

# An Iron Age Farmstead at Grove Farm, Enderby, Leicestershire

by *Patrick Clay*

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Excavations undertaken in 1983-4 of a Late Iron Age enclosure have revealed several phases of activity including circular buildings. Environmental information suggests the practice of a mixed economy during the first century BC-first century AD. This work contributes to an ongoing study of prehistoric occupation on clay subsoils

## Introduction

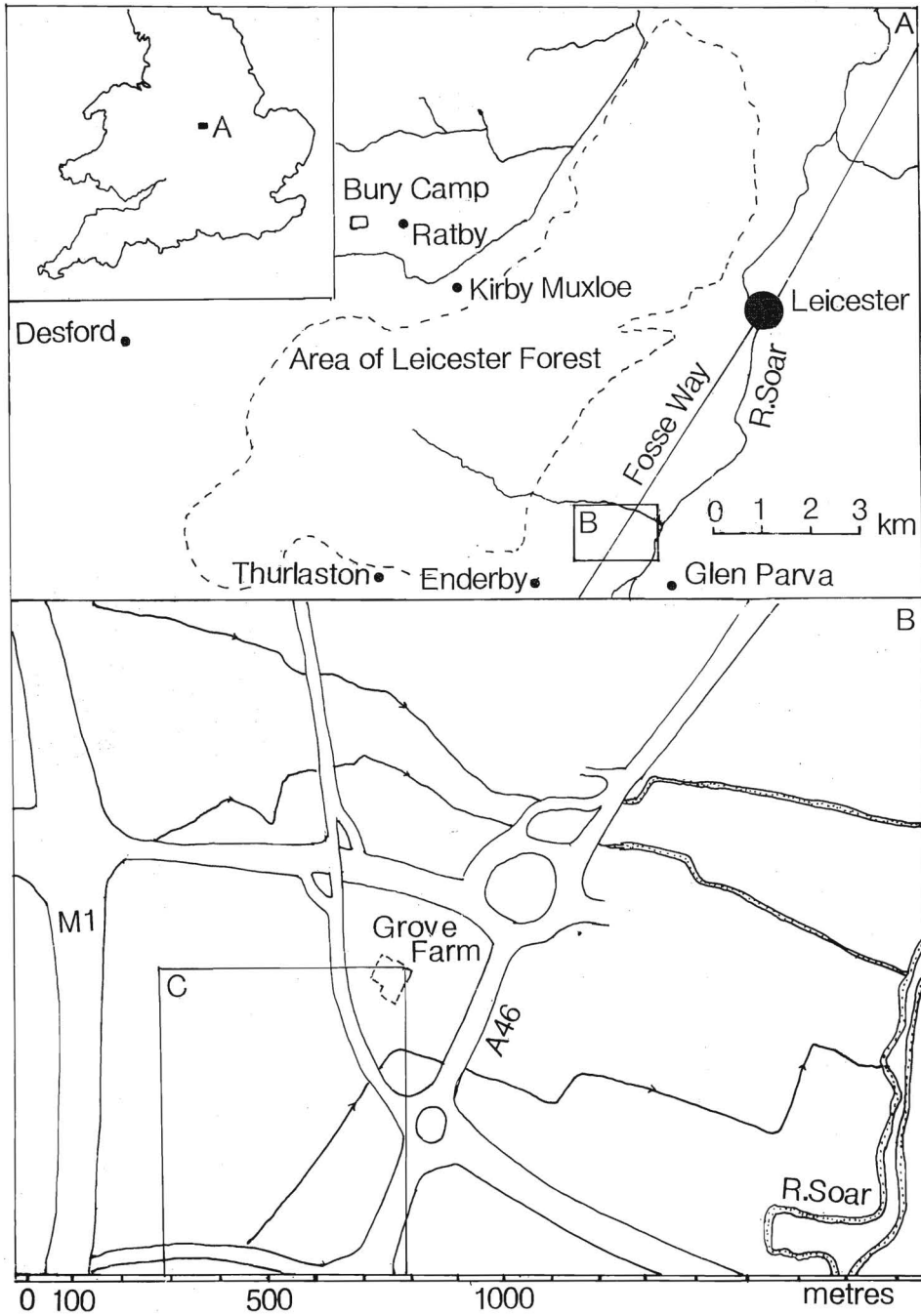
Aerial photography by Dr. J. K. St. Joseph and James Pickering in the 1960s located the cropmark of a 'D'-shaped enclosure 300m south west of Grove Farm, Enderby, Leicestershire (SK 551 001). Situated on a boulder clay ridge at 69m O.D., the site is 5km (3.2 miles) south west of Leicester and 1.5km (1 mile) north east of Enderby and overlooks the confluence of Lubbesthorpe Brook and other tributary streams flowing into the River Soar 1km (0.6 miles) to the east (illus. 1). The cropmark, enclosing an area of c. 1 ha. also revealed some possible internal features, including two parallel ditches, and some external sub-circular features to the south east. The site is located 350m west of the projected course of the Fosse Way (see below p. 37) and in August 1989 evidence of another smaller sub-rectangular enclosure and possible linear features 500m to the south west was located as a parch mark in pasture by James Pickering (illus. 2 and 3).

In 1981 an application was made to develop an area including the 'D'-shaped cropmark site as a regional shopping centre (Centre 21). In view of this potential threat a programme of fieldwork was proposed with the following aims:-

1. To identify the date, function and extent of the site.
2. To examine settlement and land use within this area of clayland.
3. To test the theory that this enclosure may have been a forest edge settlement involved primarily in pastoral farming in view of its proximity to the Medieval Leicester Forest, and assuming it may have had earlier origins.

The programme also contributed to three long term projects currently being undertaken by Leicestershire Museums Archaeology Division.

1. The Prehistoric Claylands Project, to examine prehistoric settlements and land use on claylands. (Clay 1989)
2. To examine the origins and development of Leicester Forest (Liddle 1982, 42 Fig. 29).
3. To examine settlement development in the hinterland around Leicester (Lucas 1986, 80).



1. Location Plan



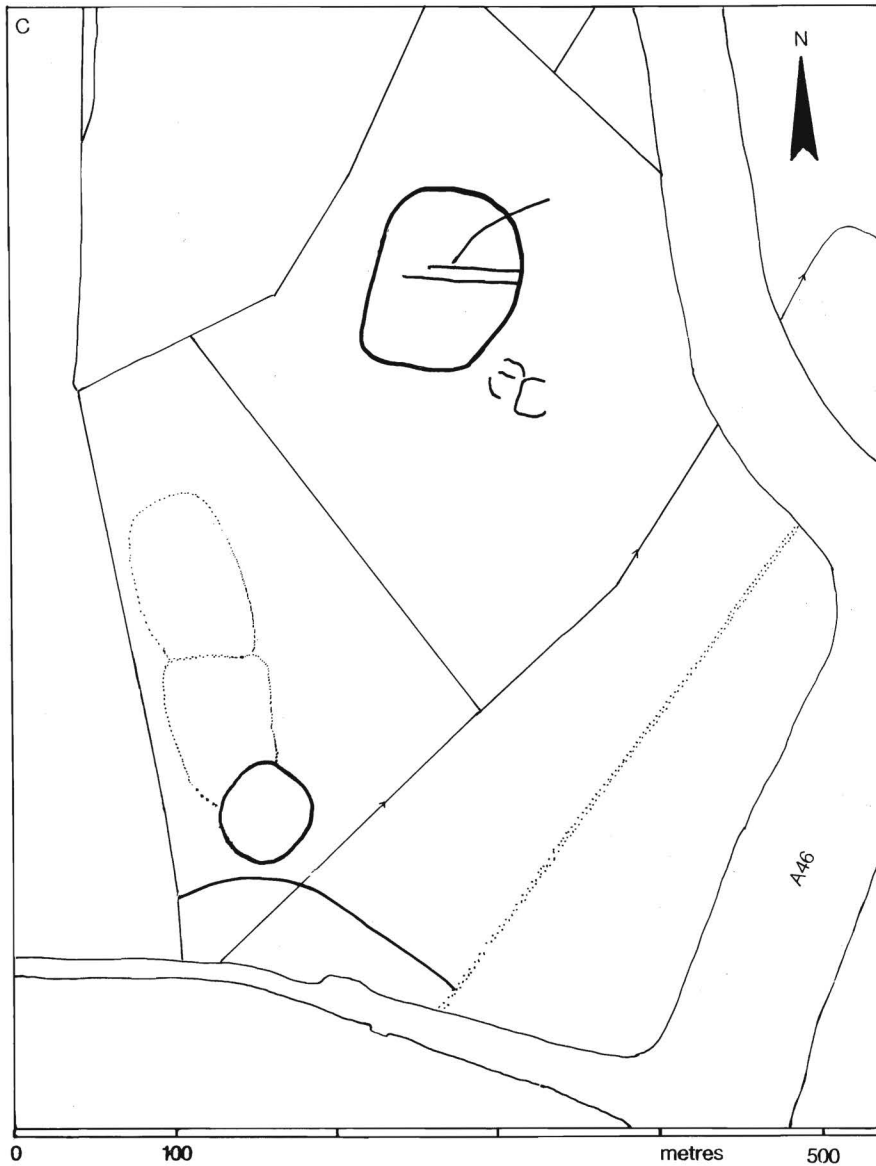
2. Cropmarks of enclosures showing in pasture. August 1989. Photograph: J. Pickering

To answer these questions three stages of fieldwork were undertaken with the kind permission of the landowners Penwise Properties Ltd. and the farmers Mr. J. Harrison (1981-2) and Mr. J. Kirk (1983-1985). This began with fieldwalking and geophysical survey followed by two seasons of excavation, supplemented by a watching brief and metal detector survey. Although the original development had its planning permission refused further development proposals will affect the area. In view of this an evaluation of the sub-rectangular enclosure and adjacent areas was undertaken in June-July 1990 (Sharman and Clay, 1991).

### **The fieldwalking survey**

A two stage fieldwalking survey of the field containing the cropmark was undertaken by Leicestershire Museum's Archaeology Section directed by Anne Graf. Initially 30 traverses at 10m intervals divided into 60m stints were walked in November 1981 and February 1982. Finds were collected by traverse and are deposited with Leicestershire Museums (Accession No. A3. 1982).

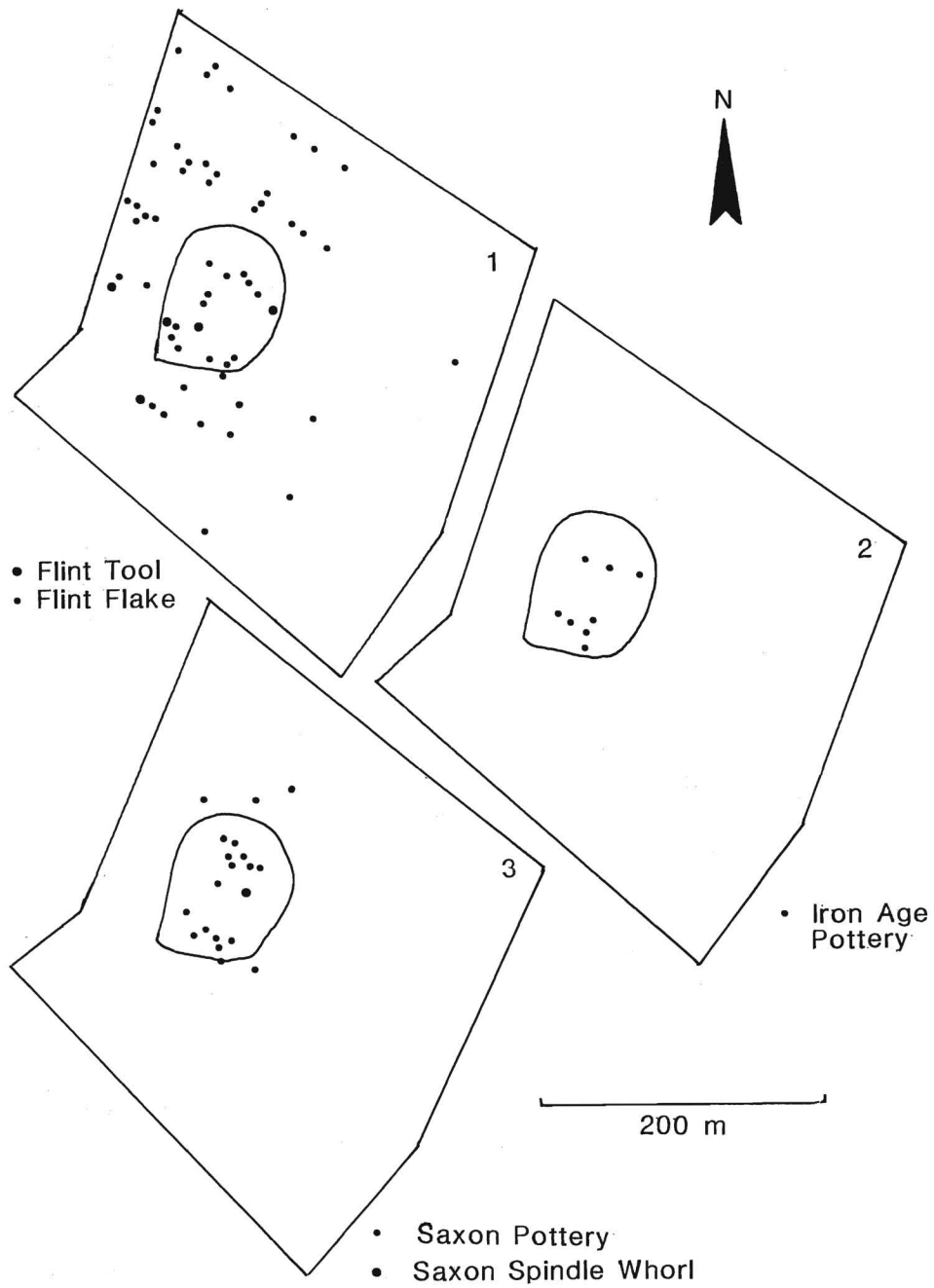
The second stage consisted of gridded fieldwalking of the cropmark area. The area was divided into 20m squares and each square was walked at 4m intervals (5 traverses/square). Finds were again collected within each traverse (Acc. No. A13. 1982). Soil samples were also taken to measure the pH.



3. Plan of cropmarks showing enclosures

*Results* (illus. 4).

The surface finds were concentrated almost entirely on the higher ground in the western half of the fields, close to, or within the area of, the cropmark. The finds included a small group of worked flint (see below p.54) (illus. 4.1). A few sherds (7) of abraded hand made pottery provisionally dated to Late Bronze Age - Early Iron Age were recovered (illus. 4.2) in addition to nineteen sherds of early Saxon pottery and



4. The fieldwalking survey: 1. flint 2. Iron Age pottery 3. Anglo-Saxon material

one Saxon spindle whorl (illus. 4.3). Small quantities of Roman, medieval and post-medieval material were also present. The topsoil pH of 7.5 suggested some potential for mollusc and bone survival.

The fieldwalked material suggested three possible phases of activity: Late Neolithic - Early Bronze Age; Iron Age, with possible Late Bronze Age origins; and Saxon.

### **The geophysical survey**

Geophysical Survey using a Proton-Magnetometer was undertaken jointly by Anne Graf of Leicestershire Museums and the Department of Archaeology, University of Leicester, who provided the equipment and student help, with the aim of enhancing the cropmark and fieldwalking information. This was to include the possible external features to the south-east. Three traverses were undertaken with readings taken at 1m intervals. Although several anomalies registered there was no clear association with the features showing as cropmarks and the only clear response was from a gas pipeline. In view of this a proposed gridded survey was not undertaken.

### **The excavation**

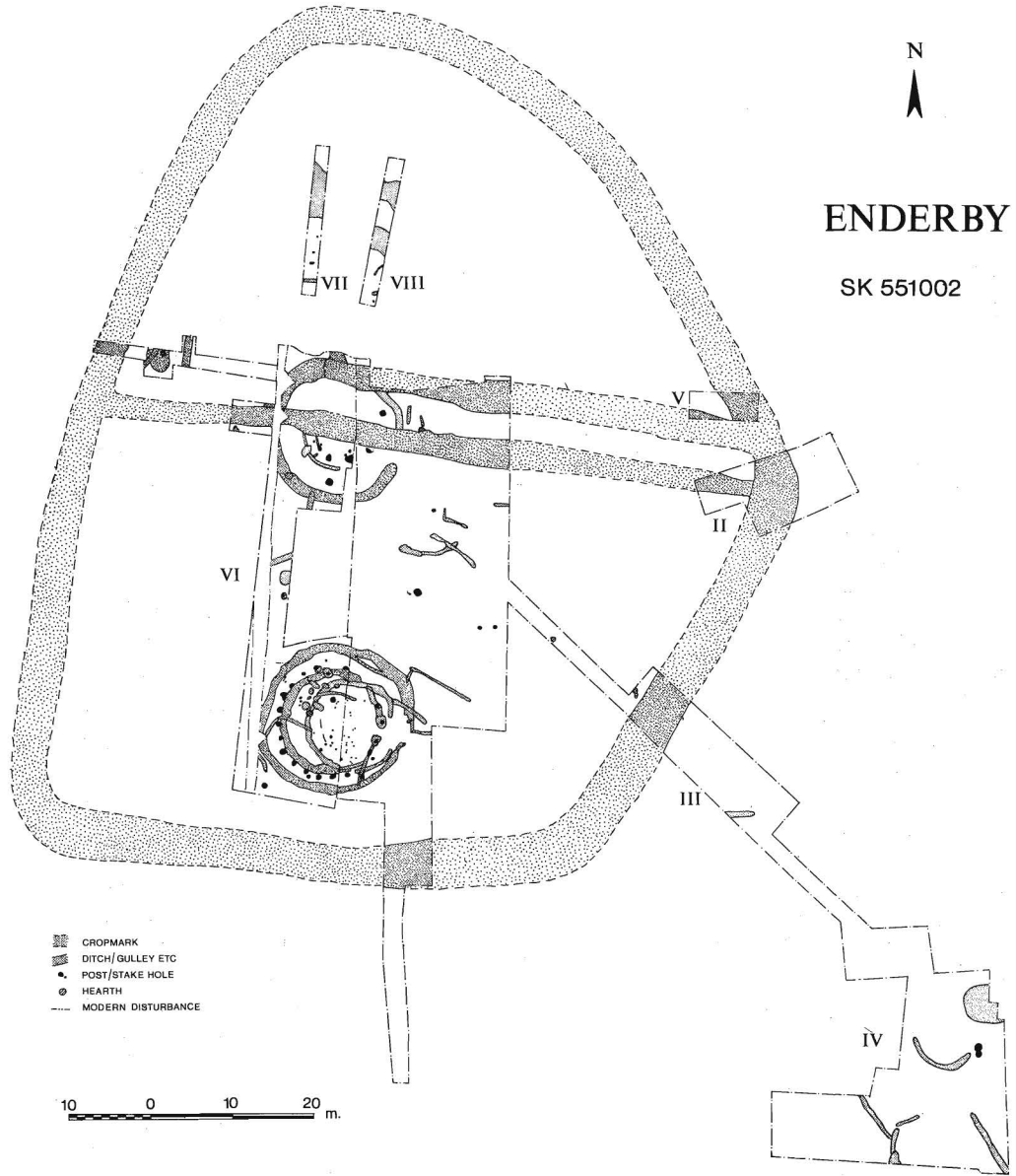
In the light of the fieldwalking survey an excavation programme was proposed with the following specific aims:

1. To recover further evidence for the three main periods of activity suggested from the fieldwalking.
2. To confirm the date and ascertain the function of the cropmark site.
3. To examine the activity suggested by cropmarks outside the enclosure ditch.
4. To identify any sequence of enclosure type suggested by the cropmark evidence.
5. To recover evidence of the economy and environment of the settlement.

The excavation was funded by Leicestershire County Council with a contribution from Blaby District Council. In the first season (1983) excavation was only made feasible through a joint project with the University of Leicester's Archaeology Department who provided student labour as part of their field training course. Work in the second season (1984) relied on the contribution of much volunteer help.

In view of the time and financial constraints sample areas were selected which, it was hoped, would address the aims of the project. In the first season 2,200 sq.m. were excavated in five main areas to examine areas inside and outside the enclosure ditch. As the excavation was undertaken between June and September of a hot dry summer some difficulties were encountered in working on a boulder clay subsoil. A further short season of excavation was undertaken in October and November 1984 to extend some of the areas revealed in 1983. This was a much wetter period and proved far more suitable for excavation. Some areas opened in 1983 were re-examined to ensure that features were not missed in the dryer conditions of the first season. An evaluation of adjacent areas was undertaken by the unit and directed by Josephine Sharman in June-July 1990 (Sharman and Clay 1991)

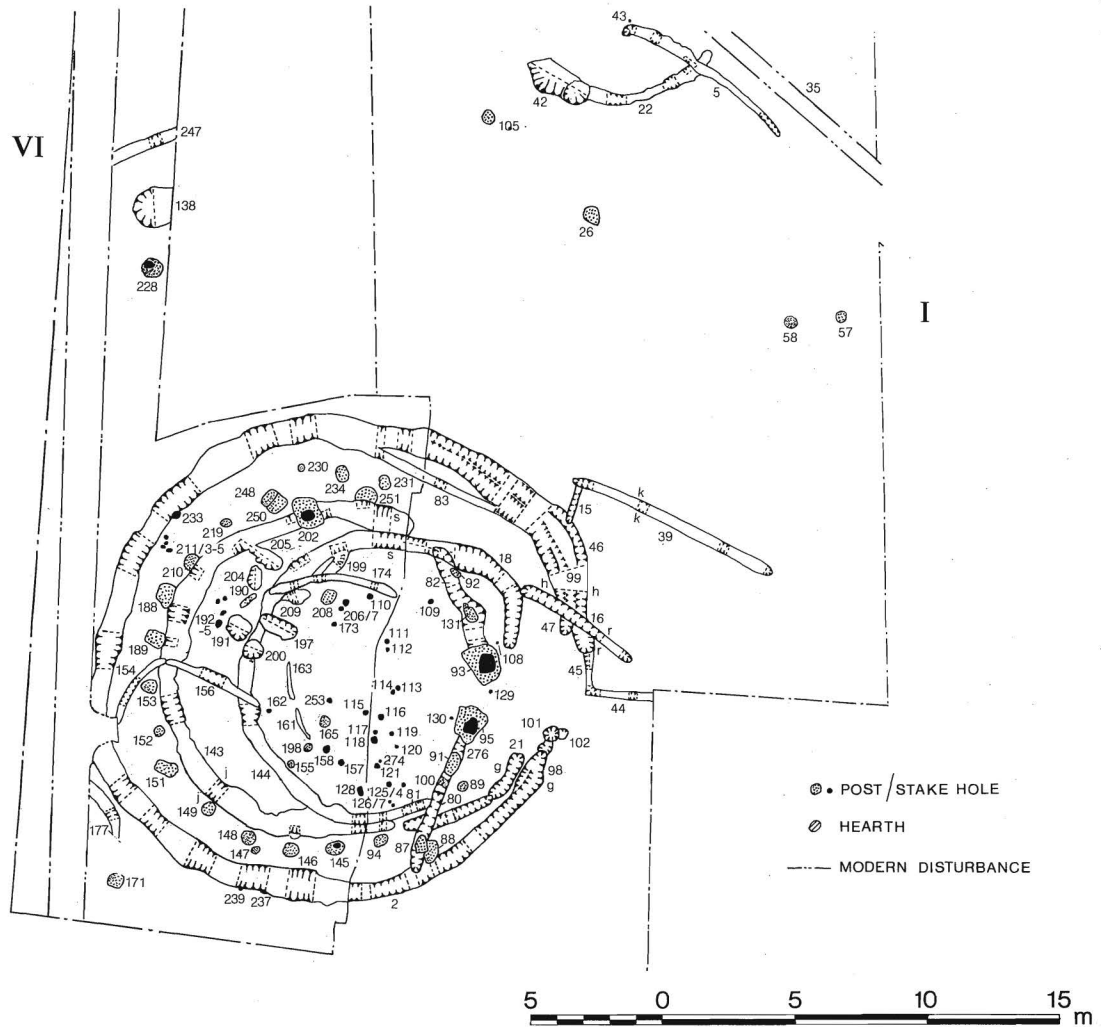
As is the case with most sites currently under cultivation this site had suffered from considerable plough erosion with only features cutting the subsoil surviving. Despite this, several phases of activity could be deduced from stratigraphical and ceramic evidence. Six main phases of activity are described with individual sequences within them. Some chronological overlap however probably took place between Phases 3-5 which will be suggested in the discussion. The features are described within the suggested phase order.



5. The excavated areas



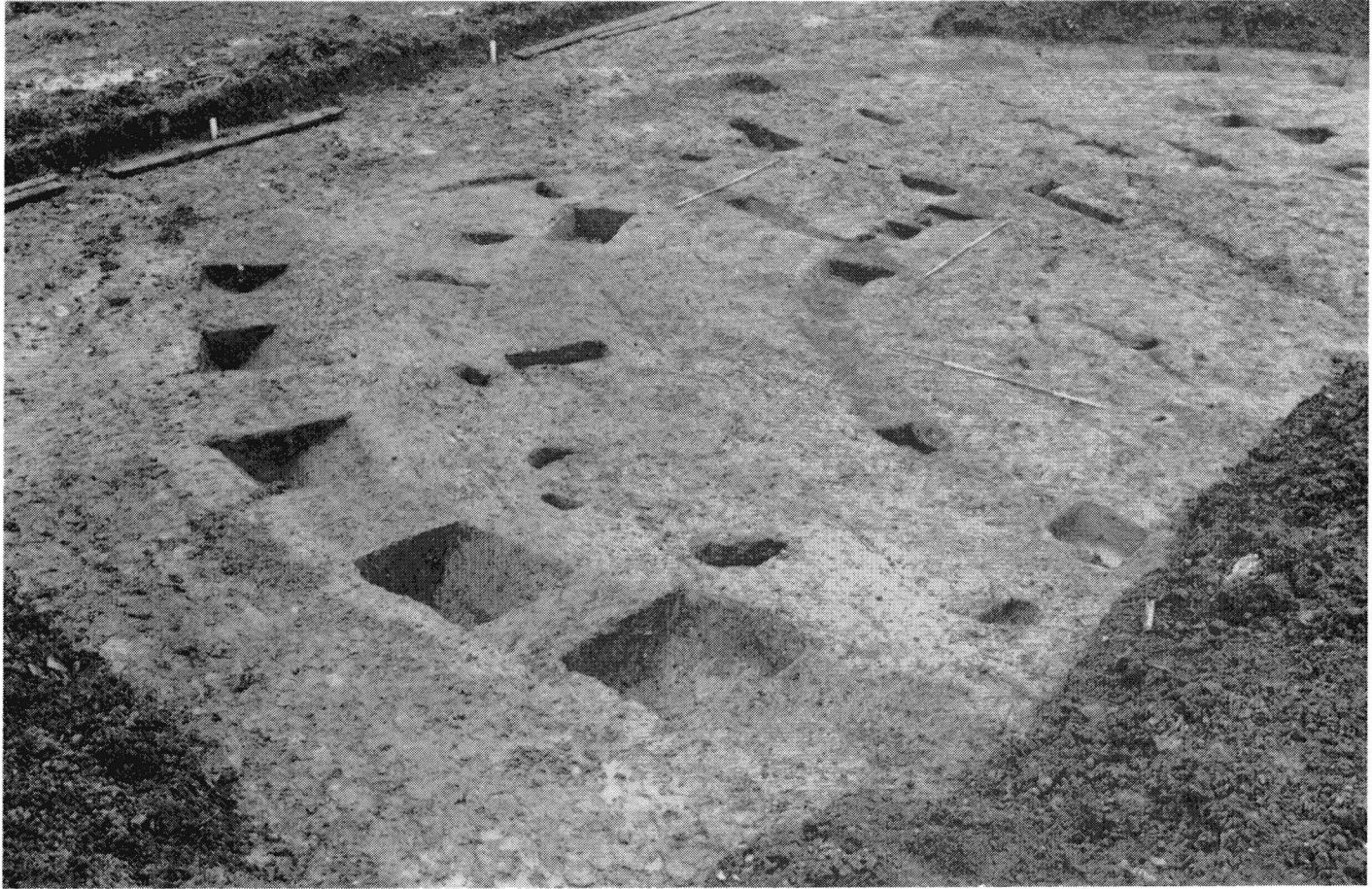




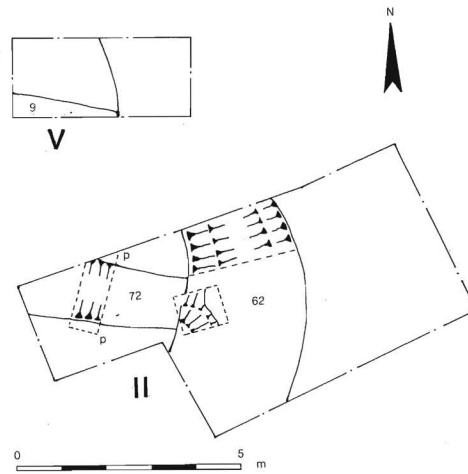
7. Areas I, VI showing southernmost circular structures

Some of these were discrete features containing no clear dating evidence. These are allocated within phases according to their spatial relationship with other features and the chronological phasing of such features should not be interpreted as being definitive. The numbers prefixed by F refer to features with subsequent numbers relating to contexts within the feature. The numbers on illus. 6-12, 14, 16 and 19 are all of features (F prefix in text).

