7L	8A 9L	.	4A 2L	3A .	.	2A .
+ teeth in jaws		5	10	21		9	14	35	15	2																								
n/f	10.0		(1.9)	(4.3)	16.0		(3.4)	(6.2)	(2.8)	(5.0)	3.5	0.5	3.0	1.5	2.0	7.0	0.0	2.0	1.0	0.0	0.0	0.0	2.5	2.5	2.5	0.5	0.0	1.5 0.9	1.0 1.1	0.0	0.5 0.3	0.4 0.0	0.0	0.3 0.0
Equus and of Equus	2	1		13	5	5		27	19	2	4	.	2	5	6	2	.	8	1	7	2	3	4	3	.	.	1	10A 2L	11	.	1	5	.	3
+ teeth in jaws		.		12		.		6	6	.																								
n/f	1.0		(2.5)		1.5		(3.5)		(2.1)	(0.5)	2.0	0.0	1.0	2.5	3.0	1.0	0.0	4.0	0.5	3.5	1.0	1.5	2.0	1.5	0.0	0.0	0.3	2.5 0.3	2.8	0.0	0.3	1.3	0.0	0.8
Canis and of Canis	1	.	1	.	1	.	.	2	.	3	.	.	.	2	.	2	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
+ teeth in jaws		.	1	1		.	1	1	.	.																								
Lepus and of Lepus	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carnivora and of Carnivora	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	1	.	.	.	.	.
+ teeth in jaws		.	.	.		.	3	3	.	.																								
of Cervus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

Table 2: Towcester St. Lawrence Road, whole sample, counts by species/species group and part of the skeleton. Bones counted as in Table 1, but note that a single specimen may be counted here in more than one column: thus a complete metapodial would be counted both in the proximal and in the distal metapodial column. The n/f counts divide the count for the part by the frequency of that part in the skeleton: 2 for most bones, but more for teeth, carpals, tarsals, metapodia, phalanges and sesamoids. Counts are given for teeth in jaws as well as for isolated teeth in order to arrive at a total figure; the resulting n/f is given in brackets, as gnawing caused by dental eruption and replacement necessarily make this an approximate figure. A = axial; L = lateral.

	Maxilla	Maxillary milk molar	Maxillary premolar	Maxillary molar	Mandible	Mandibular milk molar	Mandibular premolar	Mandibular molar	Incisor	Canine	Scapula (glenoid)	Humerus proximal	Humerus distal	Radius proximal	Radius distal	Ulna proximal	Carpals	Pelvis (acetabulum)	Femur proximal	Femur distal	Patella	Tibia proximal	Tibia distal	Astragalus	Calcaneum	Navicolocuboid	Other tarsals	Metapodia proximal	Metapodia distal	Proximal sesamoids	Phalanx 1	Phalanx 2	Distal sesamoids	Phalanx 3
Ovis/Capra and cf Ovis/Capra	5	2	3	43	18	5	4	73		3	7	.	20	7	5	7	1	13	5	.	.	1	15	6	8		.	23	8	.	14	1	.	.
+ teeth in jaws		2	4	5		10	19	25		.																							
n/f	2.5		(1.8)	(9.0)	9.0		(6.3)	(16.3)		(0.4)	3.5	0.0	10.0	3.5	2.5	3.5	0.1	6.5	2.5	0.0	0.0	0.5	7.5	3.0	4.0	0.0	0.0	5.8	2.0	0.0	1.8	0.1	0.0	0.0
Bos and cf Bos	4	4	14	38	23	8	10	25		20	24	1	18	24	9	17	14	45	11	4	.	6	19	72	24	11	.	40	35	1	80	66	.	22
+ teeth in jaws		.	5	7		9	23	42		1																							
n/f	2.0		(3.5)	(7.5)	11.5		(8.3)	(11.2)		(2.6)	12.0	0.5	9.0	12.0	4.5	8.5	1.2	22.5	5.5	2.0	0.0	3.0	9.5	11.0	12.0	5.5	0.0	10.0	8.8	0.1	10.0	8.3	0.0	2.8
Sus and cf Sus	16	1	.	4	27	.	1	2	14	16	6	1	5	5	4	9	.	3	2	.	.	.	4	5	4	1N 1O	.	10A 5L	8A 7L	.	4A 1L	3A .	.	1A .
+ teeth in jaw		3	5	17		6	9	31	11	2																							
n/f	8.0		(7.5)	(3.5)	11.5		(2.3)	(5.5)	(2.1)	(4.5)	3.0	0.5	2.5	1.5	2.0	4.5	0.0	1.5	1.0	0.0	0.0	0.0	2.0	2.5	2.0	0.5	0.0	1.3 0.6	1.0 0.9	0.0	0.5 0.1	0.4 0.0	0.0	0.1 0.0
Equus and cf Equus	.	.	5		.	.	14		12	2	1	.	1	3	5	.	.	3	.	2	2	2	1	1	.	.	.	4A 1L	4	.	1	5	.	3
Canis and cf Canis	1	.	1	.	1	.	.	1	.	3	.	.	.	2	.	2	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
+ teeth in jaws		.	1	1		.	1	1	.	.																							
Lepus and cf Lepus	.	.	.	.	.	.	-	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Capreolus and cf Capreolus	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.
+ teeth in jaws		.	.	.		.	3	3	.	.																							
cf Cervus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

Table 3: Towcester Ct. Lawrence Road, phases 6-8, counts by species/species group and part of the skeleton. Conventions etc. as in Table 2.

TABLE 4: Towcester St Lawrence Road, ratio of *Ovis* to *Capra*

Identification	Postcranial		Horncores	
	Phases 4a-b	Other	Phases 4a-b	Other
Ovis	9	3	2	
probably *Ovis*	10	2	1	
? *Ovis*	19	10		
? *Capra*				
Probably *Capra*	1			
Capra			1	1

PHASE	Scapula GLP	humerus BT	Radius Bp	Radius Bd	Metacarpus GL	Metacarpus SD	Metacarpus Bd	Tibia Bd	Astragalus GLl	Calcaneum GL	Metatarsus GL	Metatarsus SD	Metatarsus Bd
1								24.2x					
4a	28.8+?0 30.4?0	25.4+?0 26.4+?0 26.6pr0 26.9+ 27.2+pr0 27.5+ 27.8+?0	33.9?0		131.7 ----	14.2 ----	24.80vis	24.2?0 (24.4) 24.8pr0 26.4x 26.4?0 26.7?0 26.8+x?0 26.9 (30.2)x	25.5?0 25.9pr0 26.1+0vis 28.0+?0	57.5pr0 (58.8)0vis	130/5+ ----	11.9 -----	23.6+x0vis
4b	42.0*0vis 42.0*0vis	26.0+ 26.2?0 26.2+?0 26.3+?0 27.9?0	28.6?0	27.5+	126.7 ----	13.1 ----	24.20vis	23.2 24.0?0 24.9 27.0 28.0	24.7+pr0 27.3?0	51.5pr0 57.0 57.1+			

TABLE 5 - Towcester St Lawrence Road, Ovis/Capra, posteranial measurements

Definitions follow von den Driesch 1976; note that radius Bp has been taken at right angles to the sagittal ridge and groove, and that tibia Bd has been taken with the graduated beam of the callipers in contact antero-medially and antero-laterally: in each case a strict maximum would be taken diagonally, which seems less useful. Damaged specimens are only measured if the resulting measurement is thought to be within ±2% of the true value: () = within ±2%; + = chipped/eroded, up to 2% to be added; - = concreted or with open split, up to 2% to be deducted. Unfused specimens not measured; x = epiphysis still fusing (i e fusion line still open at some point); j = another epiphysis on same bone known to be unfused (e g qualifying Bd humerus when bone has unfused proximal end). Surface and unphased contexts not included.