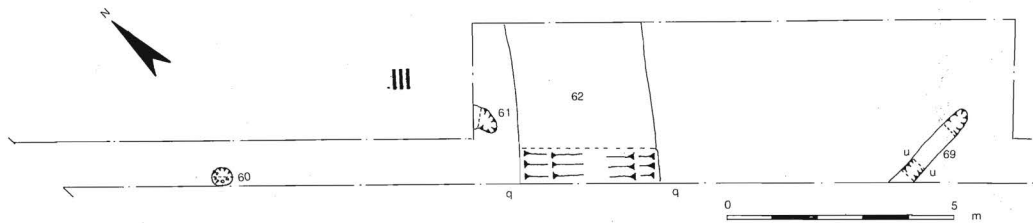
The excavation was directed by Patrick Clay and Richard Buckley and the finds and archive are deposited with Leicestershire Museums (Acc. No. A30.1983).



8. Area VI showing southernmost circular structures under excavation. November 1984



9. Areas II and V

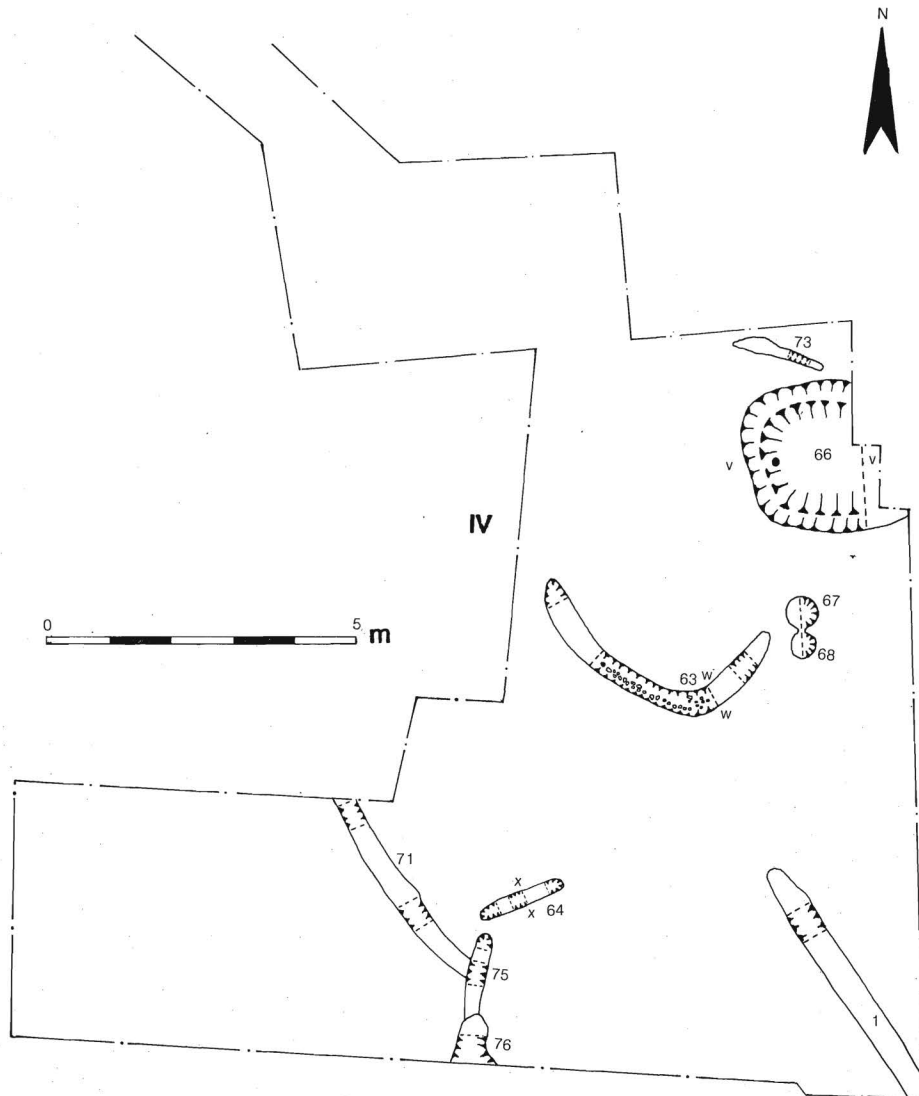


10. Area III

*Phase 1 Early activity*

Post hole:	F88 (151,171-174,306).
Ard-marks:	F178 (648).
Pit(?)/hollow:	F199 (511,516-17).
Pit/post hole (?)	F209 (533-34,633).
Gully:	F216 (499,500).
Hollow:	F232 (481,626)

Evidence of early activity consists of fieldwalked and residual lithic material (p.54) and several features cut by Phase 2.2A building activity to the south of the excavated area. These consist of a post hole, F88, a post hole or pit, F209, two shallow scoops, F199 and F232, a gully, F216 and possible ard marks, F178. All these features contained dark grey brown - dark yellowish brown clay loam fills with some animal bone and fired clay present in F88.



11. Area IV

*Discussion of phase 1*

Activity in the Neolithic - Early Bronze Age is suggested by a group 1 stone axe fragment and a sherd from a Food Vessel. Struck flint was also recovered during fieldwalking and excavation. This may represent activity during this period (but see below p.55). Although showing no clear focus the presence of this material may indicate Neolithic - Early Bronze Age activity in this boulder clay valley side.

The nature of this activity is unclear but may, from the presence of the stone axe fragment be connected with woodland clearance while the Food Vessel sherd may be connected with ritual or burial activity during the Early Bronze Age. All these objects were from unstratified or residual contexts and cannot be related directly to the Phase 1 features which contained no dating evidence. Of interest from this group of features are the two possible ard marks cutting into the clay subsoil. Ard marks are discussed in detail elsewhere (Fowler 1983, 114-7, 150-6). The few Enderby examples may suggest accidental scoring of the subsoil where shallow topsoil was encountered rather than a deliberate attempt to break up the subsoil (Fowler 1983, 117). Modern ploughing may have obliterated all but the occasional deeper groove.

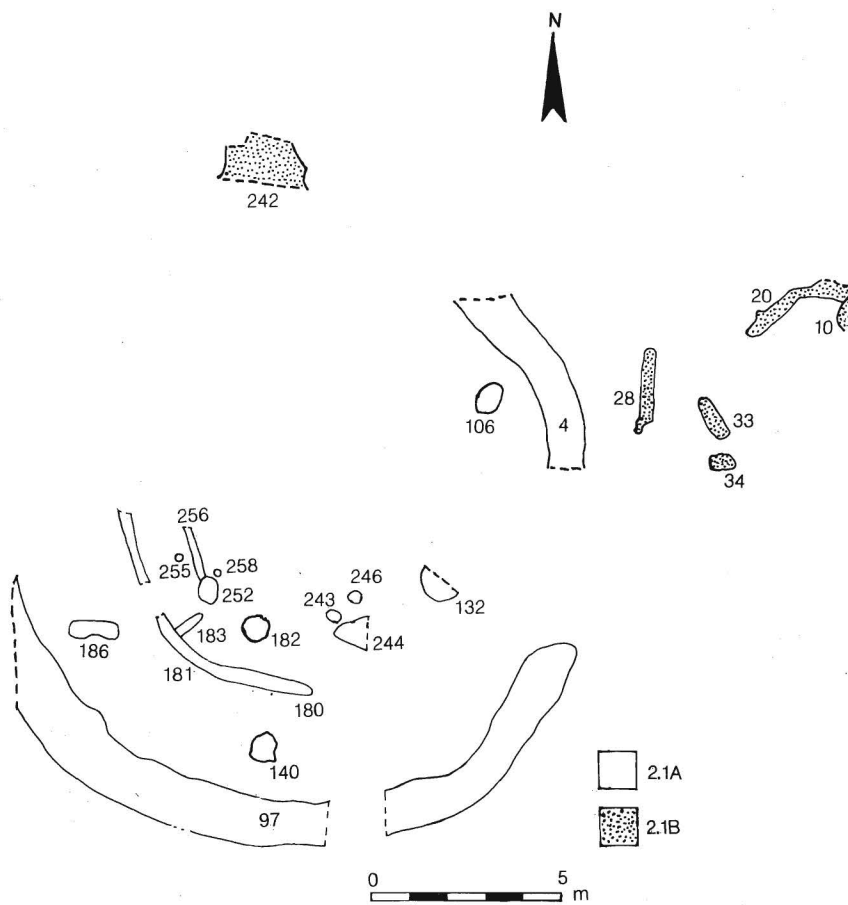
### *Phase 2 Circular buildings*

#### *Phase 2.1A (illus.12-3,15)*

Penannular channels:	F4 (17,180-81,243); F97 (169,177,206,316,635).
Post holes:	F106 (183,207); F132 (228-230,348); F140 (391-395); F182 (512,539,540); F186 (410-412); F243 (559-561); F252 (614,616); F273 (656,657).
Stake holes:	F244 (552-53,556); F246 (600,621); F255 (610-11); F258 (612-13); F180 (542-43).
Wall slots:	F256 (607-609); F181 (471-72,483); F183 (589-91)

Seven post holes, four stake holes and three wall slots were located to the north of the excavation surrounded by an eaves-drip/drainage channel. These can be grouped as follows:

1. Four post holes, F132, F182, F244 and F252 were located to the south of the area forming an arc of radius 3.5m. Four stake holes F243, F246, F255 and F258 and a wall slot, F256, may be associated with this group of features which contained fills of brown clay loam overlying yellow-brown clay. Iron Age pottery (Fabrics A and B) was recovered from F132 and F246. Animal bone was present in F132 the latter also containing a small bone needle.
2. To the south-west of this group a wall slot F181 was located forming an area of radius 4.5m concentric with group 1. A slot (F183) abutting F181 at right angles was located to the north-east containing some Iron Age pottery (Fabric B). A post hole F182 to the north of F181 may be associated with these features which again contained fills of brown clay loam overlying yellow-brown clay. A small fragment of glass was recovered from F181.
3. Three post holes F106? F140 and F186 were located outside the area demarcated by wall slot F181. Grey brown clay loams with pebble and grits overlying yellow brown clay formed the fills for these features which contained animal bone, Iron Age pottery, fired clay and charcoal from F106 and Iron Age pottery, (Fabric A) from F140. F186 shows evidence of a second post hole perhaps replacing or supplementing the first.
4. Surrounding this area a penannular channel (F97), internal diameter 14m was located with a butt ended terminal to the north west. This feature was cut by modern disturbance and Phase 3 ditches to the west. A continuation of this feature was located (F4) also cut by Phase 3 ditches to the north and a modern field boundary (F35) to the south. The fill of these features consisted of dark brown clay loam with much pebble overlying yellowish brown clay. Much Iron Age pottery (Fabrics A-D), animal bone, burnt clay, charcoal and some tap slag was recovered from these features.
5. Disturbed fragments of burnt clay and charcoal (F187) in the Phase 4.2 ditch F6 may be from another feature, possibly a hearth, associated with this phase.



12. Phase 2.1

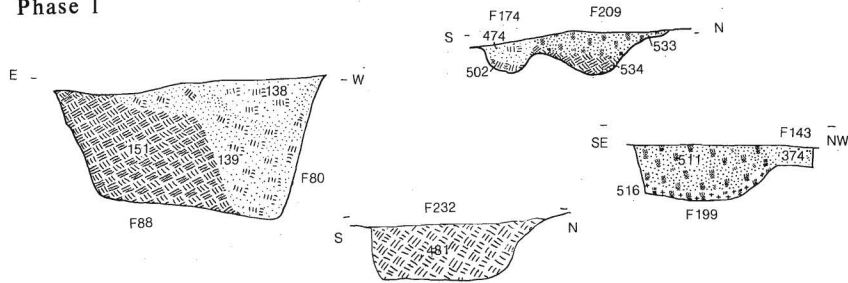
*Phase 2.1B* (illus. 9,10,12)

Gullies: F20 (21,29,31,252); F28 (18,24,258); F33 (14,32,33,261).  
 Hearth: F34 (130,262).  
 Ditch: F242 (597-599,568)

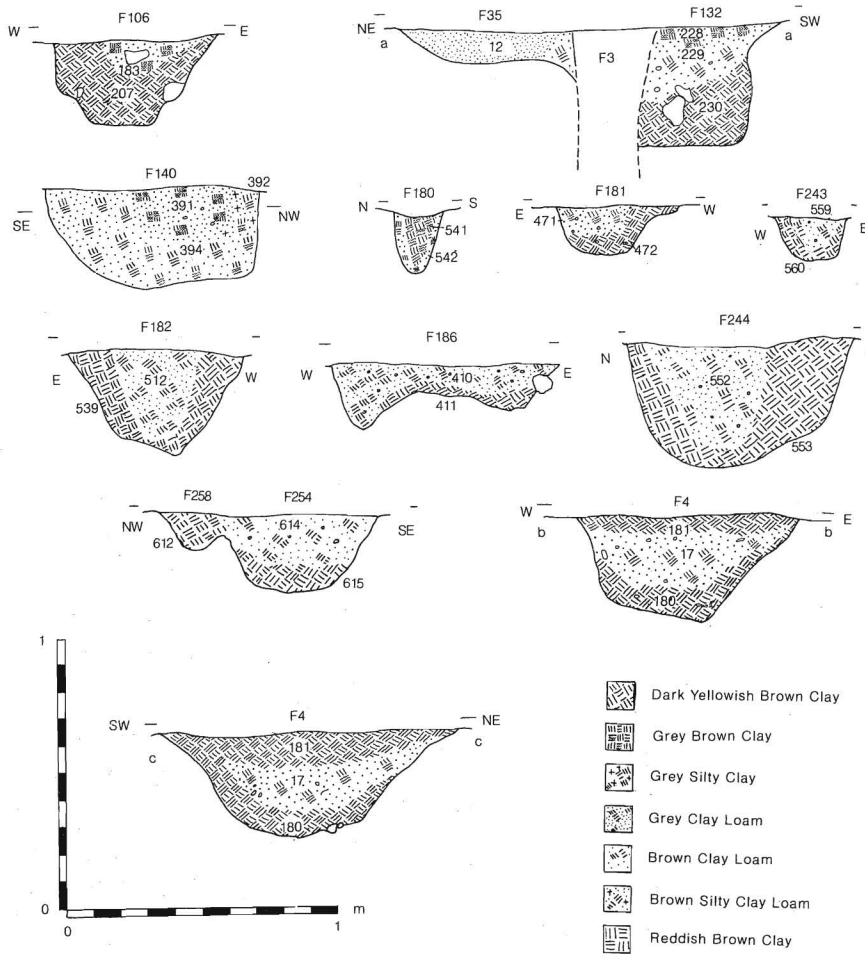
A north-south aligned ditch, F242, (depth 0.78m) was located to the north of the excavation cut by F179 (Phase 3.1A). The excavated upper fills of this feature consisted of dark grey brown sandy clay loam containing Iron Age pottery (Fabrics A, B and E).

Four features were located to the east of F4 which may be associated with this phase. Three of these were channels; F28, 2m east of F4 on a north-south alignment, F33, 2.5m east of F14 on a north-west - south-east alignment and F20 3.5m north-east of F4, a north-south aligned channel turning to the east where it was cut by later Phase 3 activity (F9). These contained fills of dark yellowish brown and brown clay loam with finds of fired clay, animal bone and charcoal from F33, Iron Age pottery (Fabrics A & B) and bone from F28 and animal bone from F20. One metre south of F33 a circular hearth, F34, was found consisting of red brown burnt clay with much charcoal. This was cut to the south by the Phase 3 ditch F6.

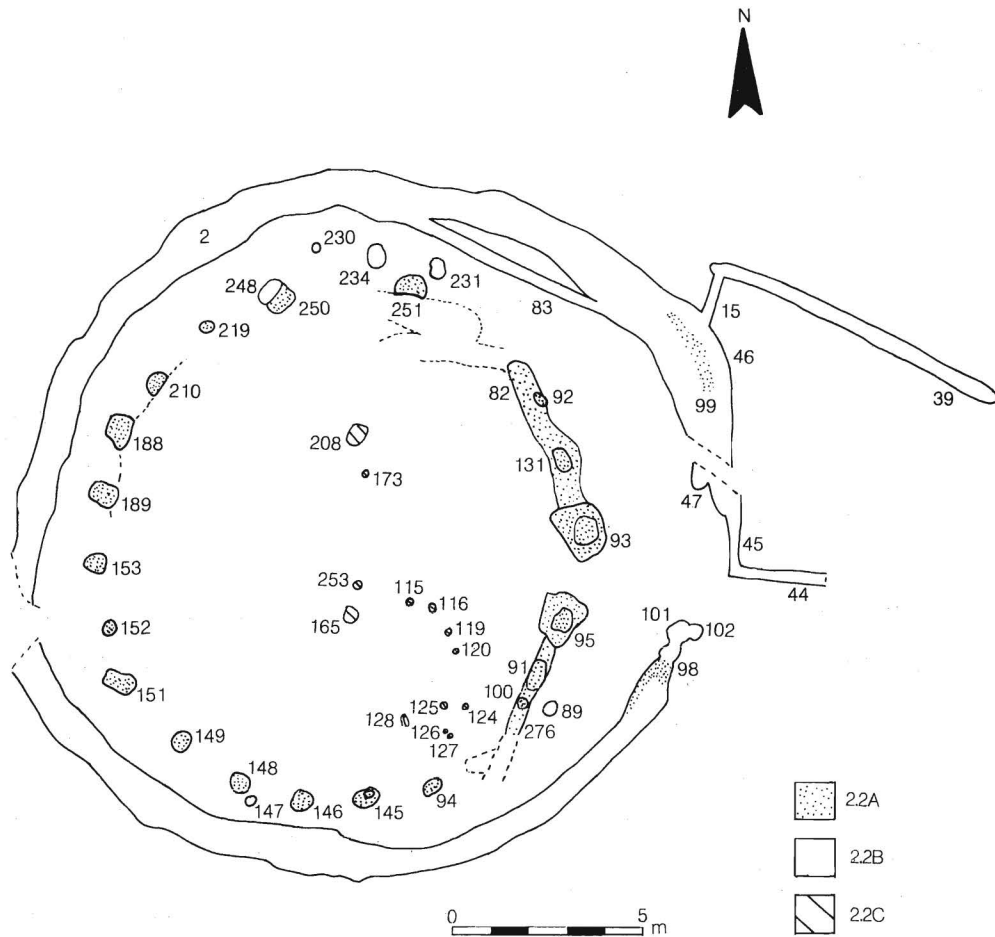
Phase 1



Phase 2.1



13. Sections of features. Phases 1 and 2.1



14. Phase 2.2

*Phase 2.2A* (illus.14,15,17)

Eaves drip channels: F98 (317,163);F99,(170,318).

Wall trench: F82 (143,154,301).

Post holes: F91 (149,156); F92 (152,309); F93 (150,158,162,164,310); F94 (165); F95 (160,167-68,313,314); F100 (319); F102 (205,221); F145 (361-364); F146 (406,425-9); F148 (422-424); F149 (365-367); F151 (405,456-460); F152 (354-358); F153 (451,462-63,484,485); F188 (389,448-450); F189 (453,507-510); F210 (513,515); F219 (495,496); F250 (575,577,579); F251 (584, 585).

Stake holes: F133 (231,349); F211 (493-94); F213,(489,490); F214 (482,488); F215 (486-87); F221 (491-92); F223 (497-98); F235 (462,563); F236 (564-65); F237 (566-67); F238 (619-20); F239 (650-51); F240 (652-53); F241 (654-55).

Wall trench: F276 (661-62)



Twenty one post holes varying between 0.9m and 1.3m apart were located forming an oval of c. 13 - 13.5m diameter. Two of these, F250 and F251, had been cut by later activity which may have also disturbed possible post holes in the gap between F92 and F251. Post pipes were clearly visible in three examples F93, F95 and F145. F93 and F95 were more substantial settings than the rest, with wide deep post pipes perhaps forming an entrance. The post pipes contained dark grey brown silty clays whilst the post settings consisted of dark brown clay loams and yellowish brown clays. Iron Age pottery (Fabrics A and B), fired clay, animal bone and charcoal was recovered from F91, F93, F95, F146, F151 and F189, whilst flint was found in F153. Two shallow wall trenches were located, between F92 and F93 to the north (F82), and F95 and F100 to the south (F276), both containing a fine brown clay loam.

A penannular eaves drip channel 17.5m in diameter was located surrounding and concentric to the post hole circle. A gap in the channel, 4m wide, to the east may have served as an entrance. Recutting (Phase 2.2B) has meant that the original channel has only survived either side of the entrance (F98, F99). The channel's fill consisted of dark grey brown silty clay loams overlying yellowish brown clay from which Iron Age pottery (Fabrics A and B), fired clay, animal bone and charcoal were recovered. Immediately to the north of F98 a shallow scoop, F102, was located containing a dark yellowish brown clay loam.

Fourteen stake holes with brown clay loam fills were located along the edge of the eaves drip trench. These formed three groups, F133 on the inner edge adjacent to the entrance, F235-F241 on the outer edge to the south and F211, F213-5, F221 and F223 along the inner edge to the north-west. Iron Age pottery (Fabric A), fired clay and charcoal were recovered from the dark brown silty clay fill overlying yellowish brown clay.

*Phase 2.2B* (illus. 14,15,17)

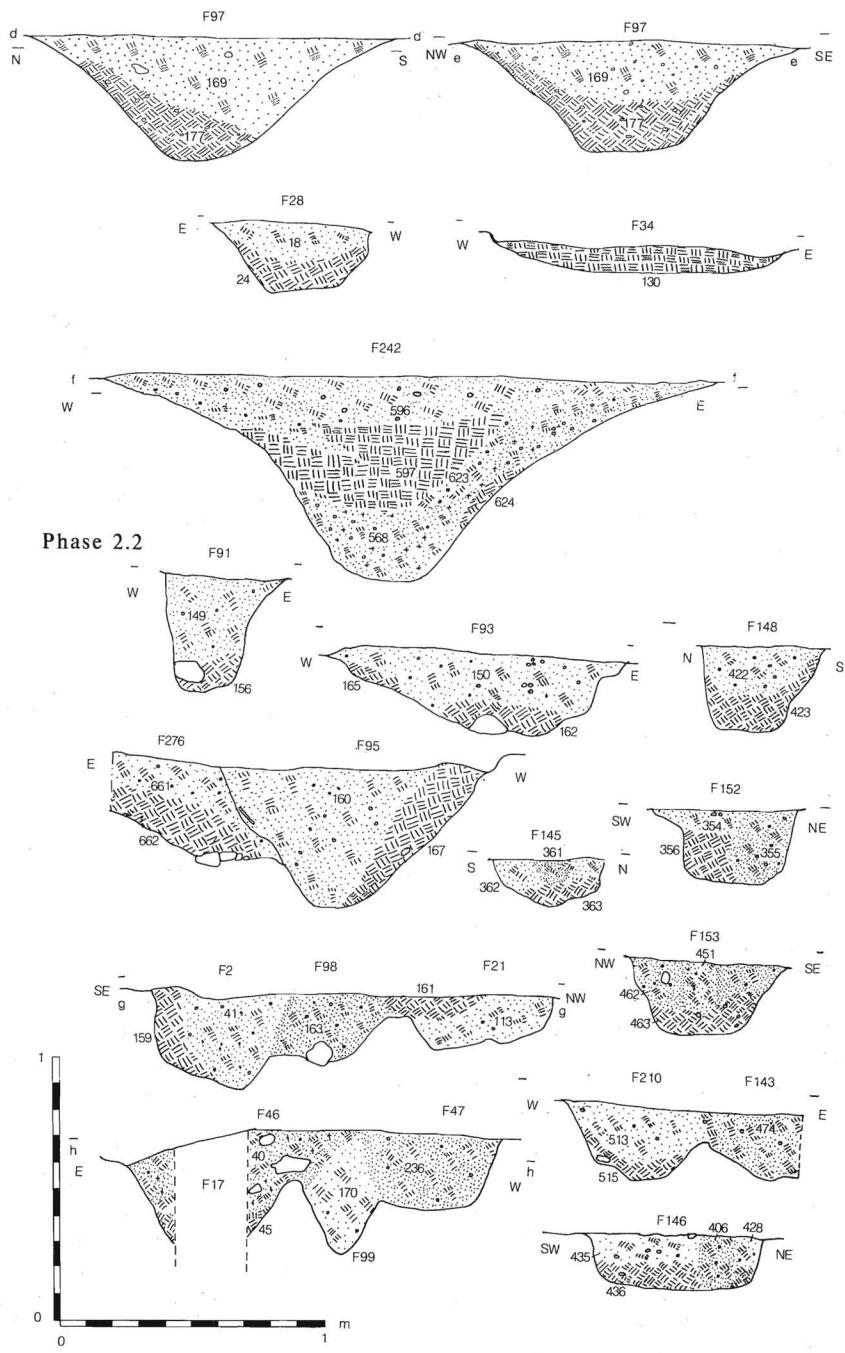
Penannular channel, recut: F2 (41,159,241); F46 (40,144,45,278,273); F47 (49,236); F15 (75,155,156).  
 Drainage channels: F39 (25,48,267); F44 (67,271); F45 (39,143,272); F83 (140,176,302).  
 Hollow: F101 (204,320).  
 Post holes: F89 (148,307); F147 (407-9); F230 (520-522); F231 (656,657); F234 (573); F248 (574,576,578)

Four post holes F230, F231, F234 and F248 were located immediately to the north of the Phase 2.2A circle, F248 cutting F250. To the south another post hole, F147, was located immediately to the south east of F148, while to the south east F89 was situated 0.75m east of F100. These post holes again had fills of brown clay loam and yellowish brown clay.