* A pair of unusually large scapulae from a phase 4b context were part of a group of bones which were noticeably paler and lighter than most of the rest. This group included a radiale, two first phalanges, a second phalanx, a mandible, a maxilla, and two loose maxillary teeth; the mandible was from a very old animal, unlike any other tooth or mandible from Phases 4a-b. It seems likely that this group may be intrusive; it has been included in the Phase 4b counts, but attention is drawn to is when necessary.

Table 6: Towcester St Lawrence Road, Ovis/Capra mandibles, eruption/wear data. Mandibles without a countable m_3 or P_4 are excluded (after Payne 1973) to prevent double-counting of the same mandible (but see also Table7 below, in which all teeth are included); a tooth is classed as being 'in wear' once dentine has been exposed. Suggested ages follow Payne 1973.

Stage	Suggested age	Brief description	Phases 4a-b	Other
A	0-2 mths.	m_3 unworn	.	.
B	2-6 mths.	m_3 in wear; M_1 unworn	.	.
C	6-12 mths.	M_1 in wear, M_2 unworn	cf 1	cf 1
D	12-24 mths.	M_2 in wear, M_3 unworn	1+ cf 3	.
E	2-3 yrs.	M_3 in wear, post. cusp unworn	1	cf 2
F	3-4 yrs.	M_3 post. cusp in wear, infundibula not yet isolated	cf 1	1
G	4-6 yrs.	M_3 infundibula isolated; M_2 infundibula not yet starting to be erased	1+ cf 1	cf 1
H	6-8 yrs.	M_2 infundibula starting to be erased	.	.
I	8-10 yrs.	M_3 infundibula starting to be erased	.	1

Table 7: Towcester St Lawrence Road, Ovis/Capra, mandibular tooth-wear data, including loose teeth; letter references to stages as in Grant 1975, Fig 221.

1. m_3/P_4 Stage	Phases 4a-b			Other		
	in md.	loose		in md.	loose	
m_3 unworn (a or earlier)						
early wear (b-f)		4			1	
infundibula isolated (g-h)	1+?2	1		1	1	
ant. inf. erased (j and later)						
P_4 unerupted/unworn (a or earlier)	2	1				
early wear ((b)-f)	2	1		1	1	
infundibula isolated (g)	2	1		1		
post. inf. erased (h-j)		1		1		
both inf. erased (l)				1		

2. M_1 /M_2 Stage	Phases 4a-b			Other		
	M_1 in md.	M_2 in md.	$M_1/2$ loose	M_1 in md.	M_2 in md.	$M_1/2$ loose
unworn (a or earlier)						
first cusp in wear (b)			2			
second cusp in wear (c-f)	1	8	27	1		12
indundibula isolated (g-j)	10	2	25	1	1	8
ant. inf. erased (k-l)				1	2	
both inf. erased (m and later)				2		

3. M_3 Stage	Phases 4a-b			Other		
	in md.	loose		in md.	loose	
unworn (a or earlier)	1	2			1	
first cusp in wear (b)	} 1	1			1	
second cusp in wear (c-d)		4 } 1				
third cusp in wear (e-f)		5		1	3	
infundibula isolated (g-j)	1	3 } 1		1	3	
ant. inf. erased (k-l)	1*					
post. inf. erased (m)						

*probably intrusive: see footnote to Table 5.

PHASE	Scapula GLP	Humerus BT	Radius Bp	Radius Bd	Metacarpus GL	Metacarpus SD	Metacarpus Bd	Tibia Bd	Astragalus GL1	Calcaneum GL	Metatarsus GL	Metatarsus SD	Metatars Bd
3		(76.0)						58.4+			195.5+ ----	22.2------	-
											-	-	57.8
4a	63.4+	67.6+	69.2+	63.9	-	-							
	67.7+	72.8	82.4		187.3 ----	27.4 ----	48.7+	55.8	54.5+?juv.	128.1+x	203.3+-----	24.3------	48.0+
			89.7		175.4+ ---	29.3 ----	50.9	56.5	56.9		192.1+ ----	21.1 -----	45.2
					190.1 ----	29.2 ----	(51.0)	57.4+	59.0		199.6+ ----	22.6 -----	(49.3)
					179.7 ----	26.6 ----	51.1	59.1	59.2+?juv.		218.7+ ----	27.0 -----	-
					-	-	51.4	59.5	59.5		230.4 -----	25.7 -----	49.5
					188.7 ----	29.6 ----	52.9 or?Mt.	60.0+	60.2				
					192.9+ ---	37.3 ----	53.3	68.5	60.5				
							67.5	69.3	61.1				
									64.5				
									67.1				
4b	63.6			61.4+	165.9+ ---	33.0 ----	-	57.4	61.6	126.9	-	-	(50.2)
	59.0+				-	-	55.0+	62.3	63.5	128.9			(61.7)
					191.9 ---	36.0 ----	64.7		63.5				
					190.1+ ---	36.5 ----	65.2+		64.5				
					172.4 ---	28.6 ----	(50.5)		64.8+				
					198.7+ ---	38.9 ----	75.9+		73.2+				

TABLE 8 - Towcester St Lawrence Road, Bos, posteranial measurements

For conventions, definitions, etc see Table 5.

TABLE 9 - Towcester St Lawrence Road.

Bos mandibles, eruption/wear data

Mandibles without a countable m_3 or P_4 are excluded (after Payne 1973) to prevent double-counting of the same mandible (but see also Table 10 below, in which all teeth are included); a tooth is classed as being 'in wear' once dentine has been exposed. Letter references to stages follow Grant 1975, Fig 220.

Stage	Phases 4a-b	Other
M_1 unworn		
M_1 in wear, M_2 unworn	1	
M_2 in wear, M_3 unworn	1	
M_3 in wear, post. cusp unworn (b-d)	3+?1	1
M_3 post. cusp in wear (e-f)	2	
M_3 infundibula isolated (g-h)	3	2
M_3 bovine pillar in wear (j)		1
M_3 bovine pillar joined (k-m)		2

TABLE 10 - Towcester St Lawrence Road.

Bos, mandibular tooth-wear data, including loose teeth, letter references to stages as in Grant 1975, Fig 220.