Recuts of the Phase 2.2A eaves drip channels were located to the south, F2 and north, F46, F47, of the entrance. Iron Age pottery (Fabrics A-C), fired clay, animal bone, flint, charcoal and some furnace slag were recovered from the greyish brown silty clay and yellowish brown clay fills of this channel. Charcoal submitted for C<sup>14</sup> dating from F2 provided a date of a.d. 80 ± 90 (Har. 9401). A channel F83 was located forming a chord between two points on the inside of F2 to the north and north-east respectively. Drainage run off channels (F15, F45) were located cutting F47 and joining other channels F39 and F44 respectively. These contained dark grey brown silty clay fills again with Iron Age pottery Fabrics A and B and were aligned west-east (F44) and north-west to south-east (F39). A shallow scoop F101, cutting F102 to the east, was located containing a dark yellowish brown clay loam fill.

*Phase 2.2C* (illus.14,15,17)

Post holes: F116 (190,333); F128 (201,344); F165 (371-373); F208 (570-2); F108 (184,325).  
 Stake holes: F115 (189,332); F119 (193,336); F120 (194,337); F124 (197,340); F125 (198,341); F126 (199,342); F127 (200,343); F129 (202,345); F155 (461,464-65); F164 (648-49); F168 (650-51); F169 (652-53); F170 (654-55); F173 (475,505-6); F192 (432-434); F193 (444-447); F194 (418-420); F195 (416-17); F253 (617-619)



15. Sections of features. Phases 2.1 and 2.2

A group of twenty one stake holes, may be assigned to this phase perhaps having some connection with structure 1. Twelve of these formed a cell like arrangement to the south of the area within the Phase 2.2A post hole circle. Two stake holes, F253 and F173, and two post holes, F165 and F208, formed a linear arrangement close to the centre of the structure, while four other stake holes, F192-95, were located to the west of the structure. Two stake holes, F108 and F129, to the north and south of F93 respectively may be associated with this structure. All these features contained fills of brown clay loam.

*Phase 2.3A* (illus. 16,17)

Penannular channel: F143 (377-79).  
 Drainage gullies: F21 (113,161,253); F96 (166,315).  
 Stake holes: F111 (185,328); F112 (186,329); F113 (187,330); F114 (188,331); F117 (191,334); F118 (192,335); F158 (368-370); F162 (430-31); F198 (404,421); F206 (580,581); F207 (582-83)

Eleven stake holes containing brown clay loam were located forming an arc 5.5m in diameter. Ten of these were grouped in five pairs at intervals of c. 2.25m. Concentric to these was a penannular channel, F143, containing yellowish brown silty clay and yellowish brown clay fills. Continuations of the southern arm of this channel consisted of two further channels, F96 and F21, again with yellowish brown clay fills. Iron Age pottery (Fabrics A and B), animal bone, fuel ash slag and much charcoal were recovered from these channels.

*Phase 2.3B* (illus.16,17)

Recut of channel: F143 (374-376).

A recut along part of F143 was identified to the west consisting of fills of brown silty clay loam and brownish yellow clay. Iron Age pottery (Fabric A), animal bone and charcoal were recovered from these deposits.

*Phase 2.3C* (illus.16,17)

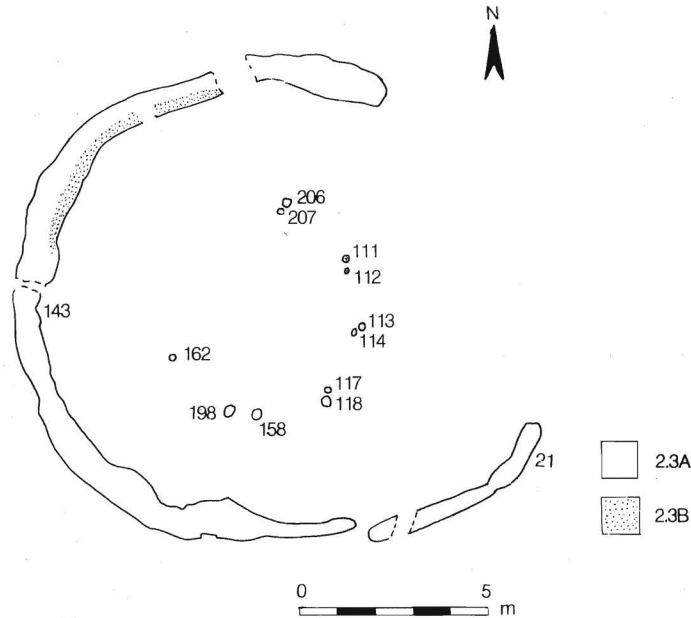
Cobbled surface: F55 (76).

A cobbled surface, F55, was located, having slumped into the silted Phase 2.2, channels F47, F45 and F39.

*Discussion of phase 2*

Phase 2.1 shows evidence of different sequences of timber structures surrounded by a penannular drainage channel. Phase 3 ditches and Phase 6 modern disturbance have removed much of the central, western and northern sections of the area making definite conclusions about the nature of the structures difficult. However a possible sequence of three timber structures may be postulated.

Group 1 consists of four post holes to the south of the area forming an arc of radius 3.5m. No corresponding post holes were located to the north of the area. Although some post holes may have been destroyed by F6 (Phase 4), it is unlikely that modern ploughing had removed all traces of further post holes north of this feature considering the depth of those located. A possible interpretation is that the post holes formed part of a semi-circular or polygonal shaped building. Similar post hole structures are known from various Iron Age sites including Draughton and Weekley Hall Wood, Northamptonshire (Knight 1984, 146; Grimes 1961, Fig. 30) Heybridge and Mucking, Essex, (Drury 1978) which fit into Knight's (1984) Group 1a of semi-circular standing structures.



16. Phase 2.3

A wall slot (F181) and four stake holes are probably associated with this structure. This may suggest a double ring structure (cf Guilbert 1981) or a different building phase. The penannular channel (F4, F97) probably functioned as a drainage or boundary ditch rather than gathering water directly from the eaves.

Various interpretations have been suggested for semi-circular structures (Knight 1984, 146) including unroofed windbreaks or animal pens as well as small roofed houses or huts. The size of the post holes suggests that this structure was roofed perhaps with rafters at the open area forming a gable end (cf Drury and Rodwell, 1973, 97; Drury 1978, 68). These structures are usually open between the south and east compass points (Knight 1984, 150 Fig. 40) away from the prevailing south-westerly and coldest northerly winds. The Enderby example appears, unusually, to be open to the north although this is not unknown, for example Gun Hill, Thurrock (Drury and Rodwell 1973, 97; Drury 1978, 68 Fig. 15). The combination of semi-circular buildings with a bedding trench and drainage channel is unusual although there are possible examples from Cats Water (Pryor 1984, 58 Fig.44) and Great Doddington (Windell 1981, 66). The size and shape of this structure however suggests that it may not have been used as a permanent dwelling house. Disturbed hearth fragments found in the Phase 4 ditch F6 may have derived from an area within this structure and a function as a workshop or kitchen as suggested for Gun Hill (Drury 1978, 68) may be feasible. The large quantities of animal bone, including eighteen butchered fragments, pottery and the presence of wheat grain recovered from the surrounding ditch (F4, F97) may support the latter interpretation.

Three more post holes (F106, F140, F186) were found within the area demarcated

by the penannular channel. Interpretation is difficult but they may have formed part of a rectangular structure on a north-east to south-west alignment disturbed to the north by Phase 4 activity. Alternatively the profiles of F106 and F186 might indicate that they were formed by rafters extending down to ground level and leaving shallow depressions in the subsoil.

Other features to the east of F4 (Phase 2.1B notably the hearth F34) may also suggest workshop or food preparation. The ditch, F242, located to the north of the excavation may be a drainage run-off ditch originally connected to F97 similar to others connected with the buildings to the south e.g. F15, F45 (Phase 2.2B).

Like Phase 2.1, Phase 2.2 indicates the presence of a roughly circular timber building surrounded by a penannular gully. The area demarcated by the post holes forms a circle flattened to the east where wall trenches were evident. This is an unusual constructional form, buildings usually showing either post hole or wall trench construction but rarely a combination of the two. It is possible that an original post hole construction was later rebuilt to the east with wall trenches obliterating earlier phase post holes. The wall trenches may have been foundations for a straight wall facade either side of the entrance denoted by two very substantial post settings (illus.14). Also of note is the size of the structure with a maximum diameter of 13.5m. This places the building within the group of largest Iron Age circular buildings so far examined comparable with others from, for example, Pimperne (Harding and Blake, 1963), and Crickley (P. Dixon, pers. comm). Similar structures of this size had internal post holes which were not obviously present at Enderby. A reconstruction of the Enderby house however at Donington-le-Heath using a ring beam without internal support indicates that buildings of this size could be constructed using this method (illus.25; Hind 1990).

The post hole structure fits into Knight's Type 1B (1984) of earlier buildings, post hole construction usually being thought to pre-date wall trenches. The building was surrounded by a penannular channel which would have served as an eaves drip to the north, south and west. This showed evidence of having been re-cut. Material from this channel included Iron Age pottery (Fabrics A and B), animal bone, fired clay, furnace slag, flint and much charcoal. Charcoal recovered from the channel and post holes suggest that oak, ash and field maple may have been used in the construction of the building, oak probably for the uprights and ash for the rafters. Rebuilding of the structure is suggested by further post holes (Phase 2.2B). Several stake holes were located which may be associated with this structure. These include two which are centrally placed while another group may denote the position of internal partitions.

The pottery suggest that this building was contemporary with the Phase 2.1 structure. From its size it could have served as a house for several family groups with the Phase 2.1 structure possibly serving as an associated kitchen or workshop building.

The large Phase 2.2 building was replaced by one considerably smaller (Phase 2.3) represented by a group of eleven stake holes forming an arc 5.5m in diameter surrounded by a penannular gully. The occurrence of double stake holes may indicate rebuilding and the gully shows evidence of at least one re-cut. Although later than the Phase 2.2 building it fits into the same ceramic sequence (See below p. 52).

### *Phase 3 Enclosure ditches (illus.17,18,20)*

Four large enclosure ditches, some showing recutting, were revealed during the excavation.

A possible sequence may be extrapolated as follows:

*Phase 3.1A*

Enclosure ditches: F62 (121,126,129,285); F179 (382-386,403,473,479,538,555,593-6,601,390)

A large enclosure ditch first located as a cropmark was revealed in four areas of the excavation (F62). This was a 'V' shaped ditch with steeply (60°) angled sides averaging 1.5m in depth. Slip and primary silting deposits were recognised consisting of grey brown silty clays and yellowish brown clays, which contained some Iron Age pottery (Fabric B) and charcoal. Analysis of the molluscs recovered from these features revealed a preponderance of fresh water species (see below p.71).

An east-west aligned ditch, F179, was located to the north of the site joining F62 to the east. To the west this ditch turned south apparently following the course of F4 (Phase 2.1A). This ditch, average depth 1.25m, with fills of dark yellowish brown clay loam, yellowish brown clay, brown silty clay and yellowish brown clay silt contained finds of Iron Age pottery (Fabrics A and B), fired clay, furnace base, slag, animal bone and charcoal.

*Phase 3.1B*

Recut of enclosure ditch F179: F9 (220,223,225-6,246,351); F249 (602)

A recut of F179, F249 (illus.6) was located with a terminal to the west adjacent to and cutting the fill of F242. The fill of this recut consisted of dark yellowish brown sandy clay loam containing Iron Age pottery (Fabric B), furnace base and fuel ash slag.

*Phase 3.2*

Enclosure ditch: F72 (86,106-108,211-214,245).  
Ditch backfill: F9 (136-7,178,216-9,222)

An east-west aligned ditch F72 (average depth 1.8m) was located running between the east and west sections of F62. This cut the Phase 2.1 structure. The primary silting and slip deposits of the ditch consisted of brown silty clay, dark grey brown silty clay, yellowish brown clay silt and grey brown clay. Slip layers on the southern slope of F9, adjacent to the phase 2.1 structure, included disturbed burnt clay deposits (F187) (see above p. 13). Backfilling of F9 is suggested by the upper fills in the ditch which contain some Iron Age pottery (Fabrics A and B) and animal bone.

*Phase 3.3A*

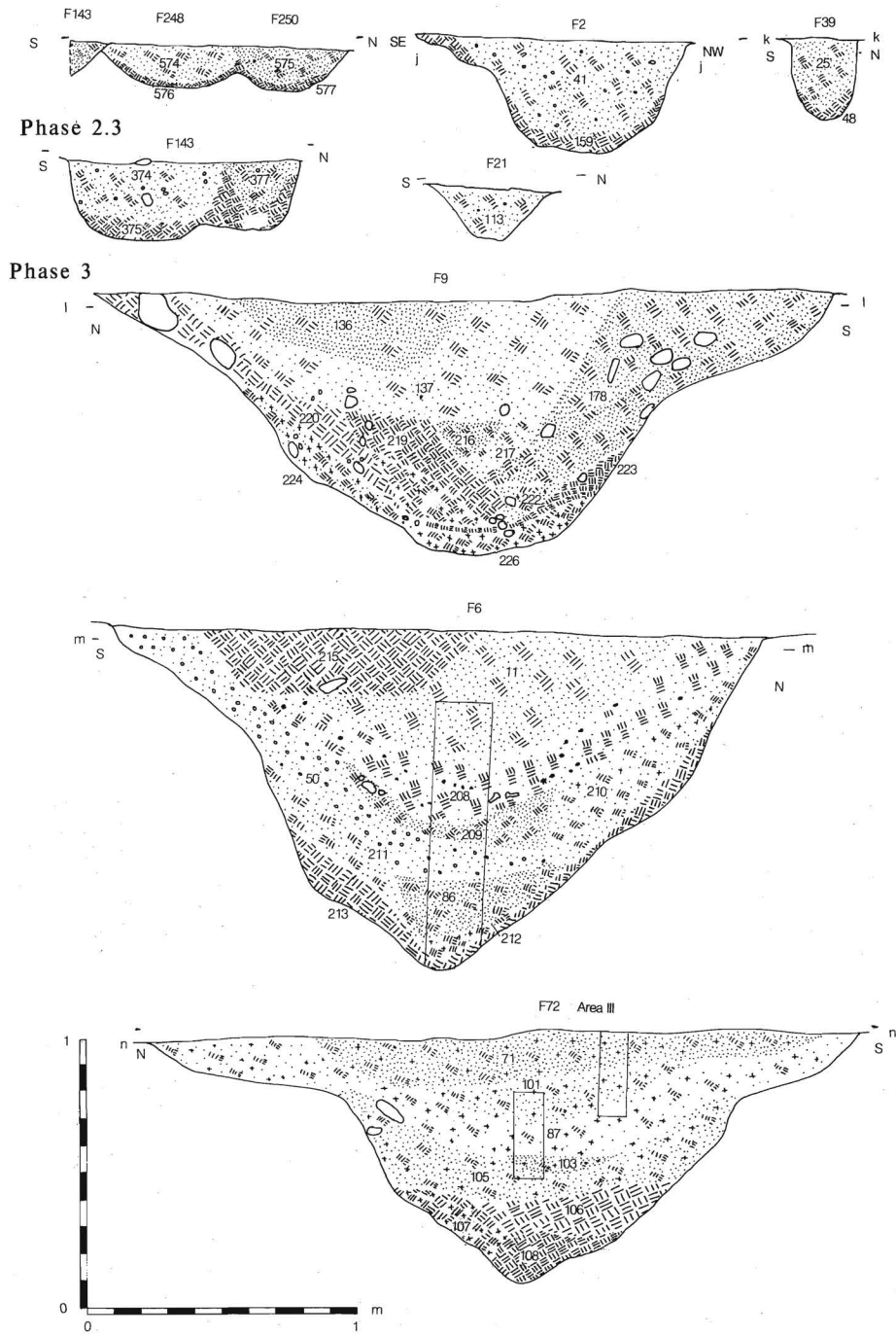
Ditch backfill: F6 (11,16,27,36,50,208-10); F72 (87,101-5)

Evidence of partial backfilling of F72 and F6 is present in the form of clay loam and clay and pebble deposits containing a beehive quern, Iron Age pottery (Fabric A, B, C), fired clay, animal bone, charcoal and furnace slag.

*Phase 3.3B*

Enclosure ditch recut: F62 (77,120,122-5,91,112,296).

An extension of F62 was excavated to the north of F72 to form a new oval enclosure. At the same time the original channel to the south was recut. Gradual silting of this recut is evident with fine grey silty clay and fine clay loam deposits with some Iron Age pottery (Fabric A, B), furnace slag, animal bone and charcoal present.

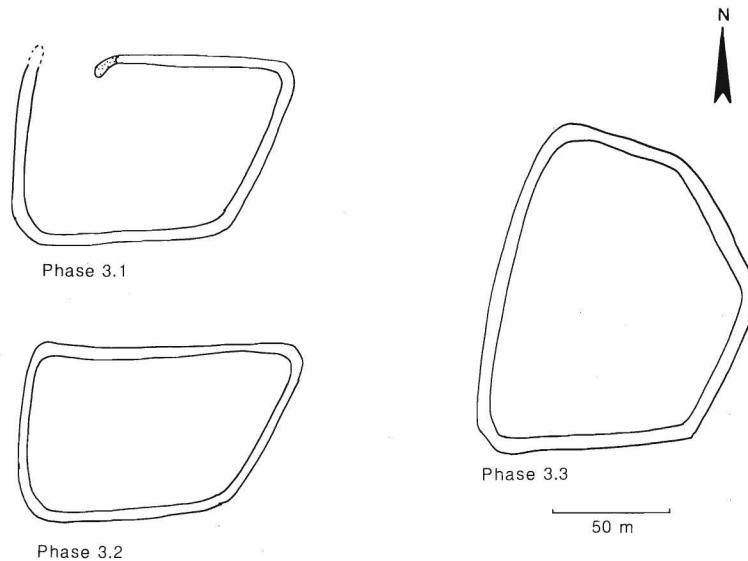


17. Sections of Features. Phases 2.2, 2.3 and 3

*Discussion of phase 3*

A sequence of enclosure ditches was recognised from cropmark and excavation evidence. As only a sample of the area was excavated definitive phasing is impossible, however from the areas examined a possible sequence can be suggested. (illus. 18).

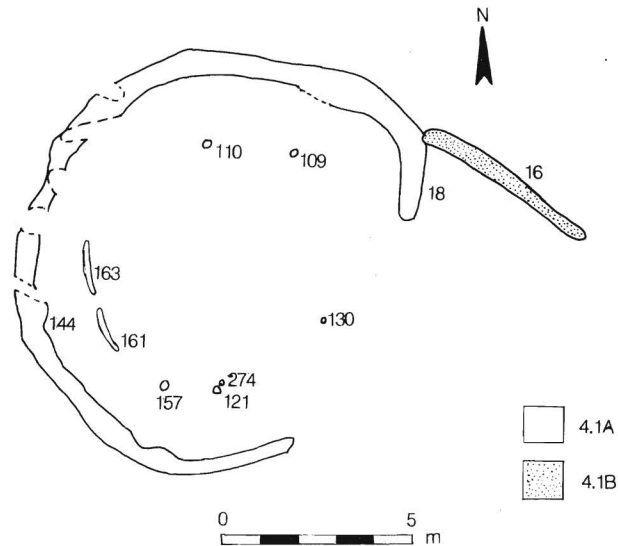
1. Initially a small trapezoidal enclosure with an inturned entrance to the north west was demarcated by a 'V' shaped ditch (F62, F179). (Phase 3.1A).
2. The inturned eastern arm was backfilled and the ditch recut to the east. (Phase 3.1B).
3. The northern enclosure ditch was abandoned and replaced by a parallel ditch (F72) 2m to the south forming a trapezoidal enclosure of slightly smaller area. This continued to the west across the previous entrance area. (Phase 3.2).
4. F72 was partially backfilled (Phase 3.3A).
5. At this time F62 was extended to the north to enclose a large D shaped area. A shallow ditch was still evident along the line of F72 and was possibly used for internal drainage or demarcating areas within the new enclosure.



18. Possible sequence of Phase 3 enclosure ditches

The final phase of enclosure ditch consisted of wide and deep ditches which would probably have had internal banks. Evidence of some bank material was found in Phase 6 (see below). No gap in the enclosure ditch is discernible from the aerial photographs or from the excavated area and it is possible that there was originally a bridged entrance (as suggested for Brigstock; Jackson 1983). Charcoal from all the enclosure ditch phases includes hedgerow species and thorn hedges may have been used to serve as a boundary. The size of the ditches, notably the later phase (3.3B), suggests that defence was a consideration in their construction.





19. Phase 4.1

Molluscs from the enclosure ditches provide some evidence for the local environmental conditions (see below p. 68). Fresh water snails indicate permanent water at the bottom of F72 and F62, Phase 3.1A (F62) showing evidence of open vegetation rather than trees or shrubs in the immediate area of the ditch. A more open environment or clearance of ditches is suggested from F72 (Phase 3.2) where there were fewer intermediate and shade loving species in comparison to the greater numbers of open country species (see below p.73).

*Phase 4 Later circular building* (illus. 19,20)

*Phase 4.1A*

Penannular channel: F144 (382,388,297,569); F18 (114-15,251); F81 (157,300).  
 Stake holes: F109 (178,326); F110 (179,327); F121 (195,338); F130 (203,346); F157 (637,638); F161 (439-441); F163 (466-468); F274 (658-59).

A group of six stake holes and two narrow wall slots were located forming an area 7.15m in diameter. These features contained fills of brown clay loam with pottery and bone present in F109. A penannular channel, F144, with to the north, an angled extension F18, was located partially surrounding the stake holes and slots. Fills of grey brown silty clay containing Iron Age pottery (Fabrics A and B), animal bone, fired clay and charcoal overlying yellowish brown clay were present in this feature, which had been cut to the north, west and south-east by later activity.

*Phase 4.1B*

Drainage channel: F16 (26,58,141-42,268)

A drainage channel, F16, on a north-west to south-east alignment was located cutting F18 to the north. Iron Age pottery (Fabric A) and animal bone was present in its brown silty clay fill.

*Discussion of Phase 4*

Evidence of a later circular building replacing the Phase 2.3 structure was suggested from a stake hole group and wall slots surrounded by a penannular gully. The ceramic assemblage from the Phase 4 structure suggests that it may have been in use at the same time as the Phase 3.1A enclosure ditch.

*Phase 5.1-2 Intra mural activity (illus.5, 20)**Phase 5.1A*

Drainage channels: F74 (109,293); F135 (353,454,455); F268 (646); F269 (647); F260 (637-38); F266 (644); F247 (586-88).

Gullies: F22 (1,254); F31 (15,52,53,54,259); F48 (51,72); F139 (413-415); F267 (645); F264 (642).

Pit: F23 (13,22,255).

Post holes: F26 (9,10); F32 (23,260); F57 (59,280); F58 (60,281); F79 (117,298); F105 (227,322); F228 (477,526-528); F261 (639); F262 (640); F265 (643).

Stake hole: F225 (518-19).

Hearths: F60 (56,73,283); F61 (57,133-34,284); F227 (470-71).

Working hollow with oven: F137 (400,402,632).

Pit/hollow: F138 (478,529-30); F254 (603-606); F263,(641)

Various features broadly contemporary with the final circular structure (Phase 4) were located within the enclosed area of the settlement. These can be divided into five groups.

1. Two shallow pits, F227 and F254, and a gully, F139, were located cutting the Phase 2.1 features. Fills of brown and grey brown clay loam were encountered in these features, with large quantities of charcoal present in F227 and F254, which also contained Iron Age pottery (Fabric B).
2. Another group of features was located seven metres to the south-east of F97. These consisted of three gullies: F31 on a north-west to south-east alignment with a turn to the north-west: F22, 1.5m to the south forming an arc of radius 4.5m abutting a shallow pit, F23, to the west and F48 on an east-west alignment partially revealed at the eastern edge of the excavation. F31 had fills of dark brown, silty and yellowish brown clays containing Iron Age pottery (Fabrics A, B and D), fired clay, furnace slag and animal bone; F22 yellowish brown silty clay containing Iron Age pottery (Fabric B) and furnace slag; F48, dark brown silty clay, yellowish brown clay with Iron Age pottery (Fabrics A and B) and charcoal including charred barley grains (see below p.75). The shallow pit, F23, contained a dark yellowish brown silty clay. Four post holes were also located in this area. F32, F79 and F105 formed a north-east to south-west alignment with a right angle turn between F105 and F26 5.25m to the south-east. The fills consisted of brown clay loams (F32), brownish yellow clay loam (F79), yellowish brown clay loam (F105) and brown silty clay with yellowish brown clay (F26). Furnace slag was present in F26. Eight metres south-east of F26 two more post holes, F57 and F58, 1.45m apart on an east-west alignment, were located containing brown clay loams with much charcoal. Iron Age pottery (Fabric B) and animal bone were present in F58.

Two hearths, F60 and F61, were partially exposed to the south-east of the enclosed area. These were both shallow circular features containing dark yellowish-brown clay loams with much charcoal. Stones with areas of burning were present in the fill of F61. 1.5m to the south east of F61 a channel, F74, was located on a north-east to south-west alignment. This contained a dark yellowish-brown clay loam with Iron Age pottery (Fabric B) present.

3. 12.25m west of F105 a group of four other features was revealed. These consisted of a gully, F247, on a north-east to south-west alignment containing a grey clay loam and yellowish brown clay fills; a post hole, F228, with a brown clay loam surrounding a grey clay post pipe fill with Iron Age pottery (Fabric B) present; a stake hole, F225, with a brown clay loam fill with, to the south, a shallow pit, F138, with a brown clay loam fill containing Iron Age pottery (Fabric B) and a quern fragment.
4. Three features were revealed to the west of the enclosed area. These consisted of a north-south aligned ditch, F135, containing grey brown silty clay and yellowish brown clay fills with Iron Age pottery (Fabrics A, B and D), flint and animal bone present. A shallow feature, F137, 2m to the west contained a brown clay loam with Iron Age pottery (Fabric A and B), fired clay, flint and animal bone present. To the east of this feature the base of a circular fired clay oven was revealed (illus.20,21).
5. Ten features were revealed but not excavated in trial trenches to the north and west of the enclosed area. These consisted of three ditches or channels F260, F266, F268 and F269 two narrow gullies F264 and F267, three possible post holes F261, F262 and F265 and a possible pit F263.