1. M_3/P_4 Stage	Phases 4a-b		Other	
	in md.	loose	in md	loose
M_3 unworn (a or earlier)				
early wear (b-c, e)				
infundibula isolated (d, f-k)	4	3 } 1		1
ant. inf. erased (l-m)		1	1	
P_4 unerupted/unworn (a or earlier	3			
early wear (b-f)	4	1	2	
infundibulum isolated (g-h)	1	2	3	

2. M_1/M_2 Stage	Phases 4a-b			Other		
	M_1 in md.	M_2 in md.	$M_{1/2}$ loose	M_1 in md.	M_2 in md.	$M_{1/2}$ loose
unworn (a or earlier)		1	1			
first cusp in wear (b)		1				
second cusp in wear (c-f)	3	5	4		2	
infundibula isolated (g-h)	2	2	1			3
bovine pillar in wear (j)	1	5	2	1	2	1+?1
bovine pillar joined (k-n)	6	1	9	8	6	4
ant. inf. erased (o and later)						

3. M_3 Stage	Phases 4a-b		Other	
	in md.	loose	in md.	loose
unworn (a or earlier)	1	1+?1	1	
first cusp in wear (b)	1		1	
second cusp in wear (c-d)	3	} 1		
third cusp in wear (e-f)	4			
infundibula isolated (g-h)	5	3	3	1
bovine pillar in wear (j)		1 } 1	2	} 2
bovine pillar joined (k-m)	1		3	

TABLE 11 - Towcester St Lawrence Road

Sus, postcranial measurements

For conventions, definitions, etc see Table 5

PHASE	Humerus BT	Radius Bp	Tibia Bd	Astragalus GL1
4a			27.6 28.9x	
4b	(27.5)	26.6+ 27.2+		38.7+ 39.9+

TABLE 12 - Towcester St Lawrence Road

Sus, dental measurements

For conventions etc see Table 5; as tooth length is reduced by wear, teeth at or beyond Grant's wear stage g (Grant 1975, Fig 222) are indicated by the letter w.

PHASE	m_3L	M_1L	M_2L	M_3L	M^1L	M^2L	M^3L
1						23.6(!)	
3					16.9w		
4a	16.2w 19.0 19.1 19.5	13.7w 15.3w 15.5w 16.1 16.5 18.8(!)	19.1 19.1 19.4 19.6 20.8	(34.1)	14.9w 15.7w 16.0w 19.9 17.1	20.5 20.8 21.7	(30.0) (32.5)
4b			18.6 20.7+ 23.2(!)	(33.5)	15.5w 17.1	21.2+	

TABLE 13 - Towcester St Lawrence Road

Sus mandibles, eruption/wear data.

Mandibles without a countable m_3 or P_4 are excluded (after Payne 1973) to prevent double-counting of the same mandible (but see also Table 14 below, in which all teeth are included); a tooth is classed as being 'in wear' once dentine has been exposed. Letter references to wear stages follow Grant 1975, Fig 222.

Stage	Phases 4a-b	Other
m_3 not yet in wear	1	
m_3 in wear, M_1 unworn	?1	
M_1 in wear, M_2 unworn	2+?1	1
M_2 in wear, M_3 unworn	1+?1)	1+?1
M_3 in wear (b-c)	) ?2	
M3 post. part in wear (d)		

TABLE 14 - Towcester St Lawrence Road,

Sus, mandibular tooth-wear data, including loose teeth;

letter references to stages as in Grant 1975, Fig 222

1. M_1/M_2	Phases 4a-b			Other		
Stage	M_1 in md.	M_2 in md.	$M_{1/2}$ loose	M_1 in md.	M_2 in md.	$M_{1/2}$ loose
Unworn	1	2				
enamel wear only (a)						
dentine exposed (b-d)	3	7) 1	1	1	1	
ant. dentine confluent (e-f)		1)		1		
post. dentine confluent (g)	2		1			
ant. dent. conf. with post.(j)	1		1			

2. M_3		Phases 4a-b	Other	
Stage	in md.	loose	in md.	loose
unworn	4		1	
enamel wear only (a)	5			
dentine exposed (b-c)	2			
dentine exp.post.part (d)	1			
ant.dentine confluent(e onward)				

PHASE	Scapula GLP	Radius Ll	Radius Bp	Radius Bd	Metacarpus GL	Metacarpus SD	Metacarpus Bd	Tibia Ll	Tibia Bd	Astragalus BFd	Metatarsus GL	Metatarsus SD	Metatarsus Bd
2					205.9 ----	27.4 -----	45.8+		75.8+				
3	83.2+						43.7			48.8+			
4a	85.7+	(308.0)-78.6+---(72.1)						321.4--72.5			284.0 ----	29.3 -----	50.0
4b			84.4+						70.5				

TABLE 15 - Towcester St Lawrence Road, Equus, posteranial measurements
For conventions, definitions etc see Table 5

TABLE 16 - Towcester St Lawrence Road,

Canis, measurements.

For definitions, conventions, etc, see Table 5

Phase	P^4 L ext.	M^1 B	M^1 L	M_1 L	Pelvis LAR
4a	19.2	14.6	13.6	21.8	(25.3)
	19.0			22.4+	
4b					(21.3)

Table 17: Relative abundance of the main species, different phases from Towcester St Lawrence Road and Park St compared. See text comments about sample bias.

	Ovis/Capra and cf. Ovis/Capra		Bos and cf. Bos		Sus and cf. Sus		Equus and cf. Equus		Canis and cf. Canis	
Park St. Phase 4 (C1-C2)	102	43%	97	41%	25	11%	6	3%	6	3%
Park St. Phase 5 (C2)	65	40%	52	32%	27	17%	1	1%	15	9%
St. Lawrence Road Phase 4a (330-335 AD)	190	27%	362	52%	108	15%	3	4%	7	1%
St. Lawrence Road, Phase 4b (335 -)	91*	27%	181	55%	32	10%	22	7%	4	1%
Park St. Phase 9 (C13-14)	52	28%	100	53%	23	12%	5	3%	8	4%

* includes group of 10 ?intrusive specimens, see footnote to Table 5

TABLE 18 - Ovis/Capra measurements (probably nearly all Ovis), Towcester St Lawrence Road (Phases 4a-b) and Park St (Phases 4-5, C1-C2 AD) compared. See Table 5 for conventions, etc.

Humerus BT		Radius BP		Metacarpus GL		Metacarpus Bd		Tibia Bd	
SLRd	PkSt	SLRd	PkSt	SLRd	PkSt	SLRd	PkSt	SLRd	PkSt
									23.5x
									23.6
									23.7
	22.7j				106.6				23.7
	24.7				110.6		20.4	24.2	
25.4+			23.8j		114.2		21.0	(24.4)	
	26.0		25.6+j		115.0		21.7		24.7
26.2			26.4j		115.1x		21.9x	24.8	
26.2+			28.1		116.5		22.1	24.9	
26.4+		28.6			121.9		22.8		25.5x
26.6			29.3		122.8+		23.5		26.2+
26.9+			(30.3)j	126.7		24.2		26.4x	
pr.Capra) 27.2+		33 .9			126.9		24.6	26.4	
27.5				131.7		24.8		26.7	
27.8+					132.1+			26.8+x	
27.9								26.9	
								27.0	
								28.0	
								(30.2)x	

TABLE 19 - Sus tooth measurements, Towcester St Lawrence Road (Phases 4a-b) and Park St (Phases 4-5, C1-C2 AD) compared. Worn teeth (ie at or beyond Grant's stage g (Grant 1975, Fig 222)) have been excluded.

M_1L		M_2L		M_3L		M^1L		M^2L	
SLRd	PkSt	SLRd	PkSt	SLRd	PkSt	SLRd	PkSt	SLRd	PkSt
		18.6							
		19.1							
		19.1							
		19.4							
16.1									
	16.2	19.6	19.6						
16.5			20.5		(32.5)	16.9		20.5	
	17.0			(34.1)		17.1		20.8	
	17.1	20.7+			(35.0)	17.1		21.2+	
	17.1	20.8		(35.5)			17.8		21.3
	17.5		21.0				18.1	21.7	
?Wild) 18.8			21.2						
			21.6						
			21.7						
			21.7						
	(?Wild)	23.2							

ANIMAL BONES FORM THE 1977 EXCAVATIONS

by Dr J M Holmes

Sub-department of Veterinary Anatomy, University of Cambridge

Phase 2

282 (2), Alchester road side ditch

Ox

(a) Many fragments of an ox mandible, right side. It is to be assumed that they all belong to one jaw. Three molar teeth and a premolar are present. The teeth are of Grant wear stage 35. According to Silver's age estimates (for 19th century breeds), this animal would be over 5 yrs of age.

(b) (2 pieces) an intact right mandible of an ox with all premolar and molar teeth present. The teeth are of Grant wear stage 43.

(c) An upper jaw ox tooth.

(d) The centrum of a lumbar vertebra, probably of an ox.

Horse

(a) Part of the mandible of a horse.

(b) Two loose horse teeth. These may also belong to the mandible. The teeth are well worn and include the third molar, so the horse was aged.

Sheep

Three upper jaw sheep teeth (well worn)

Summary: The bones are not charred and show little evidence of weathering or gnawing. The remains are essentially those of two cattle and a horse, all fully mature, and a sheep, together with six oyster shells.

195, plot boundary, west of Alchester road.

Ox

(a) Head of right femur. Epiphysis fused.

(b) Tibial tarsal. One end chopped obliquely across. Length approx 68mm.

(c) Part of left ulna - anconeal process, etc (olecranon missing)

(d) Distal end of right tibia, epiphysis fused (width approx 62mm).

(e) Piece of lower jaw articulation (two pieces)

(f) Piece distal shaft left humerus

(g) Piece of cervical vertebra

(h) 3rd phalanx intact. Heel-toe length 67mm

(i) Left wing of atlas - rather small, could be a large sheep or deer.

(j) Piece of neural spine of thoracic vertebra

Several of these ox bones are weathered or dog-gnawed. They show signs of chopping (the jaw, femur, tibia fragments have marks on them, and several of the others have been cut across cleanly in ancient times). They could all come from one animal. If so, the animal was of small stature and probably mature (all visible epiphyses are fused). None of the bones show any evidence of charring.

Sheep

Mandible with permanent premolars and Ms 1 and 2 Payne wear stage F (suggested age 3-4 years).

PHASE 3

282 (1) Recutting, Alchester road side ditch.

Ox

1. (Two fragments). Metatarsal bone distal end and shaft. Epiphysis intact + fragment of upper part of bone allowing estimate of length at 228mm. From measurements of distal width and minimum diaphyseal width, the bone probably comes from a female

2. Fragment of dental pad of premaxilla.

3. First phalanx substantially intact. Length 58mm.

4. Piece of articulation of mandible.

Horse

Upper jaw cheek tooth.

Sheep

Fragment of ileum.

Summary: These bones are not badly weathered or gnawed and show no evidence of charring. Knife marks are visible on the ox metatarsus.

PHASE 4(b)

185, plot boundary, west Alchester road.

Several small fragments of bone The fragments clearly all belong to a skull - the bases cranii, occipital region, petrosals, one tympanic and both maxillae being substantially present. The skull is that of a small dog.

The bones are too fragmentary entirely to eliminate fox, but there are features suggesting they are canine. There are no surviving teeth. The dog was very small - about the size of a fox. It would seem all the teeth had erupted and, although many of the breakages are along suture lines, most of the sutures appear to have been fused, so the dog was an adult. Within the range of Roman lap-dogs.

TOWCESTER, ST LAWRENCE ROAD, THE BIRD BONES

by Anne Eastham

Of the total of 68 bird bones or fragments thereof which were excavated from this site 59 are of chicken, four of a duck comparable in size with mallard but probably a domesticated breed, a smaller Anatidae, which could possibly be a wigeon, two goose bones and two raven. The distribution of bones within the time scale of the site is even more restricted. No bird bones were discovered from the first phase of the 1st/2nd century, one chicken in Phase 2, another in the later 3rd century Phase 3, two in the earlier 4th century Phase and the remainder, including the water fowl and raven among the final 4th century occupation material. The last two chicken bones appeared on the surface of the site.

Table 1

Summary of the Bird Bones of Towcester, St Lawrence Road

Species	Phase 2	Phase 3	Phase 4a-b
Anas platyrrhyncos domesticated Mallard			4
Anas penelope (possibly domestic duck) wigeon in size			1
Anser anser domesticated goose			2
Gallus gallus chicken	1	3	53
Corvus corax			2

Waterfowl

The geese and ducks, of which there are only a total of 7 bones, were extremely few in number. The mallard, whether of a domesticated or wild species, is represented by a humerus, 2 ulnae and a femur. Three of these bones, humerus, ulna and femur, carry the same site reference and could well belong to the same individual. The other ulna is from a smaller specimen and was found in another location. It would therefore seem logical to suggest that just a pair of duck approximate in size to mallard were found in these excavations.

The other anatidae humerus is markedly more slender than is usual in mallard and approximates very much in size to Anas penelope, wigeon. Whether it is such or whether a smaller domesticated duck it is difficult to make a definite decision. The bone is a distal fragment of humerus, which does not carry any distinctive

diagnostic features in the bones of waterfowl.

The two goose bones are both left ulnae which indicates two individual specimens. One of these carries the same site reference as the mallard in Phase 4a. These ulnae are larger than the wild bean goose, Anser fabalis, and a little smaller than grey lag, Anser anser. This makes it most likely that they are both domesticated geese bought in for the table.

The Chicken Bones

Table 2 - Distribution of Gallus gallus (omitting articulated skeleton)

	Phase 2	Phase 3	Phase 4a-b	Surface
Skull				
Mandible				
Coracoid			2	
Sternum				
Furcula				
Scapula				
Vertebrae				
Ribs				
Pelvis				
Humerus			3	1
Radius			3	
Ulna			1	
Carpo-Metacarpus			1	
Digits				
Tibio-Tarsus			7	1
Fibula				
Tarsus-Metatarsus	1		2/1	
Phalanges				
Femur		1	3	

Apart from 33 bones which were found all together, the 20 chicken bones were mainly from the later phase of the site. Both the tarsus metartarsus from Phase 2 and the femur from Phase 3 are noticeably longer and more robust than those from Phases 4a-b. The fragmentary nature of the bones means that comparative measurements are rarely available. Such as they are, they are demonstrated in Table 4.