#### *Phase 5.1B*

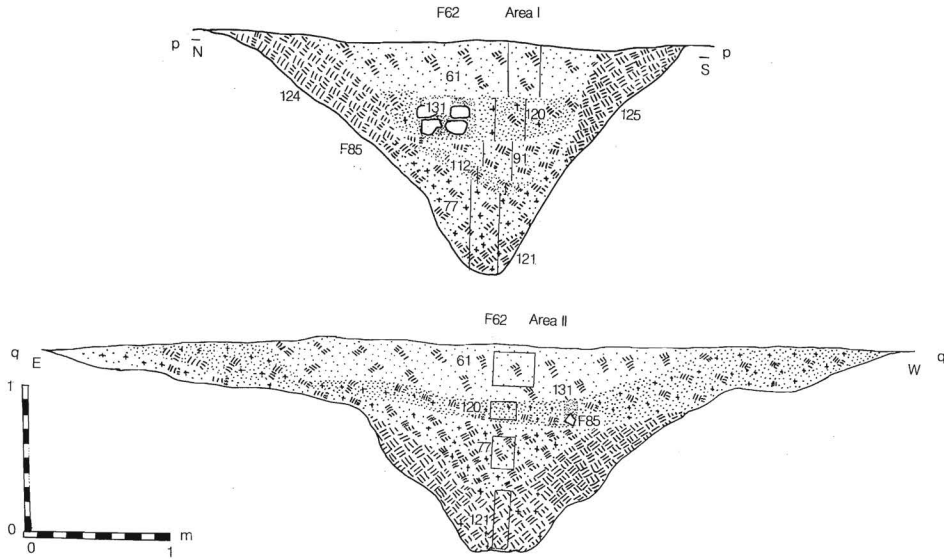
Drainage channel:	F14 (135,248).
Gullies:	F5 (6,7,244); F196 (469,592).
Pits:	F10 (35,247); F42 (34,93-100).
Stake hole:	F43 (37,270).

Four features were revealed cutting Phase 4.1A deposits. A channel, F14, containing a dark brown silty clay was revealed cutting F28. A pit F10 was located cutting F20 to the east and F9 to the north (Phase 4). This feature contained a brown clay loam with Iron Age pottery (Fabric B) and animal bone present. A shallow pit, F42, was located cutting the Phase 3.1A features F23 and F79 to the west. Deposits of yellowish brown sandy clay, brown silty clay, grey brown clay loam and yellowish brown clay were present in this feature which contained finds of Iron Age pottery (Fabrics A and B), fired clay, flint, animal bone and charcoal. Fills of dark yellowish brown silty clay and yellowish brown clay containing Iron Age pottery (Fabric A), furnace slag, furnace lining and fuel ash slag, animal bone and charcoal were revealed. A stake hole (F43) immediately to the north-west of F5 may be associated with this feature. To the north west a narrow gully, F196, on a north-east to south-west alignment was revealed, cutting F137 to the west. This contained a fill of dark grey brown clay loam.

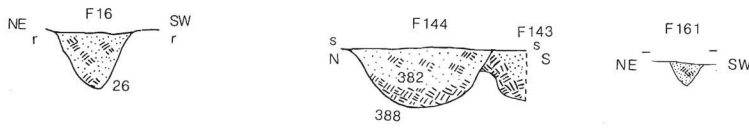
#### *Phase 5.2A*

Drainage channel:	F80 (138-39).
Gullies:	F154 (182,380,396,628); F156 (381,397-98,629); F174 (474,502-3); F177 (549-551); F190 (523-525).
Post holes:	F171 (554,557-58); F202 (514,544-546).
Hearth:	F200 (387,631).
Pit/hollow:	F191 (435-438); F197 (476,501,504); F204 (535-7); F205 (531-32).

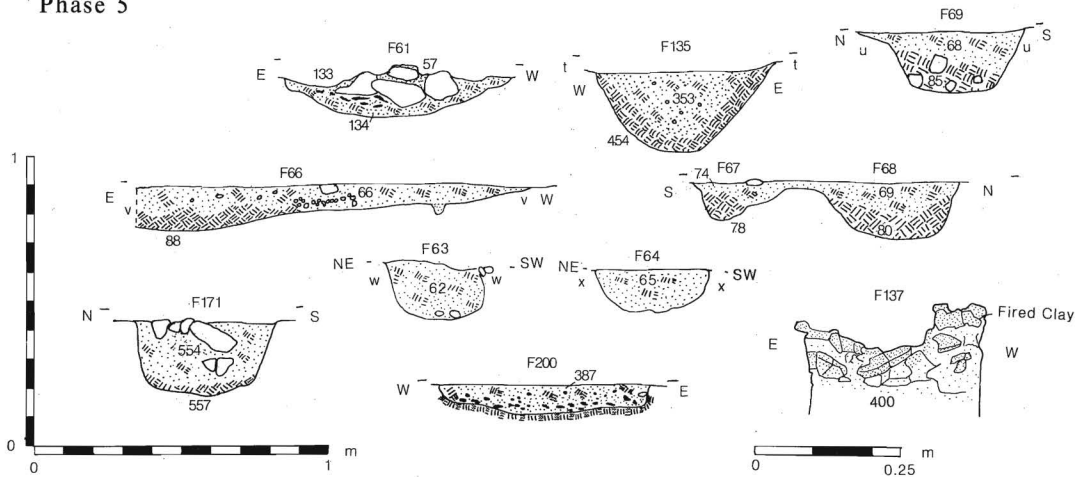
Various features were located post dating the circular structures (Phases 2.2, 2.3 and 4), most of these being grouped to the west of the area. A circular hearth, F200, containing brown clay



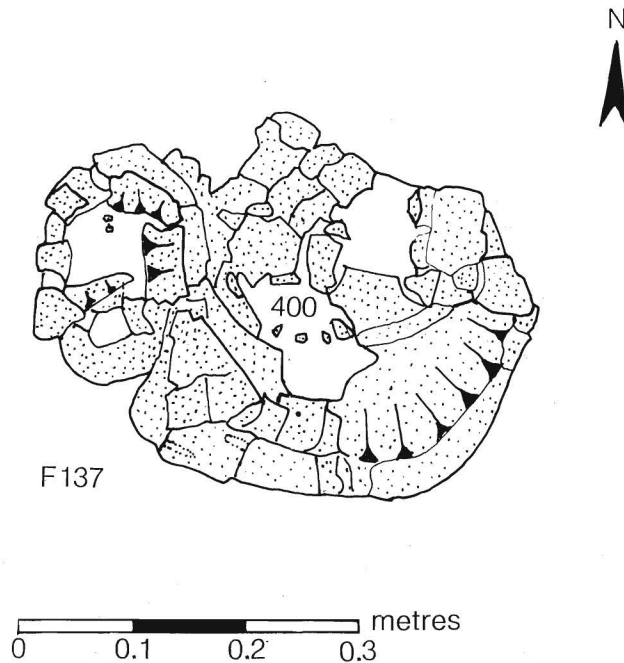
Phase 4



Phase 5



20. Sections of features. Phases 3,4 and 5



21. Oven F137 in Area VI

loam with much charcoal and burnt clay cut F144 (Phase 4.1A). To the north were four shallow features F191, F197, F204 and F205, with a single large post setting, F202, cutting F143 situated 3 metres north east of F204. These features contained brown clay loam with dark grey silty clay in the post pipe of F202. Finds of Iron Age pottery (Fabric A) were recovered from F197 and bone and charcoal from F202. Four lengths of gully, F154, F156, F174 and F190 were located to the north-east and south-west of F200, Iron Age pottery (Fabrics A and B), being present in the dark grey silty clay fills of F156 and F174. Another gully, F177 and a post hole, F171, to the north-west of the excavation may also be associated with this activity, F177 containing fills of yellowish brown clay loam and clay while F171 had fills of dark grey brown and yellowish brown clay loams.

Nine metres south-east of F200 a length of drainage channel, F80, containing a brown clay loam fill was located on a north-south alignment cutting Phase 2 features F2, F88, F96, F144 and F276. Pottery in Fabrics A and B was present in this feature.

#### *Phase 5.2B*

Post hole: F87 (145).

A post hole, F87, containing a dark grey brown clay loam fill was located cutting F80 to the north.

#### *Phase 5.3 Extra-mural activity (Area IV illus.11,20)*

Various features were located to the south-east of the excavation outside the main enclosure ditch (F62).

*Phase 5.3A*

Drainage channel:	F1 (64, 240); F69 (68,85,303).
Pit:	F67 (74,78-9,290).
Gullies:	F70 (76); F71 (70,92,292); F73 (75); F78 (118-19,297).
Wall trench:	F63 (62,286).
Sunken feature:	F66 (66,88,289)

Six gullies, two post holes and a sunken feature were located. A channel, F1 on a north-west to south-east alignment, was identified in the south-east corner of the excavation. A similar feature on the same alignment, F71, was located 8m to the south-west. Fills of light yellowish brown clay loams and clays were present in these features which contained Iron Age pottery (Fabrics A and B) and animal bone. Another feature, F63 forming an arc of *c* 3m radius was revealed 5m north-west of F1. This contained a dark yellowish brown clay loam with large pebbles (*c* 150mm diam.) positioned along its base. Finds from this feature included Iron Age pottery (Fabrics A and B), fired clay, glass, animal bone and charcoal. 0.5m north-west of F63 a post hole, F67, was located containing dark yellowish brown clay loam with some Iron Age pottery present. 2.5m north of F67 a shallow pebble lined sunken feature, F66, was partially revealed to the east of the excavation. This feature contained fills of dark yellowish brown clay loam with much pebble and included finds of Iron Age pottery (Fabrics A, B and E), fuel ash slag and animal bone. A post hole was located at the bottom of this feature to the west. A short length of gully, F73, was located 0.5m to the north-east of F66. This was on the same east-west alignment as another gully, F69, partially revealed 10m to the south-east of F62. The fills of these features consisted of dark yellowish brown clay loams with Iron Age pottery (Fabric A) and animal bone present.

*Phase 5.3B*

Pit:	F68 (69,80-82,291)
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A pit, F68, was located immediately to the south-east and cutting F67. This again contained fills of dark yellowish brown clay loam with some Iron Age pottery (Fabric A) present.

*Phase 5.3C*

Drainage channel:	F76 (90,352,295); F64 (65,83-4,287); F75 (89,110-11,116,294).
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A gully, F75, on a north-south alignment was located to the south of the excavation cutting F71 to the south-east. A possible continuation of this feature, F64, on a north-east to south-west alignment was located 0.5m to the north. Fills of dark yellowish brown clay loam and yellowish brown clays were present in these gullies with finds of Iron Age pottery (Fabric A), furnace slag and animal bone from F64 and Iron Age pottery (Fabrics A and B) fired clay furnace slag animal bone and charcoal from F75. A wider channel, F76, was revealed at the southern edge of the excavation cutting F75 and containing a brown clay loam fill.

*Phase 5.4*

Enclosure ditch backfill:	F62 (91); F72 (71).
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Further infilling of the partially backfilled ditch, F72, and the main enclosure ditch, F62, is represented by fine brown clay loam deposits containing Iron Age and a little Romano-British pottery and animal bone.

*Discussion of phase 5*

Pottery from these features, where present, suggests that they date from the later (first century A.D.) occupation on the site. The features can be grouped into different

categories of 1) post/stake holes, 2) ditches, gullies and channels, 3) hearths/ovens, 4) pits and working hollows. The function and interrelationship of these features is more difficult to evaluate. Only two of the post holes, F57 and F58, appear to form a "2 post" structure often interpreted as drying frames (Bersu 1940, 94-6).

Many gullies and run-offs were located, typical of sites on impermeable subsoil. Most of these were along east-west alignments running down the slope to the east.

The oven, F137, located to the west of the site appears to be *in situ* within a working hollow. The structure consisted of a fired clay base which would originally have had circular openings in the side of the structure similar to others from, for example, Danebury (Poole 1984), Boscombe Down (Richardson 1951) and Warmington (Knight 1984, 161) which it resembles in size and wall thickness. Originally this would have had a domed superstructure with the perforations to create an updraught. Fragments of fired clay located in the area had perforations and may have derived from this superstructure. These are usually interpreted as domestic ovens or grain dryers. Three fragments of butchered bone from the immediate vicinity and grain impressions on the fired clay would support this as being a cooking area. Two other hearths, F60 and F61, were located to the east of the site, F61 being associated with stone settings. It is unclear whether these were used for cooking areas, grain preparation or as bonfires for firing pottery. (Knight 1984, 164).

Several other pits or hollows of unknown function were located. In view of the poorly drained subsoil the absence of pits used for storage is not surprising. Several features in the central area (F5, F22, F26, F31) contained furnace slag, suggesting that it was an area used for iron working (see p.58). Several different species are represented by charcoal from F5 and F42 (see below p.78) and these may also have been used in the iron working process. The post holes, F26, F32 and F105, may denote a shelter around this working area (illus.6,12).

Various features post dating the Phase 4 circular building were located to the south of the excavation. Again these consisted of post holes, gullies and a hearth. Some of the curved gullies, F154, F156, F174, and F190 may denote house areas although no structural evidence has survived.

Extra-mural activity was examined to the south-east of the enclosure ditch (Area IV). This consisted of several drainage gullies, ditches, pits and post holes similar to others examined inside the enclosure area which, from the ceramic evidence were broadly contemporary. Of interest is the trench, F63, with pebbles along its base, which probably served as a wall trench for a small building or shelter. Although the sunken floored building, F66, contained only Iron Age pottery, the presence of early Saxon pottery from fieldwalking might suggest that it was a Saxon *Grubenhaus*. However sunken floored buildings are known from Iron Age contexts, for example, at Canterbury (Rodwell 1978, 37), Colchester (Dunnett 1975, Fig. 7) and possibly Long Wittenham, Oxfordshire (Savory 1937, 2; Harding 1972, 34).

Furnace slag and fired clay indicates iron working in this area.

A very little Romano-British pottery was located in later fills (Phase 5.4) in the abandoned enclosure ditch, F72, and the main enclosure ditch, F62. This might suggest continued agricultural activity in the area with material being introduced into the ditches by later ploughing.

*Phase 6 Post-medieval activity**Phase 6.1*

Enclosure ditch backfill: F62 (61); F259 (625).  
 Stone land drains: F49 (38,276); F50 (44,277); F84 (127-28); F85 (151).

The upper fill of F62, 1.0m deep, was located overlying the Phase 5.2 recut to the east. A stone lined drain, F85, was located to the inside of the ditch sealed by this fill in the three sections excavated. The fill consisted of grey brown silty clay and dark greyish brown clay loam with Iron Age pottery (Fabric A), glass, fired clay, slag, animal bone and charcoal present.

*Phase 6.2*

Field ditches: F35-F38 (12,18-20); F52, F59 (46,279,55,282); F7,F52 (215,43).  
 Land drains: F3 (235,242); F17 (234,250); F25 (4,5,256); F65 (63,288); F86 (132,304); F134 (350-51).  
 Clay spread: F19 (30).

Various post-enclosure features were located during the excavation. These included a field ditch, F35, on a north-west to south-east alignment. This showed evidence of two earlier cuts, F54 and F69. Iron Age Pottery, slag, animal bone and charcoal was recovered from the brown clay loam fill. Three types of land drain were present on the site, stone lined drains located within the enclosure ditch F62 (see above p.22), early 19th century horseshoe shaped ceramic drains and modern circular ceramic drains. The latter had been laid at 5m intervals on north-west to south-east alignments across the field.

A high pressure gas main was also present to the west of the site having been laid in 1968. A machine cut trench F36 on a north-south alignment 7.5m east of F4 may have been associated with the laying of this pipeline.

*Discussion of phase 6*

Some of the upper fill in F62, 61, may have derived from bank material being ploughed back into the ditch. Much of the post-medieval activity evident on the site consisted of providing land drains for the poorly draining subsoil. The presence of stone drains in the enclosure ditch suggests that the ditch and bank was probably still visible as an earthwork in the early post-medieval period. Also of interest is the absence of medieval field systems visible when the site was excavated suggesting that the area may have been marginal land or woodland during the medieval period, perhaps forming the southern extent of Leicester Forest.

**Discussion**

Fieldwork and sample excavation of this enclosure has provided new information on this settlement type. For Leicestershire it provides the only detailed examination of an Iron Age farmstead and is one of a very few clayland sites examined in the region to date thereby contributing to the ongoing Prehistoric Claylands Project. The sequence of settlement evidence is first considered followed by the evidence for environment and economy. Finally the site's location within the context of Iron Age settlement in the Soar Valley, south of Leicester, is examined .

*Settlement chronology*

The earliest activity on the site (Phase 1) is represented by some Neolithic or Early Bronze Age material. The presence of this material suggests some activities within this



clayland area during the Neolithic or early Bronze Age. The axe fragment may have been connected with clearance while Food Vessels are often associated with burials. In the absence of further evidence however the nature of this early activity or activities is uncertain. The possibility of the flint material representing later prehistoric activity (Iron Age?) is of note (below p.58; A Brown, pers. comm).

The Iron Age occupation can be divided into two broad periods based on the nature of the activity and the ceramic sequence. Initially an unenclosed settlement based around two circular buildings is suggested (Phase 2). The southernmost building of large size may be interpreted as a house for a family or families, whereas the smaller structure to the north, which may have been semi-circular, appears to have been used as a kitchen or workshop. This phase is associated with pottery coarse wares in Forms 1-4 comparable with similar material from Weekley, Northamptonshire (CPI) (Jackson and Dix 1986-7) (see below p.52). A date range of *c.* 175BC to AD20 is suggested for Phase 2 from the ceramic evidence. This is perhaps at variance to the C<sup>14</sup> date obtained from charcoal in Phase 2.2B of a.d.80 ± 90 although to the second standard deviation, this suggests 95% certainty for a date between 100BC and AD300. As the Phase 2.2B charcoal may be evidence of destruction of the building a mid-late first century BC date may be suggested for the end of this phase. Another smaller circular building (Phase 2.3) replaces the Phase 2.2 structure, again within the earlier ceramic phase.

The Iron Age activity therefore appears to indicate an initial relatively stable period starting within the first century BC or earlier. Closer dating from the ceramic evidence is difficult. There is no evidence of the settlement having been enclosed during this time although traces of boundaries may not have survived. Most of the discrete features located during the excavation, where datable, fit into the later ceramic sequence. It is possible that there was no continuous occupation during this period and the relationship between this area and the subrectangular enclosure to the south-west may be of significance (illus.2-3).

The second period sees many phases of activity (Phases 3-5) including the provision and replacement of several enclosure ditches which may have been partly defensive in function. Other activities are represented by circular buildings, ovens, external hearths and ironworking areas. Some extra-mural activity again including iron working is also suggested by features to the south-west of the enclosure. The very little Romano-British material recovered from this site suggests that it ceased to be occupied before or very soon after the conquest. This second period of activity encompassing Phases 3-5 sees a change of ceramic type corresponding to Weekley CP2 (Jackson and Dix 1986-7). This includes Forms 5-7 with some Belgic type wares (illus.24) and a date range of *c.* AD20 to AD43 or slightly later is suggested for the pottery (see below p.52). This does suggest a great deal of activity, notably the provision of different phases of enclosure ditch, within a short period of time and perhaps a more general first half of the first century AD date might be more convincing to cover Phases 3-5.

The second period sees many different phases of activity apparently within a relatively short period of time (*c.* 50 years). The provision of defensive ditched enclosures may reflect uncertainty and external pressures. It might be suggested that initially the immediate living areas were enclosed, the enclosure to be extended later with deeper defensive ditches to encompass a greater area to the north.

The function of and necessity for small defended enclosures is of interest. Dix and Jackson (1989) have recognised a group of enclosures in the south-east midlands

which have exceptionally wide and deep defensive ditches considering the area enclosed. The width and depth of the Phase 3.3 ditches at Enderby is comparable to these and dates to the same period (*c.* 25BC - AD50). It is suggested that these defended enclosures may have been constructed by a developing aristocracy having some influence on new trading connections (Dix and Jackson 1989,166). The lack of high quality domestic debris from Enderby may exclude this site from such an interpretation. The provision of defensive ditches does suggest a response to external uncertainties however.

#### *Environment and economy*

One of the main aims of the excavation (see above p.6) was to recover information on the environment and economy of the site. Although the site was not ideal for the survival of such information it was considered important to include a sampling and sieving programme to try and provide information on clayland settlements and to address the question of the site's possible proximity to forest. The lack of waterlogged deposits and of buried grain storage has meant that environmental information of the quality of that found at for example Thorpe Thewles (Hesford 1987), or Tattershall Thorpe (Chowne *et al.* 1986) is lacking. However some conclusions may be drawn from the information recovered.

A mixed economy is suggested from the animal bone and grain recovered from the site. The quantities of animal bone recovered do not allow detailed comparisons between the phases. No significant changes between the unenclosed (Phase 2) and enclosed settlements (Phases 3-5) are apparent.

Cattle, sheep/goat and pig are the dominant domesticated species present in that order, although estimates of numbers of individual animals (ENI), see sheep/goat more numerous than cattle. This compares with quantities of bone recovered from other Iron Age sites (Knight 1984, 256). High proportions of sheep/goat are also present on late Iron Age sites in Northamptonshire perhaps reflecting an emphasis on this species during this period in this area. There is a wide variation of age at death of this species implying a wider range of use, the presence of sheep over 3 years old perhaps indicating wool production (p.65). Sieving has recovered bones of some smaller species although not in significant numbers. Of note is the presence of fish bone suggesting that these formed part of the local Iron Age diet (p.59). Single finds of bone from Red and Roe Deer are the only evidence of large game animals. The question of proximity to woodland on this basis must remain open although access to woodland to provide pasture for pigs is possible. Similarly charcoal present on the site and need for partially managed woodland to provide the large quantity of timber required for the buildings suggests that there would have been ready access to woodland.

Small quantities of wheat and barley were recovered from the sieved samples and grain impressions were present on some pottery and fired clay. From one of the grain impressions emmer may have been present but the carbonised wheat grains could not be identified as to species. Charred weed seeds from the same feature as some of the wheat grains were of autumn germinating weeds of cultivation which may suggest the presence of an autumn sown wheat such as spelt, bread wheat or a variety of emmer. Further evidence of arable cultivation may be inferred from the quern fragments recovered.

Localised environmental information may be interpreted from some mollusc,

charcoal and phosphate samples. Semi-permanent water within the enclosure ditches is indicated by the fresh water molluscs present. Little tree or shrub cover is indicated by the molluscs present, although hedgerow species of charcoal in the ditch fills might suggest that hedges were used as part of the boundary system. Clearance of the enclosure ditch or a more open immediate environment is suggested from Phase 3.2 (F72). High phosphate levels indicating a variety of human or animal activities were measured in all the features examined. The highest levels however were located in the lower fills of the enclosure ditches and the Phase 2.1 gullies (F4, F97). This may indicate more rubbish disposal in these contexts. If so this is consistent with the Phase 2.1 building being interpreted as a kitchen area. Some iron working is indicated from slags recovered, which suggest smelting rather than smithing taking place on the site (p.58).

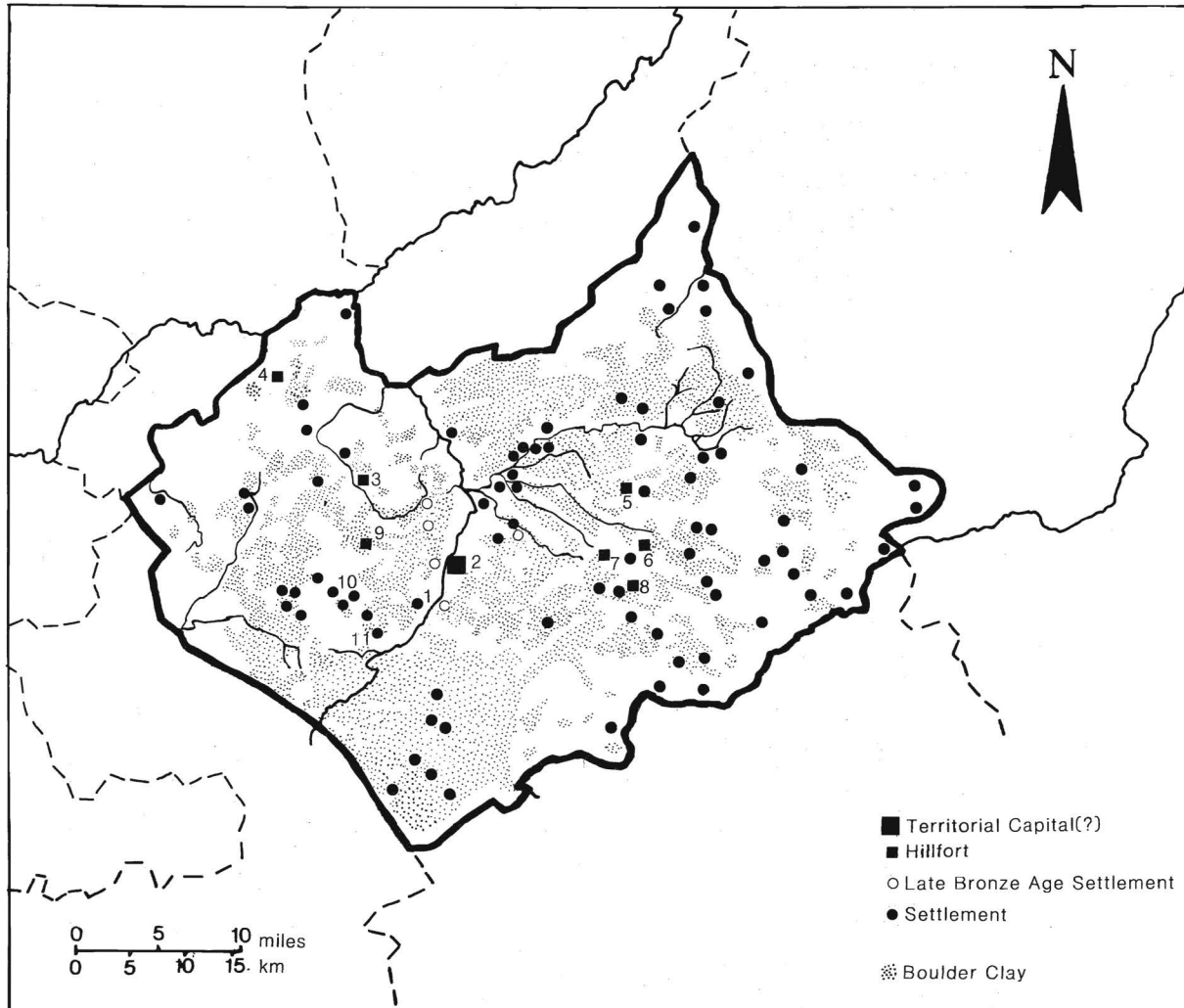
#### *Location and Context*

Fieldwork in Leicestershire over the past fifteen years has greatly changed our perception of Iron Age settlement in the county. Fieldwalking and aerial survey have revealed *c.*100 settlements of probable Iron Age date (illus.22). In addition a few late Bronze Age sites have been located and further fieldwork might increase the number of known hillforts in the county from three to seven. (The three confirmed hillforts being Beacon Hill, Burrough Hill and Breedon-on-the-Hill, with possibly four more at Robin-a-Tiptoe, Life Hill, Skeffington and Ratby Bury (Liddle 1982, 22)). Recent work in Leicester indicates that this centre had Iron Age origins and by the conquest was probably a high status settlement importing luxury goods and manufacturing coins (Clay 1985, 30)

Perhaps the most significant aspect of the Enderby Iron Age settlement is in its location within an area of boulder clay, a type of subsoil, where, with notable exceptions e.g. Brigstock (Jackson 1983), and Thorpe Thewles (Heslop 1987) few Iron Age sites have been excavated. Knight's (1984) consideration of settlement patterns in the Great Ouse and Nene basins, which include a large proportion (42%) of boulder clay cover, concludes that this type of subsoil was probably being exploited without discrimination from the Late Bronze Age onwards (Knight 1984, 304). In Leicestershire, where a larger proportion (*c.* 60%) of the county is covered by boulder clay, only 30% of known Iron Age sites are from these areas. However, this may reflect a sampling bias and it is perhaps significant that four of the five known sites producing Late Bronze Age material are from boulder clay areas.