Table 3

	Phase 3			Phases 4a-b			
Measurements of Gallus (excluding articulated skeleton)mm	Length	Proximal	Distal	Length	Proximal	Distal	Site Ref.
Coracoid				55.0 50.4			173
Humerus						19.55	14(1) 11(1)
Ulna					09.8		106
Femora				67.4	13.9		63
					15.0		18
					11.25		31(3)
Tibiotarsus			14.0			9.6	525
							14(1)
					16.5		11(1)
				117.3	20.85	10.5	6

In the final phase of the site most of the chicken bones approximate very closely in size with the modern pheasant phasiamus colchinus. Obviously with so few bones any determination or guesswork as to breed of fowl is irrelevant. No evidence of animal farming seems to have appeared on this site so that like the mammals the chickens were probably just brought in for food and not reared in the vicinity.

Although the sites were so dissimilar in function, comparison of the chicken bone measurements of both the later phases of Fishbourne Roman palace and the 3rd and 4th century phases of Porchester Castle shows a broad similarity of size variation.

Table 4 - Bones of Gallus found associated in Pit 171 (1) (Phase 4b)

	Left		Right	
Skull	-		-	
Mandible - upper	-		-	
lower	-		-	
Coracoid	1		1	
Sternum	1			Frontal section and many small fragments
Furcula	1			
Scapula			1	
Vertebrae		2		Caudal
Ribs		9		
Pelvis		1		
Humerus	1		1	
Radius	1			
Ulna	1			
Carpo-Metacarpus	1			
Digits	-		-	
Femur	1		1	
Tibio-Tarsus	1		1	
Phalanges		3		
Total		33		

One or two interesting points are raised with reference to the 33 bones of a single cockerel found in the lower levels of Pit 171 (1) below a layer of carbonised wood and ash. This seems to have been a very large rubbish pit but the cockerel was apparently thrown away whole, although its skull and the right wing below the humerus are missing; and there are no marks on the bones suggesting that it was cut up, either for jointing before cooking or at the table. The long bone measurements are very similar to those of other bones of this period, a smallish breed of chicken (see Table 5).

Table 5 - Measurements of an articulated cockerel found in Pit 171 (1)
measurements in millimetres

	Length	Proximal	Distal
Humeri	6.98	1.95	1.585
	6.45	1.90	1.575
Ulnae	7.05	1.83	1.04
Carpus	3.06	1.145	.845
Coracoid	5.575		
	5.57		
Femora	7.715	1.425	1.54
	7.57	1.475	1.56
Tibiotarsus	10.88	2.09	1.199
	10.79	2.075	1.22
Tarsometatarsus	7.46	1.525	1.4
		1.525	

The remains of this cockerel include part of his pelvis and the dorso sacrum to which the studies of A N Promptoff who researched the inheritance of the structure of the dorsosacrum at the Amkoro Genetical Research Station, Moscow in the late 1920's may be usefully applied. From a range of 4,000 chickens from a variety of breeds he was able to define three different dorso sacral types, indicating different posture in the individual. The 'Bantam' type with 3 dorso sacral vertebrae implies a rather horizontal body posture. The 'Normal' posture is found in breeds with four dorso sacral vertebrae and breeds like Orpingtons, Pavlofs, Indian game and a great many purebred types of poultry fall into this category. A much more erect posture is held by those with 5 dorso sacral vertebrae and a backward removal of the pelvic bones. Typical of this is the Orloff type of poultry and many of the larger breeds.

The dorso sacrum of this cockerel falls into the 'Orloff' or 5 dorso sacral vertebrae type, even though measurements show that it is relatively small in size. Whether further research along these lines, provided that enough Roman dorso sacra were available, would give definitive information on Roman races of fowl, I am not certain. Promptoff does point out that 'pure races of domestic poultry are never uniformly of any given pelvic type'. But a modern Dorking as bred for showing has a very horizontal posture, whereas the hybrids produced for standing upright four to a cage in a battery unit seem in the specimens I have studied to have the 5 ds type of pelvis. Unfortunately I have not had an opportunity to study the actual pelvic girdle of any of

of the valuable Dorkings which are supposed to be the oldest race of poultry in this country and to have been imported in Roman times.

The Raven

Ravens are almost a trademark of Romano British sites in this country, and it would be a disappointment to find a site without one. The fragmentary ulna and tibio tarsus fragments found in site ref 177 have been dated to Phase 4b. Often in the villas and military establishments they were tame and lived to a very great old age.

Conclusion

In summary, apart from the raven, it is logical to regard the bird bones from this site as food items rather than accidental deaths. As such, it is clear that the settlement was poorly supplied with poultry for most of its period of existence and its inhabitants never indulged in the luxury of exotic table birds as so many of their richer contemporaries did elsewhere. Chicken stew not roast peacock would appear to represent the height of their celebrations; the simple fare of the artisan in which the indulgence of poultry was a rare occasion.

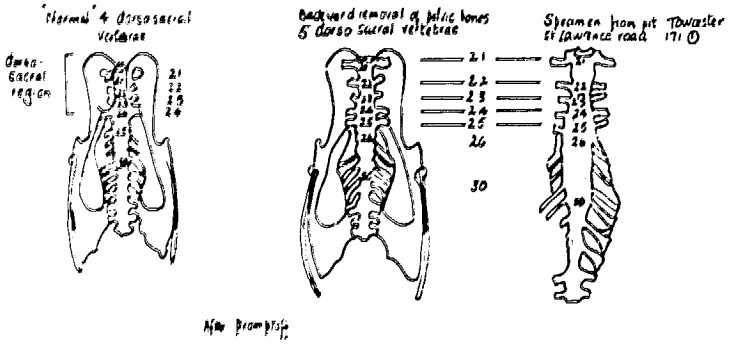


Fig. M16 Towcester, Alchester road suburbs: bird bone: cockerel skeleton from Pit 171(1).

GRAVE A, ALCHESTER ROAD SUBURBS SITE (Fig.14)

by C.T.P. Woodfield.

Period:	Arch.Ref.:	Number:
? Late Roman ? Medieval	TOWCESTER July 1978 in bed of canalised Silverstone Brook. NGR SP 693 481.	GRAVE A. (Grave B lifted by Mr & Mrs Hastings)

Locality:	Preservation:	Deformation:
In grave, extended at approx.6ft.laid.	Waterlogged.	Nil

Sex:	Age at death:	Stature:
Male	c. 40 years	164.7cm (5ft.4 3/4 ins.)

Dentition: 87654321 12345678
87654321 12345678

Attrition: M2 Slight alveolar reabsorbtion
Calculus slight
Caries absent

Cranium: Severely damaged by machine at time of discovery. Face, major part right parietal, most upper mandible missing.

Strong occipital crest and pronounced mastoid processes. Brow ridges missing.

Sutures: Saggital largely closed on ext.table. Coronal commencing at bregma. Lambdoid suture closure proceeding. No wormian bones.

Measurements: (S_2) = 113mm

Post Cranial skeleton:

Measurements:

(FeL_1)	= 432.5	(one only)
(TiL_1)	338.2	No squatting facets
(TiD_2)	23.0	
(TiD_1)	33.8	
(FlL_1)	339.7	(one only)
(RaL_1)	237.8	(one only minimum)

Based on Trotter & Gleser regession equations for white males, height estimated at 163.82 - 165.87cm = (avge of 4) = 164.7cm.

Pelvis: strongly marked muscle attachments. Sciatic notch acute Preauricular sulcus damaged, prob. absent.