The Soar Valley south of Leicester includes areas which have been fieldwalked and the beginnings of settlement patterns in the Iron Age can be examined. Enderby forms part of a group of settlements to the west of the Soar (illus.22). Of note is the site at Thurlaston 6km (3.5 miles) to the west which survives as a sub-rectangular earthwork. Late Iron Age pottery has been recovered from rabbit scrapes on this site. (Liddle 1982, 22). A 'D'-shaped double ditched enclosure very similar in shape and area to the final phase enclosure at Enderby has been located as a cropmark 6km to the south-west at Huncote (illus.22; Pickering and Hartley 1985, 34 Fig. 10 Pl. 9).

An evaluation was undertaken of the subrectangular cropmark and surrounding areas immediately to the south of the excavated site June-July 1990 (illus.2-3; Sharman and Clay, 1991). Material from the enclosure area, including East Midlands Scored ware pottery, suggests that the two sites may have been contemporary. A similar assemblage to that from the excavated enclosure to the north is also suggested from the animal bones recovered with cattle, sheep, horse and pig being represented. Anglo-Saxon pottery including two cremation burials, indicated later activity in the area. The



22. Iron Age settlements in Leicestershire:— 1. Enderby, 2. Leicester, 3. Beacon Hill, 4. Breedon-on-the-Hill, 5. Burrough Hill, 6. Robin-a-Tiptoe, 7. Life Hill, 8. Skeffington, 9. Ratby Bury, 10. Thurlaston, 11. Hunctore.



23. Reconstruction of Phase 2.2 house at Donington-Le-Heath

ditch to the south of the enclosure contained a little Roman and medieval pottery. The Fosse Way to the east was located in two areas, consisting of a shallow spread of granite and pebble with no visible side ditches. A recent fieldwalking survey (3.1992) has located two further Iron Age sites 0.5 km to the west (SP 545 000; P. Liddle, pers. comm).

Proximity to water, potential exploitation of the river valley area, a commanding aspect and ready access to woodland and other areas of Iron Age occupation may have all influenced the location of the Enderby settlements. Recent examination of pottery from Leicester includes a group of scored ware very similar to that from the Enderby sites (Pollard forthcoming) suggesting that occupation in Leicester may date from the mid first century BC. The sites at Enderby may therefore be seen as small rural settlements starting around the mid first century BC and probably having links with the settlement at Leicester 5km (3.2 miles) to the north. Leicester, being better placed strategically began to receive Gallo-Belgic imports from the late first century BC onwards (Clay 1985 Jarvis 1986). Alterations in the pottery styles at Enderby (Forms 6, 7) reflect familiarity with this new pottery although the site remained rural and the pot was hand made.

Whereas Leicester developed into an important Iron Age and Roman settlement the sites at Enderby show no evidence of continuity into the Roman period and for unknown reasons were probably abandoned by the mid first century AD. Roman agricultural activity introduced some Roman pottery onto the site possibly by manuring. Re-use of the sites appears to have occurred during the early Saxon period from the presence of fifth-sixth century pottery including two cremation vessels from the southernmost enclosure (Sharman and Clay 1991). Further work on the southernmost enclosure may help elucidate the relationship between the two enclosures and their position within late Iron Age settlement hierarchies in this area of the Soar Valley.

**Bronze Age pottery**

Sheila M. Elsdon

illus.26.BA 1 Rim sherd of a Food Vessel in coarse sandy fabric with large inclusions. It has a red exterior, dark grey core and impressed comb decoration. The vessel is probably similar to one from Cossington, Leicestershire barrow 2 with corrugations on the exterior (O'Brien 1978 6-7) A30. 1983, 429, u.s.

**The Iron Age pottery**

Sheila M. Elsdon

The total weight of pottery from the site is about 35kg. The general impression, after a cursory examination, was of a scored ware assemblage of large and medium sizes vessels which would suggest a site with possible dates anywhere from the fourth century BC to early first century AD. It is a general rural assemblage with no really fine wares or easily dated imported pottery. The interest lies in the possible relationship of this site to other scored ware sites where fine wares are present to give better dating evidence and to add one more piece to the jigsaw type chronology of this widely found type of Midland pottery.

The quality of the fabric varies from extremely crumbly to hard and fine which presumably represents functional differences; some of the softer vessels can only have been used for storage. 29% of the pottery is scored and this is mostly in the earlier phases.

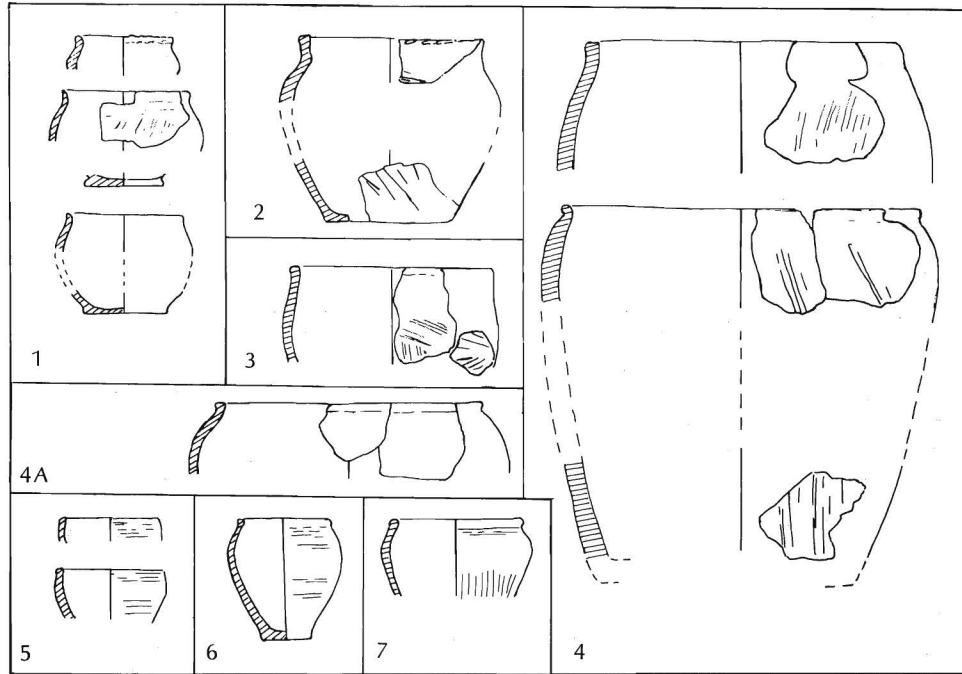
*Quantification*

The pottery was quantified by weight, number of sherds, rims and bases. The total weight of pottery was 35.180 kg in 1,925 sherds, substantial remains of 13 pots and very numerous uncountable small fragments. The total number of rims was 146 and bases 53. There are no complete profiles. illus.29.86 (Phase 5:3A) is a fairly secure reconstruction of a complete pot. There is a minimum of 43 pots where the form is secure and a further 14 (maximum 57) where it is reasonably certain. It is within these severe restrictions that a conjectural typology is suggested based chiefly on size and rim form.

Table 1: Occurrence of forms by phase (vessel numbers)

Phase/Forms	1	2	3	4	4A	5	6	7
2.1A	4-5	3-5	1-3	?1		1		
2.2A	2			2		1		
2.2B	5	?1	3-6	2-3	1			
2.3B								
3.1A	1	?1	3	1-2				
3.2	1				1			
3.3A			?1			1		
4.1A						1		2
5.1A			1-2				1	1
5.1B							2	
5.3A							2	1

A minimum 43 pots have recognisable forms (maximum 57). A correlation between the forms and Phase groups is included in Table 1.



24. Iron Age pottery. Main pottery forms

*Forms* (illus. 24)

1. These are small to medium-sized rounded bowls and jars. They have stubby upright rims or, more usually, slightly everted rims which are flattened, rounded or tapered. Rim diameter is 11-13cm. There is fingertip or slashed decoration on the rim. The body is usually plain but can have decoration of light twig brushing. Where bases of the correct size are present they can have a slightly protruding foot from which the walls of the body rise at a wide angle. There are 12-15 recognisable vessels of this form in the earlier Phases (2. 1A, 2. 2A, 2. 2B, and 3.1A) (e.g. nos, 1-3, 15, 19, 21, 27, 29, 35, 44, 46, 48?).
2. These are large rounded jars with upright or slightly everted flattened rims, rim diameter is 20-25 cm with slashed decoration on the top. Hard, well fired but coarse fabric. There are 4-8 recognisable jars in this form again in the earlier phases (2. 1A, 2. 2B, 3.1A, 3.2) (e.g. nos, 5, 11, 36, 60).
3. These are medium-sized slack profile jars with a rim diameter of 20-24cm. They can have slashed or plain rims and the body decoration is shallow random scoring or deep, fairly regular grooves. The fabric varies from very crumbly to hard. There are 8-14 recognisable vessels occurring in Phases 2. 1A, 2. 2B, 3.1A, 3.3A, and 5.1A, again possibly suggesting an earlier form. (e.g. nos, 4, 14, 28, 30, 39, 40, 43, 50, 77, 80).
4. These are large and very large slack profile jars. Rim diameters are 32-36cm. There are fingertip impressions or slashing on the rims, body decoration is twig brushing, scoring and wide, deep grooves, rims are upright and stubby. There are 6-8 recognisable examples found in Phases 2.1A, 2.2A, 2.2B. 3.1A and like form 3 this is also possibly an earlier form (e.g. No. 17, 18?, 22, 24, 33, 45).
- 4a. This is a large rounded jar, plain with a bead rim. There is just one example in Phase 2.2B, in the same context as Form 3 (e.g. no.34).
5. These are small, straight-sided bowls with a rim diameter of 11-15cm. They are undecorated and the only 4 certain examples occur in Phases 2.1A, 2.2A, 3.2, 3.3A, 4.1A, (e.g. Nos, 23, 25, 59, 62, 75).

6. These are hand made fine ware jars and there is one complete profile. They have a smooth finish. There are only four complete examples, nos, 82, 83, 86, 87 from Phases 5.1A, 5.1B and 5.3A.
7. These are bead rim fine ware jars with a fine smooth finish. There are 4 examples (nos. 70, 74, 79, 91) from Phases 4.1A, 5.1A and 5.3A.

The forms fall neatly into two groups. Forms 1 and 2 are present in Phases 2.1A, 2.2A, 2.2B, 3.1A and 3.2. Form 6 and 7 belong to Phases 4.1A, 5.1A, 5.1B, and 5.3A. Of the remainder Forms 3 and 4 are better represented in the earlier group and Form 5 in the later one.

The shape and size of pottery vessels reflects the needs (for holding food and drink, for cooking and for storage) of the community which used them. All these pots had uses which we can now only guess at; for example were the smaller vessels for holding drink and the larger coarse ones for storing grain or pulses? Sometimes traces of burnt food on the interior (no. 82) or exterior sooting indicate that the pots were used for cooking, but what purpose was served by the three holes in the base of No.42, a common feature in pots of this period is unclear.

The pottery also reflects the same needs and life style in this small rural community over a period of time. The people would have seen fine imported pottery and local, wheel made imitations on their trips to the larger trading centres. This is reflected at Enderby by a gradual change in forms and techniques although the pottery is still hand made presumably by the people themselves rather than by specialist potters. The later forms, 6 and 7, are hand made in the same local fabric. There is a tendency for both form and fabric to become standardised with time as the earlier features contain a greater variety.

### *Fabrics*

The site lies in a complex geological area in the midst of Mercian Mudstones and boulder clay and adjacent to the metamorphic and volcanic rocks of Charnwood.

The basic component of the material used for the pottery is a sandy clay which contains quartz fragments and mica, both of which are present in the Mercian Mudstones. Also present in the pottery, in varying degrees, are quartzite and quite a lot of other metamorphosed rocks (meta volcanic and meta sediments) together with coarse grained igneous rock fragments (possibly Charnian syenite). A working hypothesis could assume a matrix of local clay from the Mudstones used as the basis of the pottery, with metamorphic and igneous fragments added from nearby sources, to act as tempering material. Grog is also used for tempering and some flint, especially in the larger jars (e.g. No. 45).

There is a large variation in both colour and consistency in the fabrics of the pottery. The consistency ranges from fine and very sandy with small quartz grains to thick, coarse and very granular with large inclusions of quartzite and other metamorphic fragments. Mica is frequently present in all fabrics. The colours also vary widely from almost black through browns and reds to buff and light grey. As the fabrics vary so much and yet appear to be nearly all purely local in origin, it was decided simply to group them into fine and coarse wares. In the classification A is fine ware and B coarse. The distinctions are necessarily fairly arbitrary as this takes no account of the medium fine fabrics, but any other method would have resulted in a multiplicity of different "fabrics" when they are basically all the same, or rather variations on a theme.

Very small quantities of pottery do have a different type of fabric. The F Fabric has crushed limestone inclusions which have nearly all been leached out so that the black pottery has a distinctive corky texture. Fabric C has shell tempering. The two other fabrics, D and E, are present only in minute amounts and E could be daub or bricquetage.

The fabrics detailed below have been distinguished in hand specimens and with the aid of ten times magnification. (Thin sections are being prepared of Fabrics A1, A2, B3 and B4 which occur most frequently).

Fabric A is a hard, sandy fabric with a smooth surface. The colour varies from dark brown to buff but it is usually dark brown or red with a grey core. There is a light grey variant but this



could be overfired as it is uncommon. Inclusions are small in size with the exception of occasional pieces of flint which are up to 3mm in size. Thickness of the sherds is 7 to 8mm.

- A1: is brown with red core. There are rounded sand particles in the matrix and grog inclusions. The surface is very smooth with mica specks.
- A2: is red with a dark grey core. It is slightly coarser than A1 with inclusions of quartzite and other metamorphic particles. It often has regular combed decoration.
- A3: is dark grey-brown throughout. It is a thick, heavy fabric with large rounded quartz sand particles and added grog and limestone in small quantities.
- A4: is a hard, buff, sandy fabric with a grey core and small metamorphic inclusions.
- A5: is hard and light grey with hard angular inclusions, possibly volcanic.

Fabric B is hard, coarse and granular. The surface colours are dark brown, brown, red or buff. Large metamorphic inclusions protrude through the surface with is often vesicular where these have fallen out. Occasionally it is soft and crumbly when the firing has been insufficient. Sherds are thicker than the A fabric and can be as thick as 25mm in the large jars.

- B1: is brown with a red core. The surface is micaceous. Large pieces of quartzite break through the surface. It is decorated with narrow scored or incised lines.
- B2: is light brown with a dark grey core. It is an open, vesicular fabric which possibly once included limestone. It has decoration of deep, random scoring.
- B3: is mid brown and thick (15mm). It is granular with large angular metamorphic inclusions. Decoration is regular scoring; possibly a pattern.
- B4: is red with a brown core. It is very sandy and micaceous but a thick coarse fabric. It is very frequent and used for large jars as No.45 where it has flint inclusions.
- B5: is dark brown throughout with large metamorphic inclusions.
- B6: is light buff and very coarse with very large inclusions.

*Fabric C* is soft and light red with a brown core. It has shell filler.

*Fabric D* is a very fine, compact red ware. The core is a distinctive grey/red/grey/red/grey sandwich

*Fabric E* is red throughout but very coarse. It could be bricquetage.

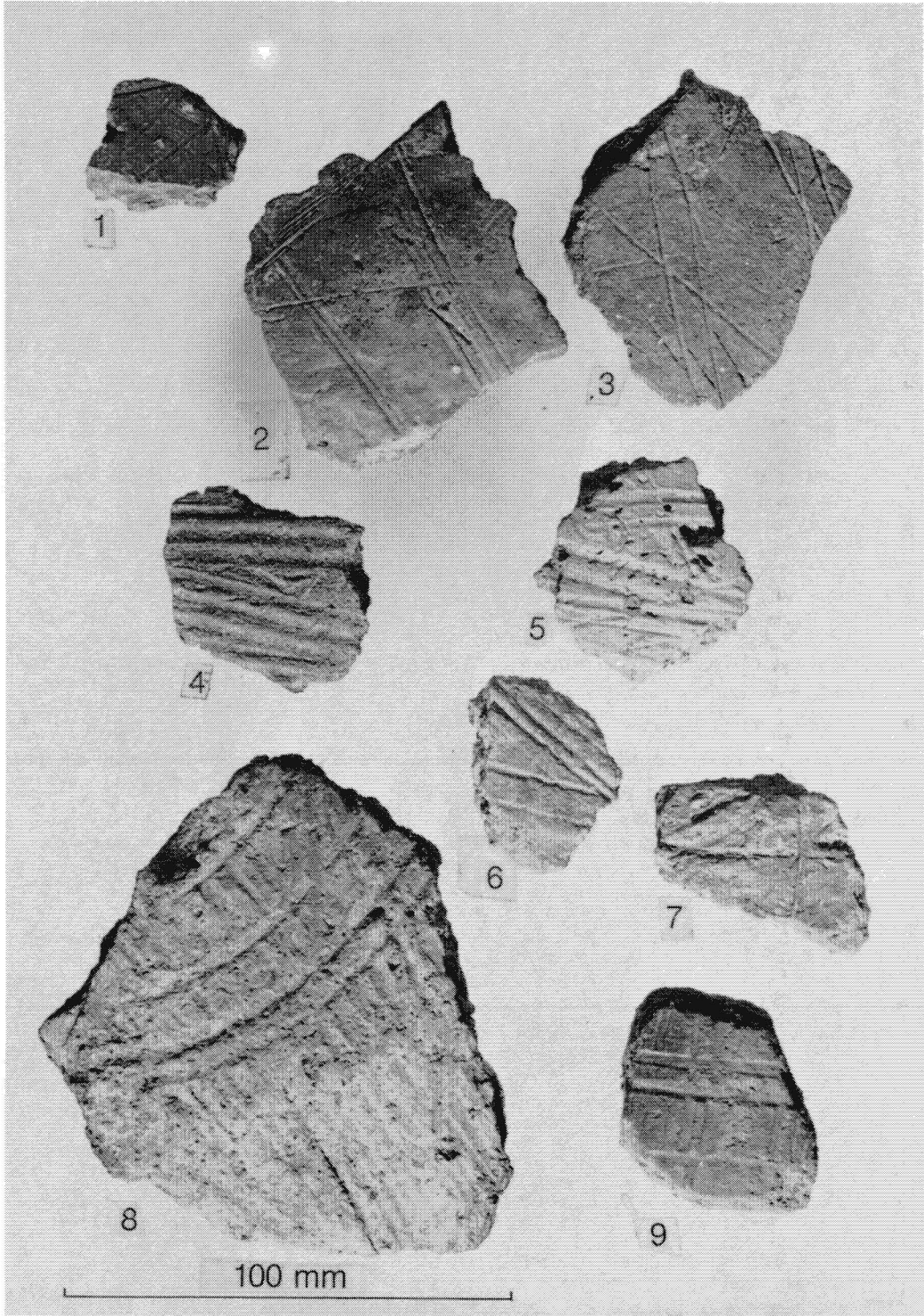
*Fabric F* is black and vesicular. It has limestone inclusions which have mostly leached out leaving a light, corky fabric.

About 30% of the total bulk of the pottery is Fabric A and 69% Fabric B. Fabrics C and F account for most of the remaining 1% and Fabrics D and E are present in minute quantities.

Chronological distributions of the fabrics are not very marked. In the earlier phases (2.1A to 2.3A) B predominates over A, but in the later phases (3.1A onwards) there is a tendency for the position to reverse or at least equalise. Fabric F does seem to be a later one as there is very little until Phase 4.1A although there is one pot in this fabric in each of the Phases 2.2B and 3.2. The shell filled C fabric is present from the beginning but in such small quantities that this may not be significant.

Table 2: Correlation of pottery forms by fabrics (vessel numbers)

Forms/Fabrics	A	B	C	D	E	F
1	11	1				
2		7				
3	2	7				
4	1	4				
5						2
6	4					
7	3	1				



*Correlation of Forms and Fabrics (Table 2)*

This is not surprising. The small bowls of Form 1, probably for food and drink, are in the finer Fabric A with one exception (No. 46). The larger Form 2 jars are usually in Fabric B. The medium, large and very large jars of Forms 3 and 4 are in the coarse Fabric B with some exception (Nos. 24, 28, 29). The two straight sided bowls (Nos. 62, 59) are in the unusual, limestone filled Fabric F, and Forms 6 and 7 are in Fabric A as they are imitations of fine wheel made pottery.

*Decoration (illus. 25)*

## Decorative types:

1. Single incised line: confined to A ware and rare.
2. Light and narrow incised scoring/twig brushing: A and B wares. The twig brushing is invariably vertical.
3. Finger decoration on the rim: A and B wares.
4. Wide grooves or finger smoothing: not common, A and B wares.
5. Shallow, narrow, even grooves: very common on both A and B wares.
6. Shallow background scoring with deeper grooves superimposed: nearly always B ware and large pots.

Quite a high proportion of the sherds have their surfaces roughened by some kind of scoring. Where forms can be identified this seems to be restricted to Forms 1 to 4 and the general rule is the larger the pot the more profuse is the scoring. Forms 6 and 7 are deliberately smoothed, often with a black burnished exterior.

The scoring can be light and random (illus. 26.4 and 29.88 decorative type 2, illus. 25.1-3) or it can be very even (decorative type 5, illus. 25.4). The range of 'scoring' varies from light twig brushing (decorative type 2 illus. 26.19 and 28.56) to deep, wide grooves (decorative type 4, illus. 28.45 and 52). Sometimes a regular scored or combed decoration is overlaid by deep lines of scoring (decorative type 6, illus. 26.18 and 25.8). Very occasionally narrow incised or scored lines seem to form a pattern (illus. 29.88 and 25.2) one only has a regular scored pattern with the lines crossing at right angles (illus. 29.61 and 25.9).

The rims of the earlier group of pottery (forms 1-4) are sometimes, but not invariably, decorated. This is either a shallow diagonal slashing (e.g. illus. 26.11; 27.27, 30) or deep finger impressions (e.g. illus. 26.17, 22). The slashed type of decoration does not occur after Phase 2.2B. Very rarely the rims have parallel grooves on the top (illus. 27.32). There are often finger indentations below the rim made as it was being pulled or pinched out and thus not decoration as such (e.g. illus. 28.48).

The decorative types listed above are equally distributed on A and B wares except for type 6 which is always found on thick B ware. Perhaps this type of decoration was considered most suitable for the large heavy pots as it would give the fingers a better grip.

Decorative types 2 and 5 are the commonest and together account for about 75% of all decoration. illus. 25.1-3 are examples of type 2 and illus. 25.4 is a good example of type 5.

A breakdown of the various types of scored decoration in relation to Groups, Forms and Fabrics appears in the appendix in the archive. There seems to be no chronological progression in the types of decoration with the exception of the diagonal slashing on rims which is confined to Groups 2.1A to 2.2B. Forms 6 and 7, although still hand made, are quite different in character. They are never scored and have a smoothed finish, sometimes with a fine slip.

*(Caption to illus 25. opposite)* 25. Decorated Sherds

1. B1, Dec. 2. Phase 2.1A, F4. Light, narrow, random scoring (172)
2. A2/3, Dec. 2. Phase 5.3B, F66. Illus. 29.88 (253)
3. A2, Dec. 2. u.s. (452)
4. A2, Dec. 5 u.s. Narrow, shallow, even grooves. (168)
5. B2, Dec.?. Phase 2.1A, F97 (190)
6. B3, Dec. 6. Phase 2.1A, F97 (192)
7. B2 Dec. 6 u.s. Random shallow grooves with deeper ones superimposed (538)
8. B3. Dec. 6. Phase 2:2A. Illus.26.18 (334)
9. B6 Phase 3.3A, F6 Illus. 29.61 (102)

*Descriptions of illustrated Pottery*

illus.26

## Phase 2.1A

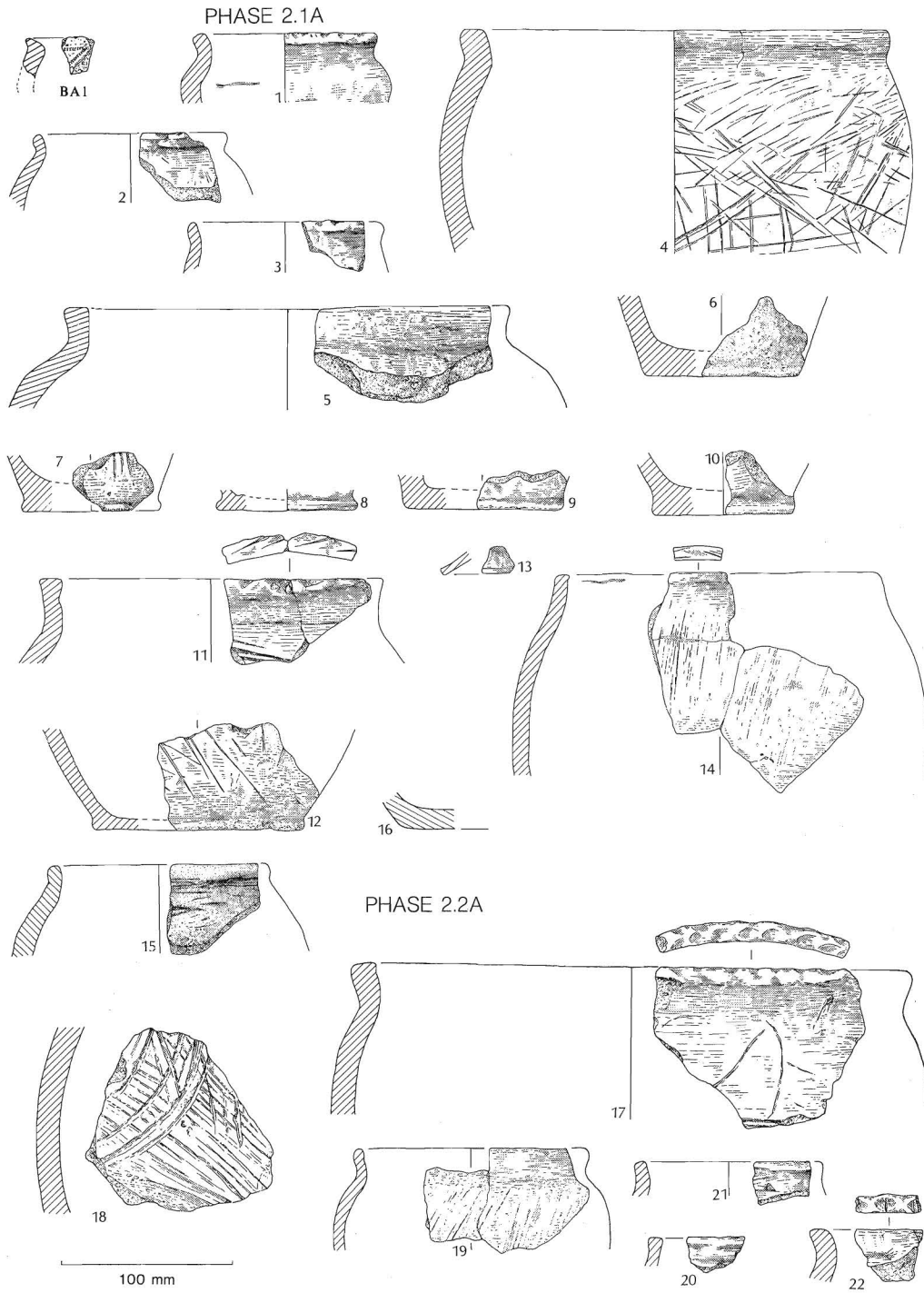
1. F4, U.S. Small bowl. Form 1. Fabric A3. Uneven surfaces and thick walls. Rim is pinched out and has uneven fingernail impressions. Traces of burnt deposit on interior (138,193).
2. F97, 169 Rim of small bowl. Form 1. Fabric hard A1. Rim pinched out with diagonal slashed line decoration. Line shows where clay has been added to form the rim (473).
3. F97, 169 Rim of small bowl. Form 1. Fabric fine A1. Rim tapered with fine finger nail impressions (183/190).
4. F97, 169 Many sherds of Form 3 jar. Fabric poorly fired and crumbly B3. Rim is undecorated. Body decoration type 2. The portion of pot illustrated was found in one piece (457).
5. F97, 169 Two rim sherds of Form 2 jar. Fabric very hard, well fired B6. Interior is dark grey. No rim decoration (186).
6. F97, 169 Part of base, possibly Form 3. Fabric A2, very thick (456).
7. F97, 169 Part of base, possibly Form 2. Fabric B2. Narrow incised vertical lines, decorative type 2. (474).
8. F97, 169 Part of a base with pinched out foot. Fabric A2 (193).
9. F97, 169 Part of base, possibly Form 4. Fabric A3. (193).
10. F4, 180 Base of possible Form 2 jar. Fabric B2 with smoothed surface (178).
11. F97, 169 Rim of Form 2 jar. Fabric B3. Rim flattened and bears a decoration of diagonal incised lines. Body shows the beginnings of deep regular scoring of decorative type 5 (472).
12. F97, 169 Base of Form 2 jar. Fabric A2. Decoration type 2 (193).
13. F4, 17 Three fragments of what is probably a lid rather than a small bowl. Fabric is very fine A1. Exceptionally thin fine ware for this assemblage (144).
14. F97, 169 Slack profile Form 3 jar. Fabric B1. Rim has shallow diagonal incisions, body has light twig brushing, decorative type 2 (185/149).
15. F28, U.S. Rim sherd in fine, hard, sandy black A fabric. Form 1. Shallow, uneven horizontal scored lines on exterior (132).
16. F242, 568 Fragments of base in B3 fabric (520).