Traumae: One phalanx (pes) has abnormal lateral growths, probably due to trauma in life.
Right ulna has healed fracture towards wrist, without corresponding break in radius. Fracture has healed correctly.

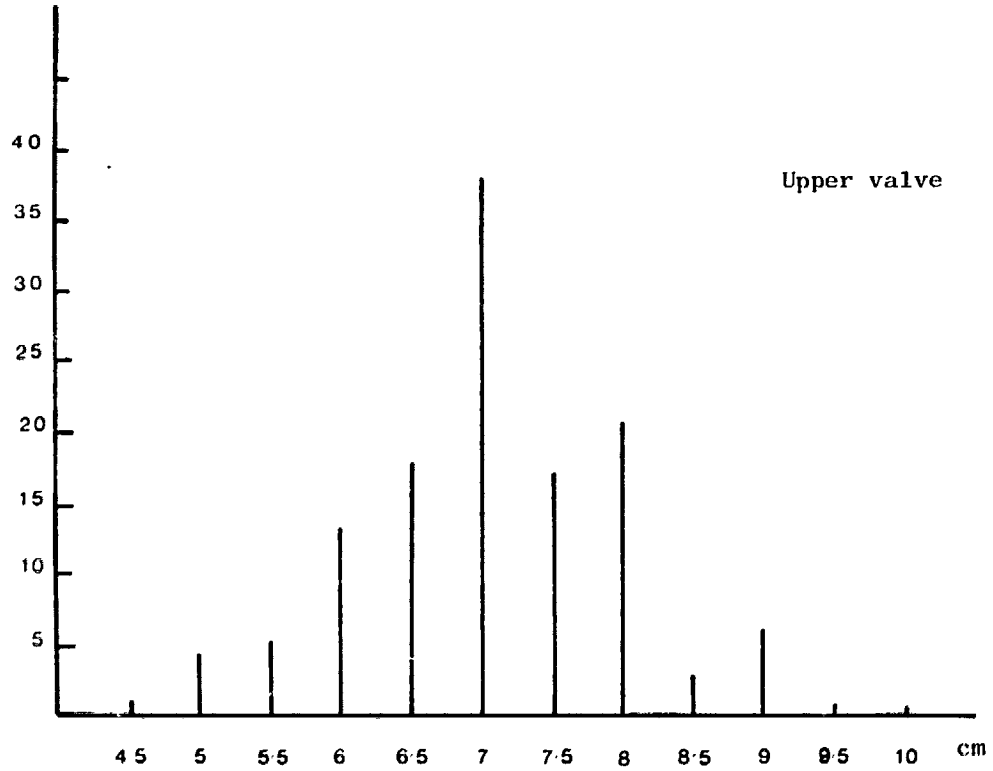
Pathological conditions: None could be detected.

OYSTER SHELLS FROM THE EXCAVATIONS OF 1974-76

by Cristine Orr

The total number of oyster (ostrea edulis) shells or ports was 545. There were 305 upper valves and 240 lower. The minimum number of oysters represented was 305. One complete oyster ie upper and lower valves still paired, was noted. Shell widths were plotted in the manner suggested by J G Evans (What to do with shellfish on archaeological sites, Fig 7) (Fig M18). There were 122 measurable upper valves and 76 measurable lower valves.

Plot of oyster shell widths (from hinge to gape)



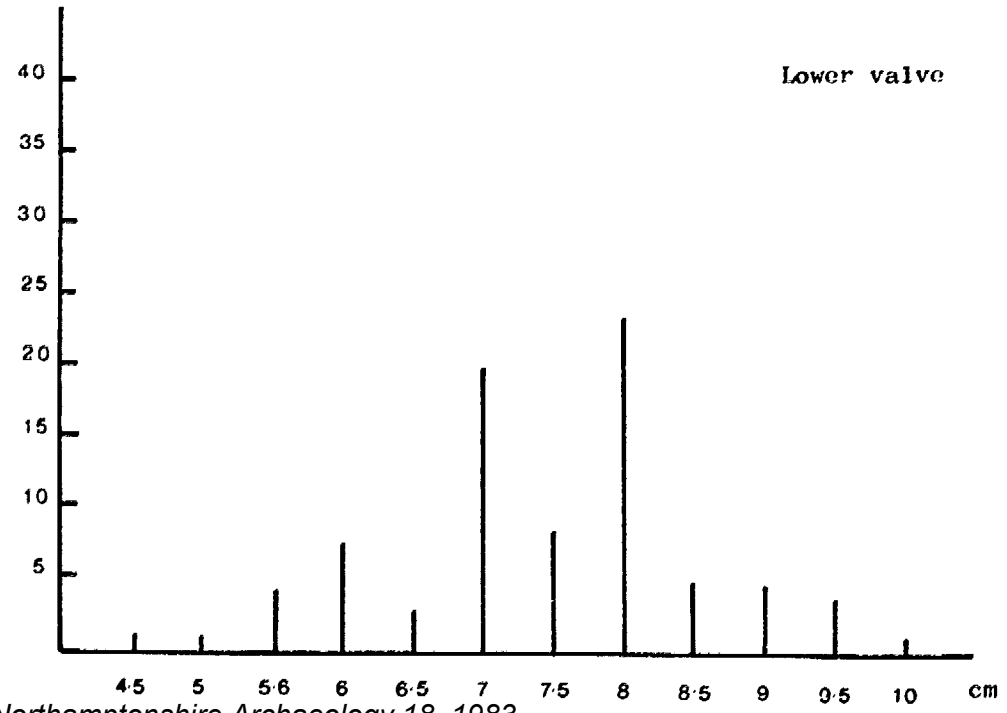


Fig. M17 Towcester, Alchester road suburbs: plot of oyster shell dimensions

Deposits on the inside of pottery fragments

by G.C. Morgan

Several pottery fragments were seen to have greyish or black deposits adhering to the inside. On examination these proved to be the following:

	Pottery fabric type	*Vessel type if known*	*Context of fragment (phase in brackets)*	*Nature of deposit*
1.	44(c)	Cooking pot base	7(3)(4b)	Silica (SiO_2)
2.	44(c)	Cooking pot body sherd	7(3)(4b)	Silica (SiO_2) & lime scale
3.	44(b)	Body sherd	21(4b)	Vegetable matter?
4.	44(c)	Cooking pot body sherd	64(4b)	Silica (SiO_2) & organic matter
5.	20	Body sherd	64(4b)	Silica (SiO_2) & lime scale
6.	35(b)	Small wide mouthed jar	66(4b)	Fibrous vegetable matter - ?cereal
7.	44(c)	Cooking pot body sherd	68(4a)	Burnt organic matter - ?cereal
8.	44(b)	Body sherd	140(1)(4b)	Vegetable matter - ?cereal

All this suggests the use of these pots for boiling water and cooking. In addition a fused burnt mass from 38 (culvert, Building 4/5, Phase 4) proved to be burnt cereal of some kind, possibly in the form of porridge or malt.

Possible daub fragments

by G.C. Morgan

Lumps of a mortar-like substance formed of a calcareous mud, probably daub, were found in the following locations, both belonging to Phase 4b:

1. 132(1) (Area 4, recutting of Alchester road side ditches, western side). Five small fragments up to 55mm long (1976, S277).