## Phase 2.2A

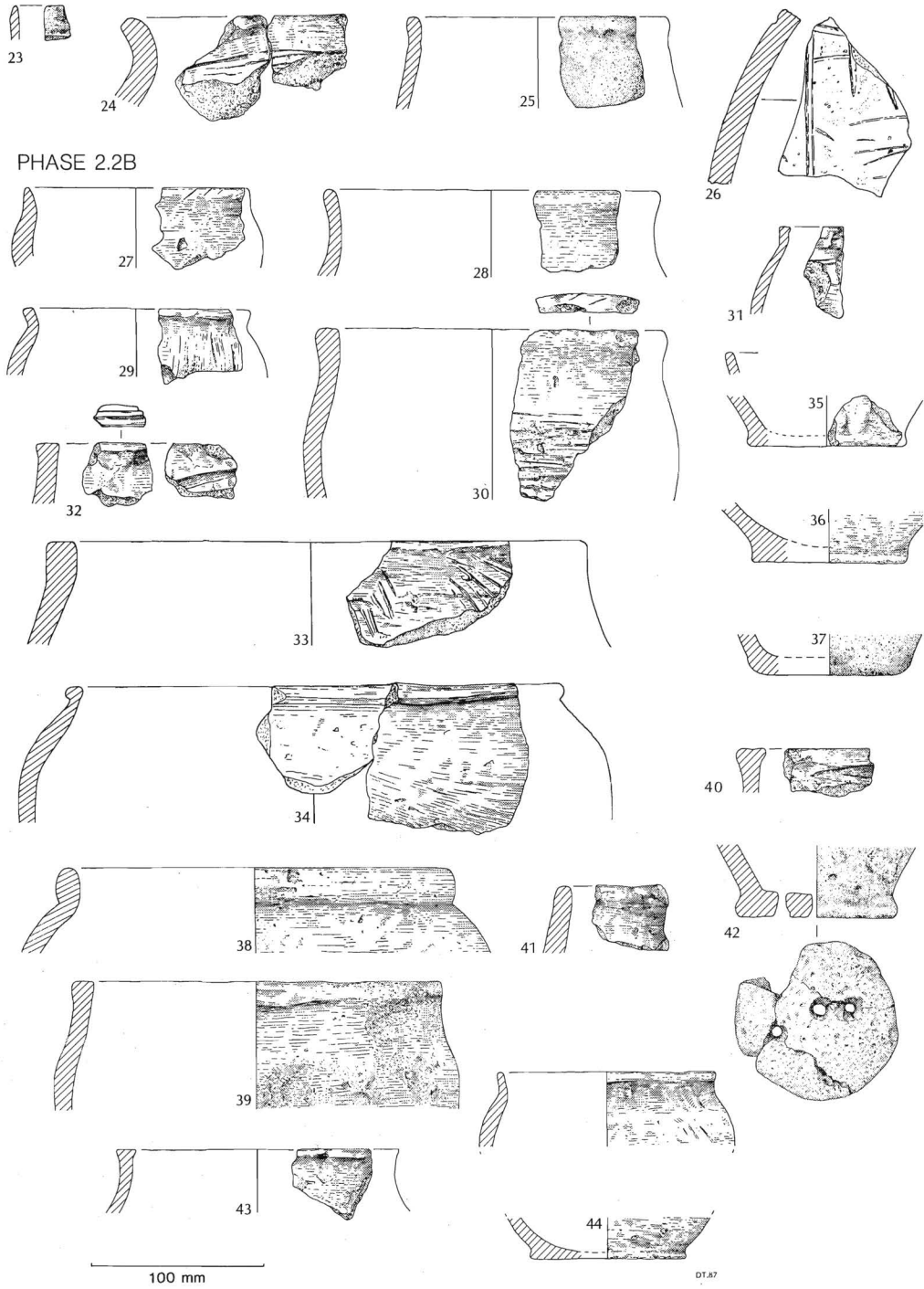
17. F95, 160 Large rim sherd of Form 4 jar. Fabric B5 with grey to brown mottled surface. Rim has shallow finger impressions and the body an incised line decoration in the form of a chevron, probably fortuitous. Traces of deep horizontal scored decoration at break (334).
18. F95, 160 Body sherd, probably of Form 4 jar. Fabric B6. Decorative type 6 (334).
19. F98, 163 Three sherds of small bowl of Form 1. Fabric A3. Rim pinched out and uneven but undecorated. Faint traces of twig brushing (333).
20. F99, 170 Rim with flattened top. Fabric A1 (350).
21. F99, 170 Two rim sherds of Form 1 bowl. Fabric A1. Surface very uneven (611).
22. F91, 149 Rim sherd of a very large jar, probably Form 4. Fabric B1. Clear finger tip impressions on rim (342).

illus. 27

23. F93, 150 Thin rim sherd. Fabric fine A1 (337).
24. F95, 160 Two rim sherds of Form 4 jar similar to 15. Fabric B3. Rim plain but body decorated with deep horizontal scoring, type 5 (334).
25. F98, 163 Two rim sherds of Form 5 jar. Fabric A2, very sandy. Rim pinched out with finger impressions visible. Uneven surface but not decorated (335).



26. Bronze Age (BA 1) and Iron Age pottery Phases 2.1A, 1-16; 2.2A, 17-22. Scale 1:4

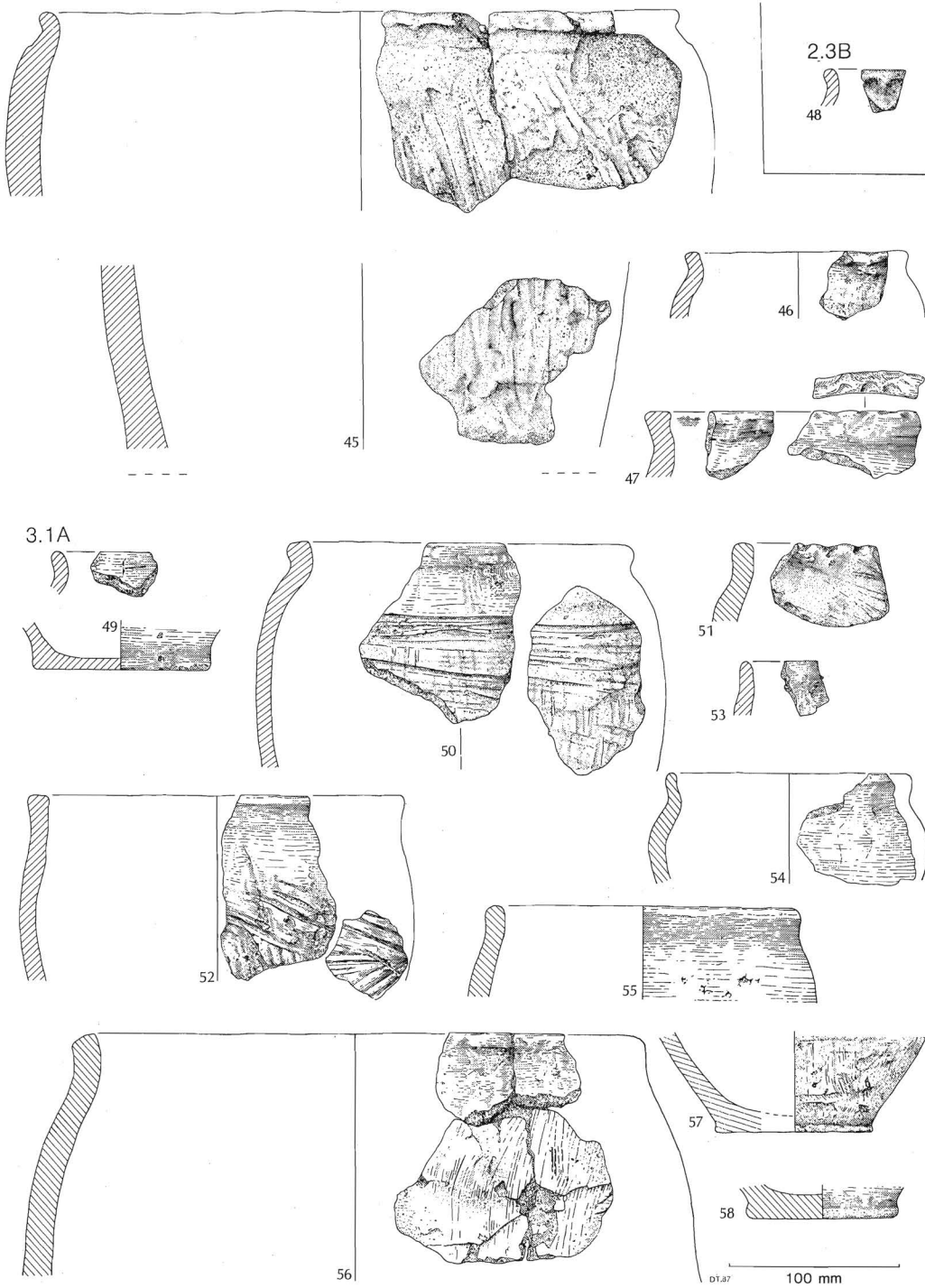


27. Iron Age pottery. Phases 2.2A, 23-26; 2.2B, 27-44. Scale 1:4

26. F98,163 Large body sherd of probable Form 4 jar. Fabric B3. Shallow scoring overlain by deep grooves, decorative type 6 (333).

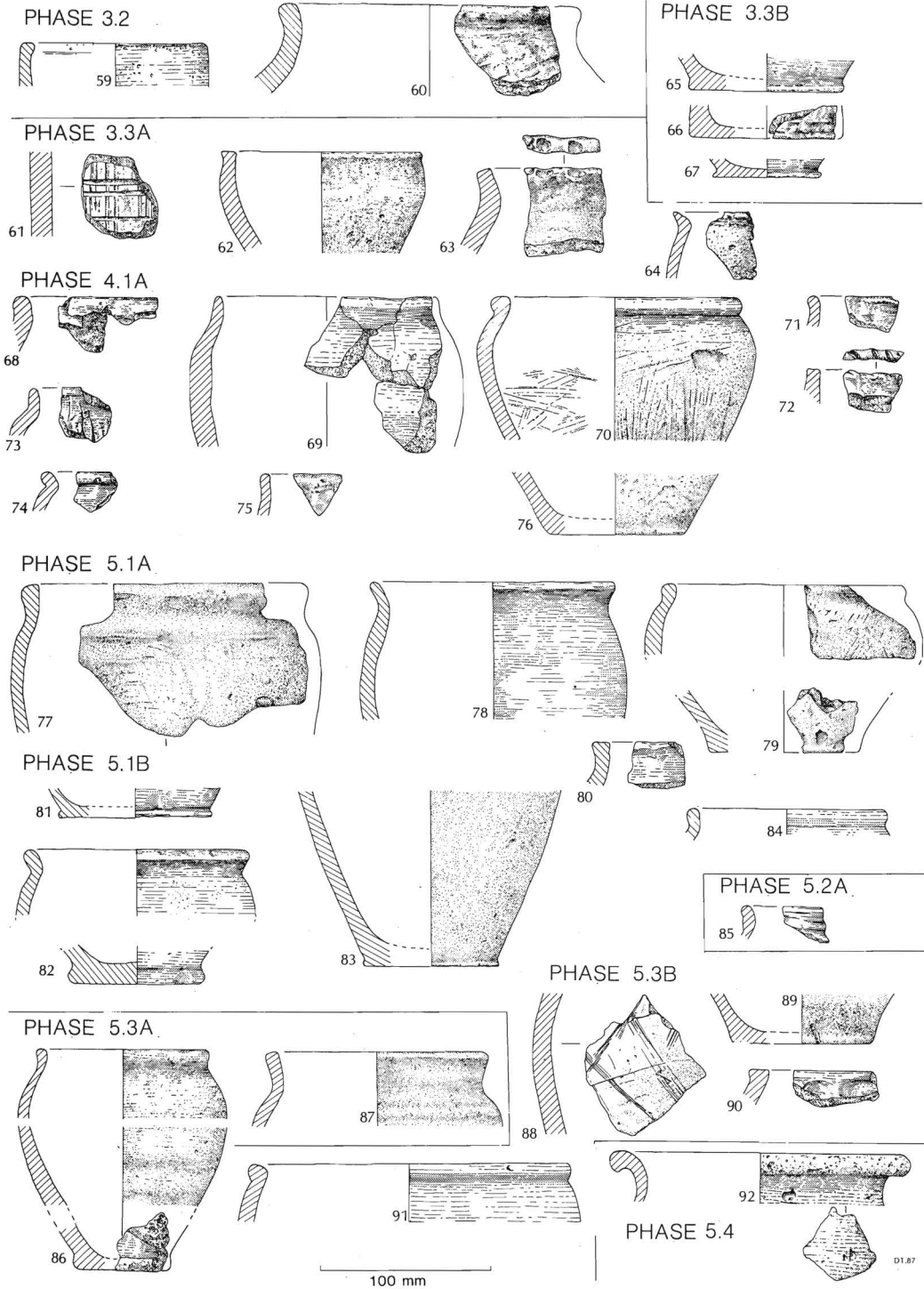
## Phase 2.2B

27. F2, 41 Rim sherd of Form 1 bowl. Fabric A1, dense, heavy and light brown. Rim tapered and with shallow diagonal slashed decoration. Some twig brushing on body and large cavity in surface (612).
28. F2, 41 Rim of Form 3 jar. Fabric A1, light brown. Undecorated. Also base, probably the same vessel (not illustrated) (285/290).
29. F2, 41 Fine, hard Form 1 bowl. Fabric A1 with dark brown surface. Rim flattened. Vertical twig brushing on body (506).
30. F2, 41 Rim sherd of Form 3 jar. Fabric B2. Light brown to dark grey, mottled surface. Rim has finger nail impressions and the body deep, parallel, horizontal grooves, decorative type 5. Large inclusions break the surface and there is one deep cavity (279).
31. F2, 41 Small rim sherd in a fine, hard A1 fabric. Decoration is probably parallel grooves, type 5 (487).
32. F2, 41 Three rim sherds of probable Form 4 Jar. Fabric B3. Rim flattened with parallel grooves on the top (507).
33. F2, 41 Rim sherd of Form 4 jar. Rim has been strengthened with added clay. Fabric B3. Decoration on the body of deep diagonal grooves (645).
34. F2, 41 Two rim and many body sherds of unique Form 4A. Fabric B2 type. Surface smoothed (287).
35. F2, 41 Rim and base in A2 Fabric, probably Form 1. Finger impressions show where wall has been joined on to the base (509).
36. F2, 41 Base with widely splayed walls and slight foot ring. Possibly Form 2. Fabric A3 with large lumps of quartzite (280).
37. F2, 41 Base sherd in A2 Fabric (509).
38. F46, 40 Rim and body sherd of jar with rolled rim. Fabric F, dark grey to black. Rim at least is wheel made and the surface smoothed (451).
39. F47, 49 Two rim sherds in micaceous B Fabric, coarse and crumbly. Black with light grey interior. Form 3 (445).
40. F47, 49 Heavy rim sherd in Fabric B3. Rim flattened with central hollow. Form 3 or 4. Decoration of deep grooves immediately below the rim (445).
41. F46, 40 Rim sherd of small jar with upright rim and a diameter of c. 13cm. Fabric A3, smoothed and black with micaceous surface (454).
42. F47, 49 Almost complete base with three perforations made before firing, heavy B4 fabric. Foot protrudes slightly (447/455).
43. F47, 49 Rim sherd in A1 Fabric. Possibly Form 3. Smoothed surface (361).
44. F47, 49 Rim and base sherds of Form 1 bowl. Rim pinched out and tapering with finger impressions visible. Fabric A1. Decoration light twig brushing, Type 2 (445).
- illus. 28
45. F21, 113 Rim sherd and body sherd from near the base of a large Form 4 jar. Sandy B4 fabric with added flint. Evidence of added coil to form rim. Wall sherd shows clearly where it was joined to the base. Decoration of wide grooves, Type 4, mostly vertical (289/448).
46. F21, 113 Rim sherd in Fabric B3, dark brown, micaceous exterior, buff interior. Form 1 (293).
47. F21, 113 Three rim sherds in dark grey A1 fabric. Possibly Form 3. Rim diameter c. 35cm. Finger indentations in rim, decorative type 3. Another similar (not illustrated) in B3 fabric, dark grey exterior and buff interior (288).
- Phase 2.3B
48. F143, 374 Rim sherd in Fabric A2. Finger indentations below rim. Possibly Form 1 (492).



28. Iron Age pottery. Phase 2.2B, 45-47; Phase 2.3B, 48; Phase 3.1A, 49-58. Scale 1:4





29. Iron Age pottery. Phases 3.2, 59-60; 3.3A, 61-64; 3.3B, 65-67; 4.1A, 68-76; 5.1A, 77-80; 5.1B, 81-84; 5.2A, 9 5; 5.3A, 86-87; 5.3B, 88-91; 5.4, 92. Scale 1:4

## Phase 3.1A

49. F62, 121 Rim, base and body sherds of probable Form 6 jar. Core of fabric is very coarse with large angular pieces of volcanic filler but the surface is smoothed and finely finished, possibly with a slip (256).
50. F179, 403 Two large sherds of a Form 3 jar, fabric B3 with mica on surface. Interior of lower part of the body is dark grey (566).
51. F179, 384 Rim of probable Form 4 jar. Fabric thick and dense A3. Deep finger impressions on rim. Exterior has light twig brushing or scoring, decorative type 2. Also sherds of Form 6 jar in the same context, (556).
52. F179, 403 Many sherds of Form 3 jar. Fabric a crumbly B3. No rim decoration. Body has deep, wide grooves in groups of four, diagonally placed (562/565).
53. F179, 384 Single rim sherd. Fabric black B3 (560).
54. F179, 403 Rim and body sherd of Form 1 bowl. Fabric A3. No decoration. (557).
55. F179, 403 Sherds of Form 3 jar. Fabric F as No. 62. No decoration. Exterior smoothed (555).
56. F179, 403 Rim and body sherds of Form 4 jar. Fabric a very crumbly B3 (like No.4 in Phase 2.1A). Light twig brushing, decorative type 2, on body (564).
57. F179, 403 Base sherd with protruding foot and splayed walls, fabric as No.59. Traces of twig brushing, decorative type 2, on body (542).
58. F179, 403 Base in dense, solid A1 Fabric. Smoothed black, micaceous surface. (580).

illus. 29

## Phase 3.2

59. F9, 138 Several rim and body sherds of small form 5 jar. Fabric F. Exterior smoothed. Internal groove under rim (179).
60. F9, 137 Several rim sherds of Form 2 jar. Fabric B. Dense and black with grog and mica. Plain rim, beginnings of deep scoring on the body (177, 540).

## Phase 3.3A

61. F6, 16 Body sherd in B3 Fabric. Unique decoration of regular, double grooves intersecting at right angles. illus.25.9 (102).
62. F6, 11 Rim sherd of Form 5 jar. Fabric F. (543).
63. F6, 11 Rim sherd of Form 3 or 4 jar. Sandy B3 Fabric with quartzite and grog filler. Impressions of thumb and finger nail on rim.
64. F6, 11 Rim sherd of small everted rim jar. Fabric F (543).

## Phase 3.3B

65. F62, 112 Base of jar in fine, black, sandy A1 Fabric (247).
66. F62, 112 Base and body sherds in fine, sandy A1 type Fabric. Reddish brown exterior, black interior (247).
67. F62, 112 Base with protruding foot. Very fine sandy fabric (247)

## Phase 4.1A

68. F89, 388 Fragments of rim in A1 Fabric. Rim flattened and undecorated (511).
69. F18, 115 Several sherds of a crude jar with tapering rim in A1 fabric. No decoration (442).
70. F16, 141 Rim and body sherds of Form 7 jar. Fabric A1. Hand made. Vertical twig brushing, decorative type 2 (340).
71. F89, 388 Rim fragment in A1 Fabric (502).
72. F18, 115 Rim in Fabric A with deep fingernail indentations (443).
73. F18, 115 Rim in Fabric B3, Black exterior and red interior, micaceous surface. Decoration of deep vertical scored lines (443).

74. F18, 115 Hand made bead rim of Form 7 jar. Fabric A1 (443).  
 75. F18, 115 Rim sherd in fine, red A Fabric (502).  
 76. F90, 126 Base sherd in B4 Fabric (343).

## Phase 5.1A

77. F31, 15 Several sherds of uneven, hand made pot in A2 Fabric, brown surfaces. Form 3. Horizontal wipe lines on interior (254).  
 78. F135, 353 Several sherds of fine Form 6 jar in A1 Fabric, black with very smooth surface, possibly slip (547).  
 79. F135, 353 Rim and base sherds of a Form 7 jar in a coarse, red sandy fabric. Twig brushing on exterior (547).  
 80. F135, 353 Rim sherd in dark brown B Fabric with finger impressions on the top. Possibly Form 3 (517).

## Phase 5.1B

81. F42, 34 Base sherd with protruding foot. Fabric A2, red and smoothed exterior (242).  
 82. F5, 6 Many sherds of the same pot in fine, hard A1 Fabric. Form 6. Thick burnt deposit on interior towards the base (262).  
 83. F5, 6 Base sherd of Form 6 jar in fine sandy A Fabric with smoothed exterior, possibly a slip (264).  
 84. F5, 6 Rim sherd in Fabric A1 (199).

## Phase 5.2A

85. F177, 549 Rim sherd in fine A1 Fabric, black exterior and red interior (535).

## Phase 5.3A

86. F63, 62 (Base F75, 89) Base and rim sherds from the same Form 6 pot. Fabric A1, sandy smoothed surface, but large pieces (up to 4mm) of mudstone and quartzite in core. Hand made (212/246/260).  
 87. F1, 68 Rim and body sherds of Form 6 jar in red sandy A2 fabric. Finger impressions below rim (255).

## Phase 5.3B

88. F66, 66 Thick body sherd in A2 Fabric, smooth surface. The decoration in a regular pattern was probably made with a notched stick. illus.25.2 (253).  
 89. F66, 66 Base in A2 Fabric, possibly Form 6. Hand made (253).  
 90. F68, 69 Flattened rim of possible Form 4 jar but in A2 fine ware. Finger impressions below the rim (255).  
 91. F68, 68 Rim and body sherd of Form 7 jar, probably wheel made. Fabric A1. Regular fine ribbing on the body (219, 223).

## Phase 5.4

92. F72, 71 Rim and body sherds of wheel made pot in Fabric F. Leached out shell or limestone. Horizontal rilling on body (263).

*Discussion and dating*

A significant proportion, though by no means all, of the pottery from Enderby is what can be loosely described as 'scored' ware, although, as we have seen, the 'scoring' can vary from single to multiple lines, which are lightly or deeply marked on the surface, in either a random or a regular pattern. A blanket description could be an artificial roughening of the surface of the pots by brushing, scratching or combing with bunches of twigs or sticks which are either single pointed or have three, four or more notches.

This kind of surface treatment is very common in the middle and late Iron Age in the East Midlands and is sometimes referred to as Ancaster-Breedon Ware after the two sites where it was first recognised (see below p.83-91 for general survey).

To assist with the general dating of the Enderby pottery a recently published site at Weekley, near Kettering, Northants, has been selected. (Jackson and Dix 1986-7). This is because the coarse pottery is very similar to Enderby and estimations of date can be reasonably precise as radiocarbon dates are available and a very high proportion of the pottery is 'goldfish bowl' type, (small globular bowls like those at Hunsbury with regular scroll or rectilinear decoration) which are more easily datable than coarse pottery. There is much more of this type of pottery (366 sherds) than from the type site itself at Hunsbury. Weekley is roughly 37km (23 miles) from Enderby, whereas the type sites for the Ancaster-Breedon ware are respectively about 64km (40 miles) and 24km (17 miles) away.

The site at Weekley has been divided into two ceramic phases (CPs). In CP1 75% of the pottery is coarse ware and the forms are strikingly similar to Forms 1 to 4 at Enderby (Jackson and Dix 1986-7, Figs.29-31). There are globular bowls and jars with finger tip and finger nail decoration on the rim. Rims are short and upright or slightly everted with plain or expanded tips. Large jars of Enderby Form 4 type are precisely paralleled as are small bowls and jars of Form 1 in a fine burnished fabric. There is also a jar with a perforated base like Enderby No.27.42 and precise parallels in the types of scoring. Enderby Form 5 also appears in the Weekley CP1 assemblage which, incidentally, also features a pedestal base (Jackson and Dix 1986-7, Fig.30.30). Lastly there is a sherd with regular right-angled incised decoration at Weekley (Jackson and Dix 1986-7, Fig.30.49) as Enderby No.29, 61.

At Weekley the Hunsbury type decorated pottery of CP1, and probably also the scored ware, ends abruptly and CP2 represents the advent of 'Belgic' pottery and the period up to the invasion. The forms of CP2 correspond well with the second Enderby period. Forms 6 and 7 (Phase 4.1A onwards). There are straight-sided jars or bowls like Enderby Form 5 in CP2 and the combing/scoring which persists is very regular and even.