2. 66 (Stone floor, Building 4/2b). Larger lump, 110mm x 60mm with smooth face (1976, S189).

ALCHESTER ROAD, TOWCESTER

COAL SAMPLES, ALCHESTER ROAD SUBURBS

by J C Eaton

Coal samples found during the excavations of 1974-76 were looked at briefly to try to identify the coals' type and thus their probable place of extraction.

Identification proved difficult (below) due to small size and degree of weathering. As a result of weathering, the samples had lost almost all of their fussian content and were therefore composed almost entirely of vitrain. The lack of fussian within the coals made direct comparisons with a range of fresh (recent) coal specimens almost impossible, as the vitrains contained in most coals have identical physical properties. The smoky flames given off by most of the specimens suggest that the coals are of a bituminous type. Difficulty in igniting the samples may possibly beattributed to oxidation of the coals over a long period of time, causing the calorific values of the coals to deteriorate.

The coals' origin or place of extraction is therefore speculative unless additional studies are carried out on more samples, using microscopic and other analytical chemical techniques.

The transportation of coal to the Towcester area during the Roman period must have been a feat in itself as the nearest coalfields are in the West Midlands and Leicestershire areas some 50 to 100km to the north.

Sample No:	Description/Flame Test	% ASH
S202 68, side ditch, Alchester road. Phase 4a	Black, vitreous lustre, rectangular in shape, easily fractured, flakey, containing a well developed cleat, thin developments of pyrite throughout, low relative density having a brown streak. Flame test: very smoky, brown/black coloured, sooty, flame small bright orange/blue, difficult to ignite.	NOT TESTED
S238 83, Building 4/2b, Phase 4b	Brown/grey, dull earthy lustre, weathered, thinly laminated, friable, poorly developed cleat, numerous small plant fragments visible along partings, silty laminae present, low relative density having a brown/black streak. Flame test: slightly smoky, black sooty coloured, flame small bright yellow/blue, very difficult to ignite.	8.6% Purple/grey fine. Very silty ash
S194 65, side ditch, Alchester road, Phase 4b	Black, vitreous lustre rectangular, thinly laminated, containing thin laminae of pyrite, occasional plant fragments and a poorly developed cleat, low relative density having a brown/black streak. Flame test: very smoky, black sooty coloured, flame bright yellow/orange, very difficult to ignite.	2.5% Orange/brown very fine silty ash
S306 170, pit, Area 2 Phase 4b	(very small sample) Black, highly vitreous, triangular in shape; apparently showing a strong cleat, having a brown streak and a low relative density. Flame test: slightly smoky, black sooty, having a bright orange flame with blue outer, difficult to ignite	NOT TESTED
S203 58, side ditch, Alchester road, Phase 4b	Black, highly vitreous lustre, moderately developed cleat, showing a slight concoidal fracture, triangular in shape having a brown streak and a low relative density; appears very pure in composition. Flame test: slightly smoky (black), having an orange/yellow small flame, difficult to ignite.	0.36% pink/brown/grey fine silty ash

Sample No:	Description/Flame Test	% ASH
334, Plot 4/7, Base of topsoil	Black, highly vitreous lustre, hexagonal in shape, having a closely spaced well developed cleat with pyrite along cleat faces, streak brown/grey and low relative density. Flame test: slightly smoky (brown/black), having an orange/ yellow flame with blue outer	NOT TESTED
S216 64, pit, Area 4, Phase 4b	Brown/black, dull, weathered, rectangular, with a vitreous lustre when broken, containing a well developed cleat (v. closely spaced), and abundant weathered pyrite material and some plant debris, streak brown having a low relative density. Flame test: Very slightly smoky with a very small (poor) yellow/ blue flame, slow burning.	12.8% Dark purple/grey clinkered ash.
S187 65, side ditch, Alchester road, Phase 4b.	Black, vitreous lustre, rectangular in shape. Showing a well developed concordial cleat, thinly laminated containing very thin clay laminae, very brittle, giving a brown/grey streak and having a low relative density. Flame test: moderately smoky, black sooty with a bright yellow/ orange flame, burned readily.	NOT TESTED
S292 164, ditch, Plot 4/2, Phase 4b	Black, vitreous lustre, cubic in shape, extremely closely spaced cleat with associated pyrite brown/ grey streak and having a low relative density. Flame test: very smoky and sooty (black), with a very bright yellow/ orange flame.	NOT TESTED

Analysis of slag remains from watching brief, Towcester, 1977.

by R Clough, Institute of Archaeology, University of London.

Four small cakes of slag were found in the fill of a ditch, 282 (2) (the Alchester road side ditch). They are plano-convex in shape, being 150-200mm in diameter and approximately 100mm deep, weighing c. 0.6kg.

Similar cakes of slag have been considered as furnance bottoms, from either smelting or smithing furnaces. Examination of these samples now suggests a smithing origin.

All four samples were extensively weathered which was confirmed by X-ray diffraction where goethite, an iron oxy-hydroxide was predominant in the pattern. This mineral would not be part of the original composition as it is a secondary corrosion product.

During the weathering, other elements would have been leached from the slag structure, particularly the more soluble elements such as the alkalis. As a consequence, any analysis can only approximate the original composition. This imposes an uncertainty on any information which can be derived from the slag, and reconstructions of the thermal conditions operating in the furnace difficult.

The analyses in Table 1 display a wide variation in composition, with furnace bottoms B and D being typical of slag from the bloomery process. Sample A is relatively low in silica but this could still represent a slag from the process with the addition of iron during the smithing process.

Although the analyses are similar to those of slags from the smelting process they are also acceptable as smithing slags, because during the early stages of smithing the iron, much of the entrapped slag is squeezed out of the iron bloom without any obvious change in composition.

During smithing, other materials in the furnace are often vitrified and enter the slag structure. Minerals such as silica and iron oxide can be intentionally added as an aid to forging, but fuel ash, and furnace lining often flux the slag resulting in unusual compositions such as that seen in slag C (Table 1), which must include furnace lining or similar high alumina material.

The quantity of slag from the / sample is small (2-3 kg), but this could reflect the small area of ditch excavated. None of the samples exhibits any flow structure which is typical of slag tapped from a smelting furnace. No furnace remains were associated with the slag cakes, which probably resulted from periodic clearing out of a smithing furnace.

Ore deposits are located to the north of Towcester along with traces of early pit mining dating to the Medieval period, and it is possible that Roman smelting operations also took place in that area.

Table 1. Slag analyses Ditch 282 (2)

Element	A	B	C	D
SIO2	9.4	14.4	21.2	26.8
FEO	60.9	57.9	43.7	52.6
AL2O3	3.2	3.4	21.9	3.0
CAO	0.8	1.7	N.D	5.5
MGO	0.8	0.8	4.6	1.1
SO3	0.4	0.3	0.2	0.1
P2O5	1.2	0.9	0.8	0.7
TOTALS	76.5	79.4	92.4	89.8M

Analysed by XRF-edax, using borate discs.

Water and carbon not analysed for.

Some of the iron in these slags would be in the higher oxidation state.

TABLE ONE

Distribution of specifically named beetles in the six faunal groups

SYNANTHROPES

I Imported species:

Laemostenus terricola, Oryzaephilus surinamensis, Agletus brunneus, Cryptolestes ferrugineus, C.turticus, Tribolium confusum, T.casteneum, Sitophilus grenarius.

II Other synanthropes:

Anobium punctatum, Ptinus fur, P.subpilosus, Lathridius pseudominutus, Enicmus transversalis.

III Dung/rubbish fauna:

Acritus nigricornis, Onthophilus striatulus, +Sphaeridium sp., Cercyon unipustulatus Megasternum obscurum, +Aphodius spp., Oxyomus syvestris, Micropeplus porcatus, Omalium laeviusculus, Coryphium angusticolle, Platystethus arenarius, P.cornutus or degener, P.nitens, Anotylus complanatus, A.nitidulus, A.rugosus, A.sculptus, Anthicus floralis, Mycetaea hirta, Rhizophagus perforatus.

NATURALLY OCCURRING SPECIES

IV Ground/soil species:

Nebria brevicollis, Pterostichus nigrita, P.versicolor, Agonum albipes.

V Vegetation feeders:

Chaetocnema concinna, Hypera punctata, Cymnetron veronica, Phlegphthorus rhododactylus, Scolytus intricatus, Hylesinus oliperda.

VI Aquatic/waterside fauna:

(Aquatic) Hydrobius fuscipes, Helophorus brevipalpis, H.aquaticus, Ochthebius bicolon, O.minimus, Limnebius truncatellus.
(Waterside) Lesteva heeri, L.longoelytrata, Corylophus cassidoides.
(Pond and pondside plant feeders) Hydrothassa marginella, Notaris acridulus, Tanyaphyrus lemnae.

+ Not identified to species, but Genus diagnostic of habitat type.

MEDIEVAL AND POST MEDIEVAL FINDS (Fig. M 18)

1. Sewing ring. Common in 16th and 17th centuries and most likely to have been imported from Nuremburg. For a mid 16th century parallel see Woodfield 1981, Fig. 6, 108. Intrusive therefore in 345, Phase 2. 1967 SF 16.

2. ? decorative scabbard binding, possibly Medieval; but a Roman date cannot be entirely ruled out (Mr F Grew, Museum of London, *in litt* 1982). Unstratified in area of Building 4/1b, 1977 watching brief.

3-5. Brooches, Medieval (London Museum 1954, Pl. LXXVII 1-2). The contexts are as follows: 3, topsoil, 1975 SF 675; 4, topsoil, 1974 SF 2; 5, intrusive in 330, Phase 2 or 4b, 1967 SF 4.

6. Small bell, copper alloy sphere within; probably Post-medieval (Moorehouse 1971, Fig. 25, 163). From 19, land drain. 1975 SF 843.

7. Piece of Medieval coulter (London Museum 1954, Pl. XXII). Topsoil over Building 4/1b, 1977 watching brief.

8-10. Horseshoes. Could be Roman but not from sealed levels. 8 comes from the topsoil, Area 4 (it resembles Portchester, Vol I, Fig. 125, 182 (Cunliffe 1975)); 9 from 336, Phases 2 or 4b; 10 from 65, Phase 4b.

In addition the 1967 excavations produced two copper alloy tag ends of Post-medieval date (Woodfield 1981, Fig. 5, 36): intrusive in 335 (Phase 4b) and 329 (Phase 2).

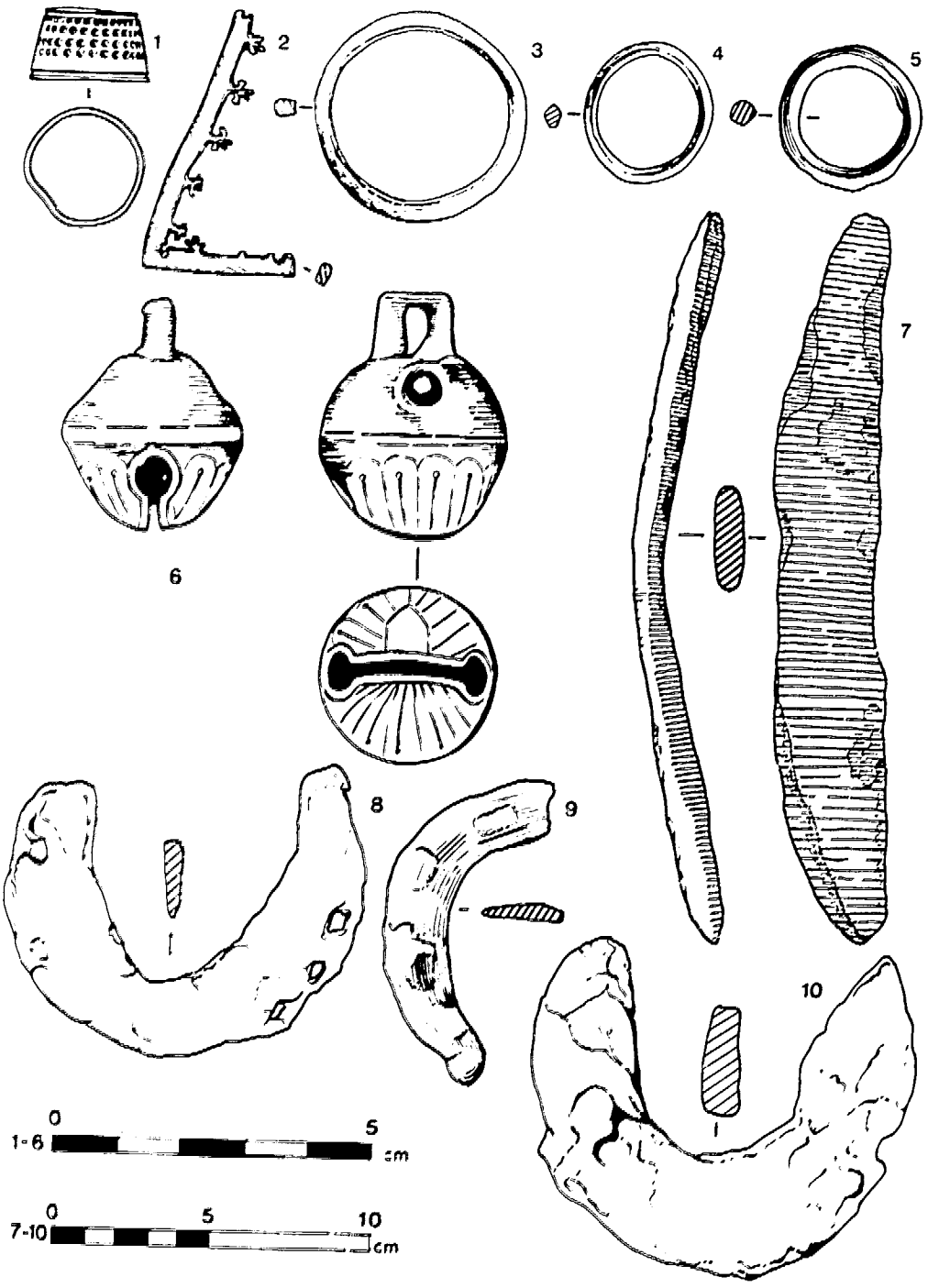


Fig. M18 Towcester, Alchester road suburbs: medieval and post-medieval finds.