Radiocarbon dates from CP1 at Weekley provide a recalibrated date range of 175 BC-AD20 whereas the CP2 corresponding to the introduction of Belgic material might be dated to the first half of the first century AD. Dates similar to those at Weekley might be suggested for Enderby.

First period: Phases 2 and 3 as CP1 at Weekley, *c.* 175BC to AD20.

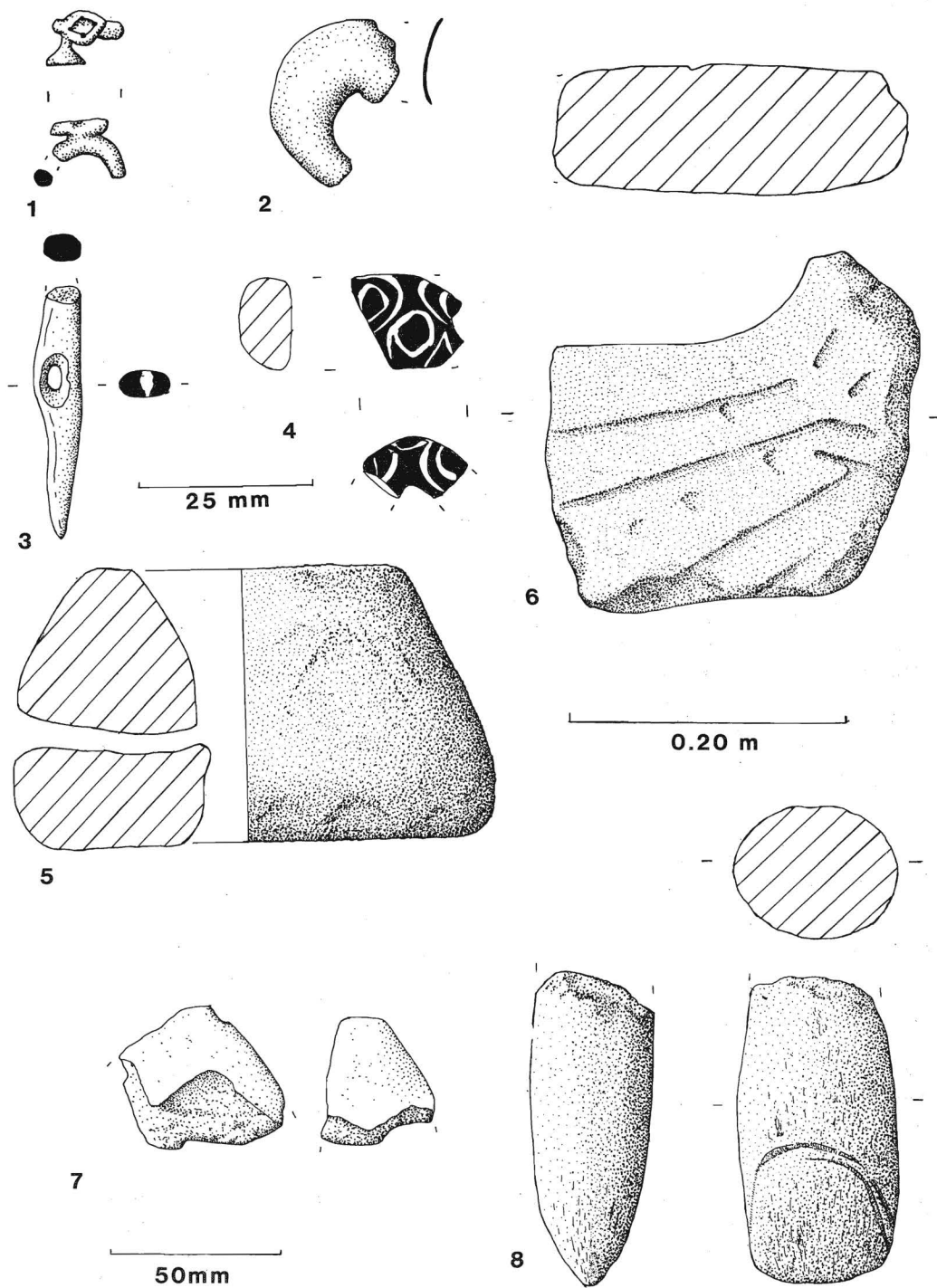
Second period: Phases 4 and 5 onwards as CP2 at Weekley, *c.* AD20 to *c.* AD43 or later.

Similar scored pottery to that found at Enderby is now known from Leicester suggesting first century BC occupation (Pollard forthcoming). Leicester began to receive Gallo-Belgic imports from at least the early first century AD. Alterations in the pottery styles at Enderby reflect familiarity with this pottery although the site remained rural and the pottery was handmade.

### **The Roman Pottery**

Richard Pollard

Finds from Fieldwalking : 4 sherds of grey ware, undiagnostic, not closely datable. (A3. 1982.1).



30. Other finds. 1-4 Scale 1.1; 5-6 Scale 1.4; 7-8 Scale 1.2.

## Finds from excavation:

1. 1 sherd of fine, grog tempered ware with moderate amounts of quartz and mica (Leics. Arch. Unit Fabric GT2 : Pollard forthcoming). Lower body possibly of bowl. Probably intended to be orange-red, with burnished surfaces, refired after breakage. Evidence from Leicester suggests a *terminus ante quem* in the 70s AD, with an origin around the end of the first century BC/early first century AD. (A30. 1983. 220. Phase 4.2B. F62. 91).
2. 15 sherds of one vessel. Sandy wheel thrown fabric, highly abraded. Grey core, oxidised 'surfaces' but abrasion makes it uncertain whether the vessel was intended to be grey ware or oxidised ware. Narrow-mouthed jar with cordon at base of neck (cf Kenyon 1948, Fig. 25, 17, 19; Pollard forthcoming, Fig.55. 113) or possibly a butt beaker derivative (cf Pollard forthcoming, Fig.53. 47). Rim diameter 70mm. Mid first to second century AD. (A30. 1983. 646. Phase 5.4. F72. 71).
3. 1 sherd of grey ware, undiagnostic. Small (3 grams) but unabraded. (A30. 1983. 496. Phase 352).
4. 1 sherd of grey ware, undiagnostic. (A30. 1983. 420. U.S.)

**Other Finds**

Patrick Clay

illus. 30

1. Copper alloy ring fragment with decorated attachment. A30. 1983. 1. Phase 4.1A. F18. U.S.
2. Copper alloy sheet. Part of a decorative fitting? A30. 1983. 3. U.S.
3. Fragment from a bone needle similar to Glastonbury type B (Gray 1917, 410-1, Fig.147. B376) A300. 1983. 72. Phase 2.1A. F244. 552.
4. Fragment of a spherical bead in blue glass with inlaid white ring decoration. Cf Bushe-Fox 1915, 62, Pl.30. 21 A30. 1983. 4. Phase 4.1A. F18. U.S.
5. Upper stone from a Hunsbury type quern. Lincolnshire Oolitic limestone. A30. 1983. 70. Phase 5.4. F72. 71.
6. Bottom stone from a Hunsbury type quern. Lincolnshire Oolitic limestone. A30. 1983. 71. Phase 5.2A. F138. 478.
7. Fragments from a triangular loomweight. A30. 1983. 520 Phase 2.1B. F242. 568.
8. Fragment including the cutting edge of a narrow stone axe or chisel with rounded section. Cornish Epidionite (Group I). (Thin section identification by R.V. Davis. Ref. No. Le60). A30. 1983. 5. U.S.

Fragments of unidentifiable iron were recovered from phases 2.1A, 2.2B, 2.2C and 6.2. Two glass vessel fragments which may have been intrusive were recovered from Phases 2.1A and 5.3A.

**The Flint**

Robert Young and Deirdre O'Sullivan

*Fieldwalked Material*

A total of sixty-four pieces was recovered in the course of fieldwalking in 1982. These represent the first and second stages of the fieldwalking survey carried out prior to excavation of the cropmark. Finds recorded as A3 1982 (forty-six pieces) are from an initial traverse and stint walk over the whole field. Finds recorded as A13 1982 (eighteen pieces) are from a more detailed grid-walk over the area of the cropmark. The material has been treated here as a single assemblage.

*Condition of Material*

All of the pieces recovered seem to derive from pebble flint. Fifty-one (79%) retain cortex to a greater or lesser degree. Fifty (98%) of those pieces with cortex exhibit smooth surfaces, while one (2%) retains hard, pitted cortex. Cortex colour is generally fawn to grey, although there is one example of cream and one of grey flint. Twenty-three pieces (36%) show varying degrees of

patination/cortication. A high percentage show clear evidence of post-discard plough-damage and other abrasion. Three pieces (4.6%) show the effects of frost shattering.

#### *Typology*

The total collection of fieldwalked material can be categorised as follows:

		%
Cores	1	1.56
Scrapers	3	4.68
Blades (unretouched)	4	6.25
Serrated flake/blade	1	1.56
Core trimming/rejuvenation flakes	2	3.12
Primary flakes	4	6.25
Unretouched/waste flakes	33	51.56
Chunks	15	23.43
Chips	1	1.56
Total	64	97.97%

As can be seen from the above, recognisable tool types in the accepted sense make up 12.5% of the assemblage.

#### *Technology*

Primary knapping: cores and related material

The rather scant evidence for primary knapping is provided by the single core, four primary dressing flakes and two rejuvenation/trimming flakes. The core was probably hand-held; there is no evidence for the bi-polar, anvil/punch-related technique of knapping. It is not possible to establish if any of the recorded chunks and chips relate to primary knapping activities.

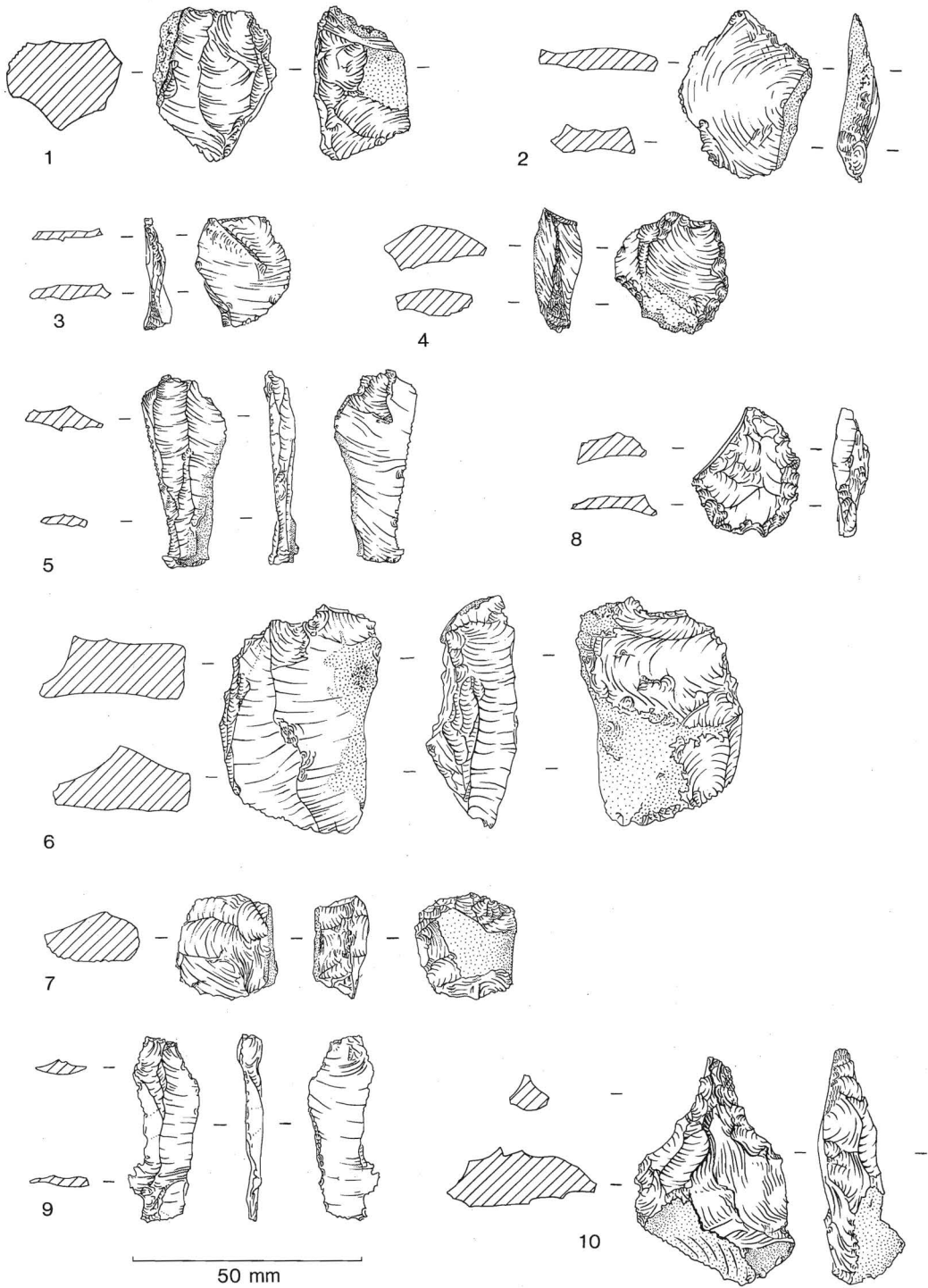
The core (illus. 31.1) is of Clark's Class E (Clark *et al* 1960: keeled but with one or more platforms) and weighs 34g. The primary flakes range from 20-30mm in length and 31-33mm in breadth. All exhibit smooth cortex.

Secondary knapping

The three scrapers show edge modification, probably by direct percussion. illus. 31.2 is of Clark's Class A, a short end scraper. A second scraper (illus. 31.3) is not easily classified in the Clark system, as it is both a side and end scraper. The third example (illus. 31.4) is too fragmentary for adequate classification. The angle of retouch on the scraping edges ranges from 66 deg. - 68 deg. The serrated blade shows characteristic fine teeth, the product of either light, direct percussion or pressure flaking. Of the thirty-seven waste flakes twenty-seven can be classified as secondary, i.e. they retain slight cortex on the dorsal face. Six can be classified as tertiary or inner flakes, having no remaining cortex. Eleven flakes have cortical butts, and twenty-three plain butts. The majority (thirty-one) of waste flakes are complete. Thirty-five waste flakes retain bulbs of percussion; nineteen are diffuse, and sixteen are pronounced. This may indicate a mixture of both hard and soft hammer percussion.

#### *Discussion*

The three scrapers would not be out of place in a Neolithic/Early Bronze Age assemblage. However, they are not closely dateable, and in the light of the excavated evidence and the absence of other earlier finds it is probably better to reserve judgement. The presence of blades in an assemblage without any other diagnostic flint material need not necessarily indicate early (i.e. Mesolithic) activity. The core in isolation is likewise not a dateable type.



31. The flint. Scale 2.3



*Excavated Material*

A total of fifty-six pieces was recovered in the course of excavation. This material is associated with the various phases of activity identified on the site. However in view of the small size of the assemblage the material is studied as one group. There is nothing immediately diagnostic in terms of date; the possibility that the flint is contemporary with the site is reviewed below.

*Condition of the material*

As with the fieldwalked sample all of the flint under study seems to be derived from pebble sources. Thirty-two (57%) pieces exhibit cortex and of these twenty-six (82%) have smooth cortex; the remainder show pitted, hard pebble surfaces. Almost all of the material is fawn to grey; there is one example of brown cortex and one of white cortex. Thirty-one pieces (55% of the total assemblage) exhibit patination/cortication. Two (3.5%) show thermal damage.

*Typology*

The total collection of excavated material can be broken down into the following categories:

		%
Cores	1	1.78
Scrapers	2	3.57
Blades (unretouched) (3 tert., 2 sec.)	5	8.92
Blades (retouched) (tert., No.36)	1	1.78
Unretouched waste flakes:	40	71.43
Primary flakes	3	5.35
Secondary flakes	22	39.28
Tertiary flakes	15	26.78
Borers/awls	1	1.78
Chips	6	10.71
Total	56	99.95

Again recognised tool types are few; there are only nine examples (16%).

*Technology*

Primary knapping: cores and related material

The presence of one core of Clark's Class C, weighing 18.5g (illus.31.5) and three primary flakes is again slight evidence for primary knapping on the site.

Secondary knapping

The two scrapers (illus. 31.6 and 7), the borer/awl (illus. 31.8) and the retouched blade (illus. 31.9) all show edge modification and retouching by direct percussion. The angles of retouch and the scraping edge of the two scrapers are 58 deg. and 48 deg. respectively. illus.31.6 is a short end scraper (Clark Class A). illus.31.7 is of Class E, i.e. a scraper on a broken flake. The borer/awl (31.8) shows clear secondary knapping from direct percussion to form the working tip, and this in turn has one clear twist fracture.

Of the forty waste flakes, twenty-six are complete. Where bulbar ends survive, twenty four have plain butts and two exhibit cortical butts. Seventeen bulbs of percussion are diffuse, eighteen are pronounced. As with the fieldwalked assemblage this may indicate the use of both hard and soft percussion.

*Discussion*

Although the excavated flint has been treated as a single group, it is possible to examine the finds in the context of the site stratigraphy.

Eleven of the pieces in 2.1A were found in the penannular drainage channel (F97/F4). This feature produced much Iron Age pottery, animal bone, fired clay and tap slag. It may be that the flint is actually contemporary with the other finds from this context: the majority is fresh and shows little sign of exposure and abrasion. Similarly, the material from phase 2.2B is mostly from one feature, F2/41, another drainage gully around a building. The eight fragments from this context are also in a fresh condition. These features are natural collecting places for household clearance rubbish, and the debitage from activities such as flint-working.

All of the phase 3 flint comes from the enclosure ditch. That from 3.1A was found in the primary silts and could well be residual in those contexts. However, the material from phase 3.3A was found at much higher levels in deposits associated with the backfilling of the ditch, and may derive from contemporary activity. It is not really profitable to speculate on the very small quantity of material from the later phases.

A comparison between the fieldwalked and excavated assemblages reveals minor differences which are probably due to collection strategies. The excavated material includes several small pieces, recovered through sieving. There are also much fewer amorphous chips and chunks, which suggests a more restricted one-site collection policy. However, as might be expected, the flint type is similar; the excavated material is generally in fresher condition.

Both collections are meagre, and the data does not support any detailed chronological inferences (Young 1987) but it lends weight to the argument that surface-collected assemblages are inherently biased in favour of larger pieces.

It is reasonable to suppose that all of the flint was obtained from the local clay deposits on which the site was located. The lithic industries of the Leicestershire claylands are the subject of ongoing research by several workers. Although the assemblage is small, the interesting possibility of later prehistoric flint-working at Enderby lends some significance to the material.

**Fired Clay and Industrial Residues**

Graham C. Morgan

Fired clay was present in all phases with large quantities from Phases 2 and 5. The material is burnt or fired yellow/orange or deep red, sandy clay. The composition is varied some having many sand inclusions whilst others have little, typical of the boulder clay subsoil. Many of the samples are very heterogeneous suggesting that the clay was not mixed after being dug and before being used. They probably derive from ovens, furnaces or simply burnt daub although there are few with wattle impressions. Slag was present in Phases 2,3, 5 and 6. Fuel ash slag, tap slag and furnace slag suggested some iron smelting activity on the site with concentrations from Phases 3.1A (F179), 3.2B (F9), 3.3A (F6), 3.3B (F.62), 51.A (F26 and F31) and 5.3C (F76). A full catalogue of fired clay and slag is available in the site archive.

**The Animal Bone**

Anthony J. Gouldwell

The bone was collected by hand supplemented by wet sieving of 5kg earth samples (with a few exceptions) using 0.5mm mesh. Full data, recording methods and tables, are available in the archive.

### Identifications

The bone was recovered from the following phases:- 1; Pre- 175 BC(?). 2.1A-2.3B; 175BC-AD20(?). 3.1A-5.3B; c. AD20-50. 6; modern. The taxa recognised are as follows.

#### Domestic species:

Horse (*Equus*)

Cattle (*Bos*)

Sheep or Goat (*Ovis*, *Capra*) (Goat was nowhere recognised, though where bones were individually, sufficiently complete and diagnostic according to published criteria (Boessneck *et al.* 1965, Boessneck 1969, Payne 1985), the morphological features compared with those of sheep).

Pig (*Sus*)

Dog (*Canis*)

Domestic Fowl (*Gallus*)

#### Wild species:

Red Deer (*Cervus elaphus* L.)

Roe Deer (*Capreolus capreolus* L.)

Hare, the species found locally at present is Brown Hare (*Lepus europaeus* Pallas, as is claimed by Corbet (1986) to be the correct binomial in preference to *L. capensis* L. by which this species has become commonly known), though (see below) Mountain hare (*L. timidus* L.) is a theoretical possibility (see discussion below).

Badger (*Meles meles* (L.))

House Mouse (*Mus domesticus* Ruddy, as recommended by Berry (1981) for the form of house mouse occurring in Britain, rather than the previously, commonly applied *M. musculus* L. which apparently properly applies to certain foreign populations).

Field Vole (*Microtus agrestis* (L.))

Water Shrew (*Neomys fodiens* (Pennant))

Wood Pigeon (*Columba palumbus* L.)

Frog or Toad (*Rana*, *Bufo*)

Fish (unidentified)

### Species abundance

Results are presented in detail in accompanying tables listed below. Quantities of bone are shown as numbers of recorded fragments (NRF), minimum numbers of whole bone elements (MNB), and equivalent numbers of individuals (ENI).

Population studies are limited by quantities of suitable bone. In the present case the condition of much of the bone (soft, broken and frequently gnawed) restricted the amount of usable material.

### Quantities

Phases 2, 3 and 5 produced significant numbers of fragments (NRF), 1, 4 and 6 much smaller quantities. The ratio of identified to unidentified bone fragments (a crude value as the two categories are not mutually exclusive, and the ratio can vary according to how much time be spent on identification) overall is 0.31 (980/3150). The quotients calculated for individual phases are for phase one: 0.07, two: 0.37, three: 0.31, four: 0.5, five: 0.27, six: 0.19. The most deviant ratios are those of the phases with fewest fragments, numbers one, four and six. These phases exhibit departures ("dispersion") from the overall figure ranging from 61% to 79% of the overall ratio itself. The values for identified: unidentified bone from phases 2, 3 and 5 lie within 1% and 20% of the overall figure. This would suggest that phases 1, 4 and 6 individually yield insufficient material for useful assessment of relative taxonomic abundance. The spread of values for even this crude relationship however warns against over-interpretation of taxonomic ratios, especially when considering small samples, or taxa with low representation with larger assemblages.

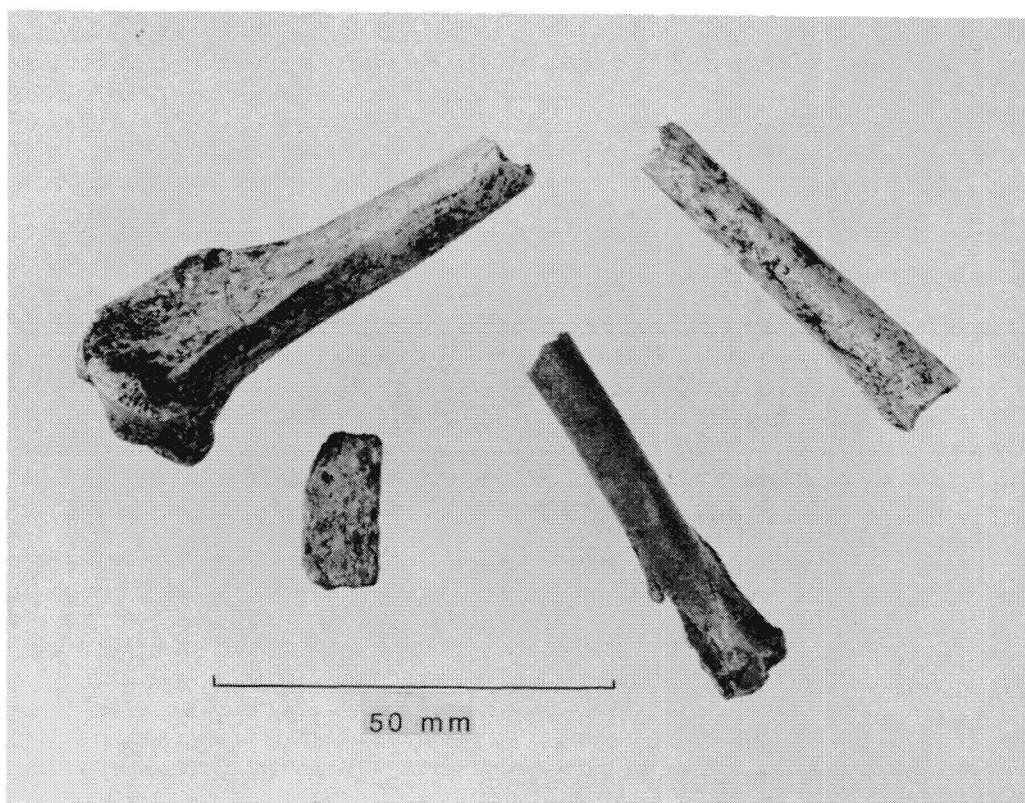
On a more positive note, the evident rough relation of dispersion, with sample size suggests a logarithmic or hyperbolic relationship (though a more even spread of phase fragment totals would clarify the relationship), so the observed deviations need not implicate an inconsistent standard of recovery. This observation is consistent with Grayson's (1984, 116 ff.) exposition of the, at least partial, dependence of taxonomic ratios on sample size.

#### *Relative taxonomic abundance*

Over phases 1 to 5 the main identified taxa are cattle, sheep/goat (sheep where diagnostic material occurred), and pigs. In relation to ENI values, Cattle are over-represented by fragment counts. As Cattle are so relatively large, it is to be expected that fewer smaller cattle bones are to be missed on site than would corresponding elements of smaller animals, so more complete skeletal representation would increase the NRF relative to ENI for cattle. Furthermore larger bones may be butchered into a greater number of pieces than would smaller ones. The consequence in the present case is that the apparent superiority of numbers of cattle fragments is not propagated to the ENI. It ought to be pointed out that overall (phases 1-5) ENI values have been derived simply by summation of the phase ENI values (which in turn were considered as integral units and not calculated by summation of the sub-phase values). In terms of potential meat weight or food value of the number of carcasses arrived at, cattle are still ahead. The sixteen cattle may be the equivalent of something like 160 sheep, so the potential contribution of beef is in the order of nine times that of the lamb or mutton. Meat ratio of ten carcasses of sheep/goats to one of cattle is as used by Harcourt (1979). To extend the same sort of reasoning to quantifying pork and bacon is particularly difficult because carcasses were spread across a range of ages from possibly four months to almost two years (or more?, see below). In fact pig showed one of the most variable selection of ages at death, thus indicating a wide variety of individual carcass weights. Furthermore, the relationship itself between numbers of fragments and estimates of numbers of individuals has been demonstrated empirically (cf. Grigson 1982) to vary with the number of fragments.

The taxa present in lower numbers are best considered as almost incidental. Measurement of frequency (i.e. presence/absence) is probably a more appropriate measure of abundance. Whereas the cattle, sheep/goat and pig are assumed reasonably safely to have been staples of human diet, horse, in the absence of butchery evidence or consistent presence in significant quantity is usually presumed to have been used for other purposes. A species used for transport or traction would require a lower turnover rate than that of food species, giving rise to relatively low numbers of individuals over time. Similar arguments can be used to explain low numbers of dog or other household animals. Wild species are also incidental in occurrence and it is not possible to define their role in human society without corroborative evidence such as butchery marks or industrial residues.

Full discussion of species including abundance, stature, age, abnormalities and butchery is available in the archive. The phase 3 date for the earliest of the hare bones is of especial interest. Corbet (1986) supposes Brown Hare to be an introduction, and claims that there is no evidence of it in Britain prior to the Roman period, but Harcourt (1979) claims to identify this species from the Iron Age site at Gussage All Saints in Gussage phases 1 and 3 and Coy (1984) is emphatic about identifying Brown Hare from at least the late phases of Danebury. Given Corbet's view the possibility of pre-Roman hare bones belonging to Mountain Hare (*Lepus timidus* Linnaeus) needs to be considered. If this latter species were behaviourally homologous to lowland Irish populations which are known to occur despite their name (Hewson 1991, 164) it might have occupied lowland habitats in Britain in the absence of the Brown Hare. The Brown Hare is larger than the Mountain Hare although not as stocky. The present incomplete tibia has a proximal breadth (Bp; von den Driesch 1976) recorded at 21.27mm and shortest diameter (SD) at 7.91mm (illus. 32). This is only slightly larger than two reference specimens of Brown Hare consulted but without knowing the



32. Hare bones from Phases 3.3A and 6

length of the complete bone, further speculation is probably futile. It is of interest to note, however, that Julius Caesar (*De Bello Gallico*, XII v 16-18) reports, from his limited acquaintance with Britain, that the inhabitants had a prohibition against the consumption of hares, also chickens and geese, but kept them as pets (*Leporem et gallinam et anserem gustare fas non putant; haec tamen alunt animi voluptatisque causa*). Was hare-keeping a localised south-eastern indulgence, possibly using animals, very probably Brown Hares, imported from the continent? Was the practice more widespread, and if so is there any evidence for Mountain Hare? No butchery marks were found on the Iron Age bone or those from the later phase, which is not to say that the bones were not separated intentionally from the body.

#### *Summary and Conclusion*

Of the Iron Age phases, 2, 3 and 5 produced the greatest quantities of bone. Taxonomic ratios vary with a rough relation to sample size, hence combining Iron Age phases 2-5 is probably the best way of using the data, particularly for comparing the abundance of anatomic parts within individual taxa. Estimates of numbers of individuals (called here Equivalent Numbers of Individuals (ENI), to indicate that number of individuals required to produce an equivalent anatomical representation to that observed) give values too low for statistical evaluation.

Identified and unidentified bone for taxa of comparable body sizes seem to parallel each other very roughly, with unidentified out-numbering identified fragments. Exceptions are: small groups which are statistically insecure, phase 5 in which the large identified taxa slightly out-number the large unidentified, and phase 3 in which the superiority of numbers of fragments of large unidentified taxa over large identified is significantly greater than in similar comparisons. It is possible that material from phase 3 was more severely damaged than that from other phases, or it may have been more thoroughly collected. Cattle bone provides the greatest numbers of fragments and the greatest contribution of meat, at least on the basis of bone representation. Sheep or goats come second, and pig third. However, in terms of ENI, cattle and sheep/goat exchange their ranking levels, with sheep/goat in first place and cattle in second. Ratios of species as ENI's are very provisional; numbers are so low that small changes in numbers of individuals would produce substantial alterations to ratio estimates. Minor domestic species, (horse, dog) occur 'incidentally' as would occur in non-food animals with low population turnover.

Population structure in terms of age cannot be deduced from the limited data with any confidence. Any deductions concerning quantitative information, such as husbandry techniques, for any single species must be very tentative.

The horse bones indicated animals substantially smaller than, say, a modern racehorse. In one case a pony of 12.2hh was indicated. Evidence for age generally suggested adult specimens, but a single loose lower third molar remained unworn implying an age of under 4 1/2 yr., and a lower third incisor had a wear state suggesting an age of 5-7 yr.

In the case of all three major food-taxa, the most abundant bones are those of the head region, indicating likely local slaughter and disposal of parts of low value.

For cattle, survival of horn cores was poor. Age indicators suggested a high proportion of adult features in the bone assemblage. If a dairy economy was practised, then superfluous calves which would otherwise have used the supply of milk must have been disposed of elsewhere. It is possible that cattle were valued for meat production and traction, but the sample is too small for interpretation. Abnormalities were three only, all dental: two cases of malocclusion, one of which was dubious, the other not severe, and one occlusal cavity on an upper premolar.

Sheep and goat bones were mostly undistinguishable as one or the other. In the absence of definite evidence for goat, it is suspected that at least most of the caprine bone represents sheep. The size of the animals was substantially smaller than that of modern sheep, but probably not atypical for the Iron Age. The ages at death seem to spread from less than ten months to over three years. (Ages are applicable to sheep rather than goats). There are a few oral abnormalities, as for cattle: calculus development, which is not really very unusual; and swollen roots on three molars.

Pig is the species with the greatest percentage of immature bones, but the data on age are frugal. A high cull rate of immature specimens would be consistent with continual cropping based on a high rate of replacement.

Dog bones are few. The size of individuals seems to range from medium to moderately large. A pelvis is from a puppy, but a lower loose canine and a calcined anterior caudal vertebra are recorded as "Canid" and may well represent fox.

Game animals are represented by single finds of Red Deer, Roe Deer, and Wood Pigeon, and by four bones of hare. The hare is interesting in that the surviving fragments appear to compare with Brown Hare in size, a species over which there

seems to be some question as to its date of arrival in Britain. Unfortunately, the bones in question are incomplete, and identification as to Brown or Mountain Hare species is unclear. The presence of hare needs to be considered in the light of Caesar's claim that this species, along with chicken and goose, was not eaten by the inhabitants of Britain.

Badger is another wild species. The circumstances of its occurrence on the site are impossible to deduce.

Cat and Fallow Deer, recorded elsewhere on sites in Leicestershire, are absent, and were probably introduced in Roman times, in the case of Fallow Deer, almost certainly. Identifiable domestic birds are also lacking, at least from Iron Age layers.

The quantities of earth which were sieved have not proved useful in providing information for adjusting estimates of quantities of large and medium-sized animals. Three new taxa were however detected, and two more whose separate recovery of single bones by hand was near-miraculous. The new species were House Mouse, Water Shrew and a single branchiostegal ray of an unidentified Fish. The last two taxa referred to are Field Vole and frog or toad.

Water Shrew and particularly the amphibian indicate nearby wet conditions, though this could include moist vegetation in a landscape less open than the present at some moderate distance from open water. The Field Vole could indicate rough grazing land which would obviously be available associated with an at least partly pastoral economy. House Mouse, if truly contemporary with the time of occupation, is an early record of this cogener of Man.

Table 3 : Hand-collected bone : all identified taxa, NRF; % per phase of identified bone.

Taxon/Phase	1	2.1A	2.2A	2.2B	3.1A	3.2A	3.3B	4.1	5.1A	5.1B	5.1C	5.2A	5.3A	5.3C	6	Total
Horse		1			2	2	8		1				2	2		18
%		0.4			2.5	2.5	5.5		2.6				5.4	1.4		1.8
Red Deer		1														1
%		0.4														0.1
Roe Deer							1									1
%							0.7									0.1
Cattle		108	12	64	39	34	72	10	16	14		11	20	76	15	491
%		42.2	42.9	85	48.2	34.7	49.6	66.7	42.1	60.9		64.8	54.1	51.4	60	50.2
Sheep/Goat	1	67	10	10	15	18	35	5	10	9	1	3	14	53	5	256
%	100	26.2	35.7	13.3	18.5	18.4	24.2	33.3	26.3	39.1	100	17.6	36.8	35.8	20	26.1
Pig		77	6	2	4	40	16		9			3		16	1	174
%		30	21.4	2.7	4.9	40.8	11.1		23.7			17.6		10.8	4	17.8
Hare							1								3	4
%							1								12	0.4
Dog							1						1	1		3
%							1						2.7	0.6		0.3
Dog/Fox							1	1								2
%							1	0.7								0.2
Fox									1							1
%									2.6							0.1
Badger					21											24
%					25.9											2.4
Field Vole						1										1
%						1										0.1
Domestic Fowl														1		1
%														4		0.1
Wood Pigeon							1									1
%							0.7									0.1
Unid. Bird									1							1
%									2.6							0.1
Frog/Toad							1									1
%							0.7									0.1
Total	1	254	28	765	81	98	135	15	38	23	1	17	37	148	25	980

Full NRF including unidentified bone is available in the archive.



Table 4 : Hand-collected bone : all identified taxa : MNB.

Taxon/Phase	1	2.1A	2.2A	2.2B	3.1A	3.2A	3.3B	4.1	5.1A	5.1B	5.1C	5.2A	5.2C	5.3A	6	Total
Horse		1			2	2	5		1			2	2			15
Red Deer		1														1
Roe Deer							1									1
Hare						1									3	4
Cattle		48	9	16	27	14	36	5	8	7		6	29	5	6	216
Sheep/Goat	1	34	3	4	12	11	21	2	6	6	1	6	14	2	4	127
Pig		37	3	2	6	25	9		8				4	3	1	98
Dog						1						1	1			3
Dog/Fox						1	1									2
Fox									1							1
Badger					24											24
Field Vole						1										1
Domestic Fowl															1	1
Pigeon							1									1
Frog/Toad							1									1
<b>Total</b>	<b>1</b>	<b>121</b>	<b>15</b>	<b>22</b>	<b>71</b>	<b>56</b>	<b>75</b>	<b>7</b>	<b>24</b>	<b>13</b>	<b>1</b>	<b>15</b>	<b>50</b>	<b>10</b>	<b>15</b>	<b>496</b>

Table 5 : Hand-collected bone : all identified taxa, ENI treating specimens in sub-phases as independent.

Taxon/Phase	1	2.1A	2.2A	2.2B	3.1A	3.2A	3.3B	4.1	5.1A	5.1B	5.1C	5.2A	5.2C	5.3A	6	Total
Horse		1			1	1	1		1			2	1			8
Red Deer		1														1
Cattle		5	1	2	2	2	3	2	2	1		1	2	2	2	27
Sheep/Goat	1	4	1	1	3	2	4	1	1	1	1	2	4	1	1	28
Pig		4	1	1	2	3	1		1				2	1	1	17
Roe Deer							1									1
Dog						1						1	1			3
Fox									1							1
Badger					1											1
Hare						1									1	2
Domestic Fowl															1	1
Field Vole						1										1
Pigeon							1									1
Frog/Toad							1									1
<b>Total</b>	<b>1</b>	<b>19</b>	<b>5</b>	<b>4</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>3</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>4</b>	<b>6</b>	<b>108</b>

Table 6 : Sieved bone : all taxa, NRF

Taxon/Phase	2.1A	2.2A	2.2B	3.1A	3.2A	3.3B	4.1	6	Total
Cattle			2	2	1	4			20
Sheep/Goat		8	4		4	1			25
Sheep/Goat/Roe		3	2	1	1	2			15
Pig			2	1	2	2	1		17
Canid						1			1
House Mouse	1	1		1		2			5
Field Vole	7	2		2	8	14			33
Water Shrew					2				2
Fowl								1	1
Bird		1							1
Frog/Toad	1	1		2	2	2			8
Fish	1								1
Total	10	16	10	9	20	28	1	1	129

Full NRF including unidentified bone is available in the archive.

Table 7: Cattle dentaries; tooth eruption and wear

Phase	Feature and Context	Eruption/wear	L/R	dm4	P4	M1	M2	M3	Mandible <sup>1</sup> wear state	Age
2.1A	F97 169	l	-	11	15	15	13	42		3 yr.
2.1A	F97 169	l	-	-	15	14	12	41		3 yr.
2.1A	F97 169	r	-	-	-	12	12	24		3 yr.
2.1A	F97 169	r	-	10	15	15	15	45		3 yr.
2.1A	F185 512	l	-	2	12	12	?	24		3 yr.
2.2A	F188 450	l	-	9	14	9.5	7	30.5		3 yr.
3.1A	F129 479	l	-	-	-	-	12	c.41?		3 yr.
3.3B	F62 112	r	-	-	-	-	15	40?		3 yr.
3.3B	F62 112	r	14.5	-	12	3	0	15		12-18 mo.
5.2A (2G)	F80 138	l	-	4	12	11	4	17		2-3 yr.*
5.3B	F61 62	r	-	-	-	14	12	c.40+?		3 yr

\* Reconstructed jaw. It appears to represent a single individual.

<sup>1</sup> *sensu* Grant (1975)

The ages are estimates compiled by Grigson (1982).

The lower age limit for the specimen from phase 5.3A is taken from Getty (1975).

Table 8: Sheep/Goat dentaries; Tooth Eruption and Wear

Phase	Feature and Context		Eruption/wear					Mandible <sup>1</sup> Age		Sheep	
			L/R	dm4	P4	M1	M2	M3	wearstate		Goat
2.1A	F4	17	r	-	13	14	13	-	27	23 mo.	21 mo.
2.1A	F97	169	r	-	-	-	-	8		36(+?)mo	18 mo.
2.1A	F97	169	l*	18	-	12	?	?		11-24mo.	3 mo.
2.1A	F97	169	r*	18	-	12	-	-		11-24mo.	3 mo.
2.1A	F97	169	l	16	-	12	10	?		11-24mo.	9 mo.
2.1A	F244	552	r	12	-	10	-	-		11-24mo.	9 mo.
2.2A	F98	163	r	-	-	12	8	?		36 mo.	9 mo.
3.1A	F179	403	r	-	13	17	12	12	41	36 mo.	18 mo.
3.1A	F179	403	l	-	14	15	12	12	39	11 mo.	18 mo.
3.1A	F129	479	r	-	12+	12	11			23 mo.	9 mo.
3.3B	F62	91	l	-	-	12	8			23 mo.	9 mo.
3.3B	F62	91	l	-	-	12	8			23 mo.	9 mo.
3.3B	F62	91	l	-	-	12	10	10	32	36 mo.	18 mo.
3.3B	F62	91	l	-	-	-	-	12		36 mo.	18 mo.

1 *sensu* Grant (1975)

\* matching pair?

Age values are from Hillson's (1986) collation: sheep data after Silver (1969), goat figures from Silver (1969), Noddle (1974)

and Bullock and Rackham (1982). The more ambiguous estimates of 11+ or 24+ months arise from different sets of comparative data:

Noddle's figures are the lower, and Bullock and Rackham's are the higher.

Table 9: Pig dentaries: tooth eruption and wear

Phase	Feature and Context		Eruption/wear					Mandible <sup>1</sup> Age		
			L/R	dm4	P4	M1	M2	M3	wear state	
2.1A	F4	17	l	-	7	17	7.5	-	24.5	12-22 mo.
2.1A	F97	169	l			3	-	-	3	4(-8) mo.
2.1A	F97	169	l				7	2		7-22 mo.
2.1A	F97	169	l			12	7	7	26	16 mo.
2.1A	F4	180	l	14	-	6	?	-		4 mo.
2.1A	F4	180	r			11	7		18+?	12-22 mo.
2.1B	F28	8	r					6+		16 mo.
3.3A	F6	11	r				10	6		16 mo.
3.3A	F6	11	r			9	6			7 mo.
3.3A	F6	50	r				7	2		7-22 mo.
3.3A	F6	50	l				11	7.5		16 mo.
5.2A	F80	138	l	10	-	7	1	-	7	4-13 mo.
5.3A	F63	62	l*		6	10	7			12 mo.
5.3A	F63	62	r*			10	6			12 mo.

1 *sensu* Grant (1975)

\* matching pair?

## Measurement Statistics

Summary statistics are given for the most abundant bones. These are divided into two groups (Phase 2; Phases 3-5) covering the earlier and later periods of Iron Age occupation, based on the ceramic evidence. Abbreviations used follow von den Driesch, 1976. Exceptions are as follows; Teeth: P2-M3 2nd premolar mesially to 3rd molar distally; P2-4 2nd premolar mesially to 4th premolar mesially; M1-3 first molar mesially to 3rd molar distally; 15a, 15b, 15c height of jaw at P2 mesially, P4 distally = M1 mesially and M3 distally. Proximal Phalanges SLpe - Shortest peripheral length. All measurements are in millimetres. Statistics are mostly given for left and right sides separately to avoid error although for phalanges this was impractical. Where statistics have been calculated using approximate values they are denoted with a *c.* (*circa*). Full measurement statistics are available in the archive.

Table 10: Summary measurement statistics; cattle.

Dentary			P2-M3	M3/L	M3/B	15a	15b	15c	P2-4	M1-3
Phase 2	left	No.	1	3	3		1	1		
	Max			37.3	15.8		48.5	38.7		
	Mean		157.3	36.3	14.1		48.5	38.7		
	Min.			35.4	12.9					
	right	No.	1	2	2	1	1	2	1	1
	Max			36.4	15.0			40.7		
	Mean		133.4	35.5	14.25	68	46.8	38.6	45.4	88.1
	Min			34.6	13.5	36.5				
	left and right combined	Mean	145.4	35.92	14.16	68	47.65	38.63	45.4	88.1
		Std Dev		1.018	1.197					
Phases 3-5	left	No	2	2						
	Max		34.4	15						
	Mean		33.9	13.75						
	Min		33.4	12.5						
	right	No	4	4	1	1	2			
	Max		38.0	15.7			38.9			
	Mean		c35	13.75	69.4	43.8	37.15			
	Min		32.7	10.5			35.4			
	left and right combined	Mean	34.63	13.6			36.57			
		Std Dev	c1.942	2.171						
Astragalus			GL1	GLm	D1	Dm	Bd			
Phases 3-5	left	No.	3	3	3	3	3			
	Max		63.9	55.8	35.5	35.6	41.3			
	Mean		60.97	54.7	33.83	33.7	38.9			
	Min		57.7	52.7	31.6	32.1	36.2			
	right	No	1	3	3	2	3			
	Max			52.2	31.5		36.9			
	Mean		57.9	51.8	31.25	31.5	36.0			
	Min			51.4	c31		c35.1			
	left and right combined	Mean		53.54	c32.8	c33.2	c37.7			
		Std Dev		2.027	c2.01	c1.82	c2.49			
Phalanx Proximalis			GLpe	SLpe	Bp	SD	Bd			
Phases 3-4		No	8	8	8	8	8			
	Max		60.2	59.7	29.4	23.8	26.8			
	Mean		54.15	52.91	c26.6	22.15	25.04			
	Min		49.9	48.5	23.5	20.7	23.1			
	Std									
	Dev		3.764	3.574	c2.24	1.103	1.591			

Table 11: Summary measurement statistics; sheep/goats

Dentary			P2-M3	P2-4	M1-3	M3/L	M3/B	15B	15C
Phases 3-5	left	No	1	1	1	7	7	0	0
		Max				21.6	8.1		
		Mean	65.1	20.6	45.6	20.66	7.4		
		Min				18.9	6.8		
		Std Dev				0.873	0.529		
	right	No	1	2	1	4	4	1	2
		Max		29.6		22.4	8.6		15.0
		Mean	65.8	64.8	64.8	64.8	64.8	64.8	64.8
		Min		27.5		18.9	7.1		14.9
		Std Dev				1.48	0.616		
left and right combined	Mean				20.69	7.545			
	Std Dev				1.057	0.568			

## The Molluscs

Angela Monckton

### Method

Samples were taken from excavated sections and molluscs extracted by carefully disaggregating the sample in water and sieving in a 0.5mm mesh sieve. The residues were air dried before sorting for the smaller shells using a binocular-microscope at X10 magnification (Evans 1972).

The number of apices of each species in each sample was counted and the samples also checked for animal bone and carbonised material.

Molluscs were found in 11 of the contexts from the enclosure ditches although all the main contexts were sampled. Three areas of F62 were sampled. F72 and F6 were different sections of the same linear feature.

Identification was carried out using the reference collection of the Leicestershire Museums with reference to Kerney and Cameron (1979) and to Ellis (1969).

Molluscs were listed in their ecological groups with reference to Evans (1972).

### Results

The number of molluscs of each species in each sample was tabulated (Table 12-13).

The percentage of molluscs in each ecological group in each sample was calculated (Table 14).

Because sample size varied and as the high percentages of fresh-water species masked the lower numbers of land snails numbers per kg of sample were considered and are recorded in the site archive.

An *in situ* monolith sample No. 110 was examined in sections (Table 15) and the results were also bulked together as F62 121 Area II.

## Ecological Groups of Snails

## Fresh Water

## Slum

*Lymnaea truncatula* (Müller)*Anisus leucostoma* (Millet)

## Catholic

*Lymnaea stagnalis* (Linnaeus)*Armiger crista* (Linnaeus)

## Land

## Marsh

*Carychium minimum* (Müller)

## Shade Loving

*Carychium tridentatum* (Risso)*Discus rotundatus* (Müller)*Vitrea crystallina* (Müller)*Oxychylus cellarius* (Müller)

## Punctum Group

*Euconulus fulvus* (Müller)

## Intermediate

*Trichia hispida* (Linnaeus)*Cochlicopa lubrica* (Müller)*Cepaea hortensis* (Müller)*Cepaea nemoralis* (Linnaeus)

## Open Country

*Vallonia costata* (Müller)*Vallonia excentrica* (Sterki)

Table 12: The number of snails recovered: F62

Phase	3.3B	3.1A	3.1A	3.3B	3.1A	3.1A
Area	III			I		II
Context	124	129	121	77	121	121
Sample	94	90	95	24	60	110
Weight kg	1.0	1.0	1.0	5.0	5.0	8.0
Depth cm	110	120	130	101	133	92
Fresh water						
<i>Lymnaea truncatula</i>	-	5	14	-	24	17
<i>Lymnaea stagnalis</i>	1	-	-	1	5	16
<i>Anisus leucostoma</i>	348	69	23	113	321	594
<i>Armiger crista</i>	47	45	874	17	374	253
Land						
<i>Carychium minimum</i>	7	-	1	12	19	1
<i>Carychium tridentatum</i>	18	5	17	13	16	1
<i>Cochlicopa lubrica</i>	1	-	-	-	1	1
<i>Vallonia costata</i>	1	-	1	-	-	-
<i>Vallonia excentrica</i>	6	4	1	-	2	26
<i>Discus rotundatus</i>	13	3	7	7	19	4
<i>Vitrea crystallina</i>	2	-	-	-	-	-
<i>Oxychylus cellarius</i>	3	-	1	1	1	1
<i>Euconulus fulvus</i>	-	-	-	-	-	-
<i>Trichia hispida</i>	-	-	-	-	5	-
<i>Cepaea spp.</i>	+	+	1	1	1	-

Table 13: The number of snails recovered: F6 and F72

Phase	3.3A	3.3A	3.2	3.2	3.2	3.2
Feature	F6			F72		
Context	209	50	86	106	107	108
Sample	71	1	31	43	52	48
Weight kg	5	5	5	0.7	1.1	1.3
Depth cm	70	80	90	58	62	73
Fresh water						
<i>Lymnaea truncatula</i>	-	56	7	-	2	7
<i>Lymnaea stagnalis</i>	-	-	-	-	-	2
<i>Anisus leucostoma</i>	-	2	-	22	38	91
<i>Armiger crista</i>	-	-	4	15	37	92
Land						
<i>Carychium minimum</i>	-	5	1	8	-	1
<i>Carychium tridentatum</i>	-	41	-	3	1	2
<i>Cochlicopa lubrica</i>	1	3	2	-	-	-
<i>Vallonia costata</i>	2	17	-	-	-	-
<i>Vallonia excentrica</i>	5	20	3	8	29	21
<i>Discus rotundatus</i>	23	134	20	4	-	5
<i>Vitrea crystallina</i>	-	-	-	-	-	-
<i>Oxychylus cellarius</i>	1	14	-	1	-	-
<i>Euconulus fulvus</i>	1	4	-	-	-	-
<i>Trichia hispida</i>	-	10	-	-	-	-
<i>Cepaea spp.</i>	-	2	1	-	-	-

Table 14: The percentage of snails in ecological groups

			Fresh water		Terrestrial			Open	Total No.
			Catholic	Slum	Marsh	Shade	Intermediate		
F62	124	III	10.7	77.9	1.6	8.1	0.2	1.5	(447)
	129	III	34.4	56.5	-	6.1	-	3.1	(131)
	121	III	92.0	3.9	1.2	2.6	0.1	0.2	(950)
F62	77	I	11.6	72.9	1.3	13.5	0.6	-	(155)
	121	I	48.1	43.8	2.4	4.6	0.9	0.3	(788)
F62	121	II	29.4	66.8	0.1	0.7	0.1	2.8	(914)
F6	209		-	-	-	72.7	6.1	21.2	(33)
	50		-	18.8	1.6	61.4	6.2	12.0	(308)
	86		10.5	18.4	2.6	52.6	7.9	7.9	(38)
F72	106		24.6	36.1	13.1	13.1	-	13.1	(61)
	107		34.6	37.4	-	0.9	-	27.1	(107)
	108		42.5	44.3	0.5	3.2	-	9.5	(221)

Table 15: The number of snails recovered: monolith sample no. 110,  
F62 Area II Context 121

	Weight Depth	2Kg 92cm	2Kg 102cm	2Kg 112cm	2Kg 122cm
Fresh water					
<i>Lymnaea truncatula</i>		5	2	4	3
<i>Lymnaea stagnalis</i>		-	-	15	1
<i>Anisus leucostoma</i>		16	11	519	48
<i>Armiger crista</i>		89	7	63	94
Land					
<i>Carychium minimum</i>		-	-	-	1
<i>Carychium tridentatum</i>		-	-	-	1
<i>Cochlicopa lubrica</i>		-	-	-	-
<i>Vallonia costata</i>		-	-	-	-
<i>Vallonia excentrica</i>		20	1	1	1
<i>Discus rotundatus</i>		1	1	-	2
<i>Vitrea crystallina</i>		-	-	-	-
<i>Oxychylus cellarius</i>		-	-	-	1
<i>Euconulus fulvus</i>		-	-	-	-
<i>Trichia hispida</i>		-	-	-	-
<i>Cepaea</i> sp		-	-	-	-

#### *Fresh-water molluscs*

Fresh-water snails formed a high proportion of the total molluscs found.

In all three areas of F62 121 (phase 3.1A) over 90% of snails found were fresh-water species. They also formed a high proportion of species in F62 phase 3.3B in areas I and III but were absent from area II which had no snails in the samples from this phase, possibly because of the later drainage of this area affecting preservation.

In F72 (phase 3.2A) the fresh-water species decrease from 87% to 61% probably as a response to the silting-up of the ditch.

In F6 86 (also phase 3.2) the fresh-water species form only 31% of total species at the bottom of the ditch but decrease to zero as the ditch silts up.

Small numbers of the bivalve mollusc *Pisidium* sp were present in samples from contexts 77, 121, 129, 106 and 108 but were not identified further.

Fresh-water molluscs can be divided into three ecological groups: an exacting group requiring fresh running water, catholic or tolerant species and slum species. The latter two groups are represented.

#### Catholic or tolerant species

*Armiger crista* is a species which lives on the leaves of water plants and is tolerant of a variety of fresh-water habitats including ditches and marshes (Ellis 1969).

The proportion of *A. crista* generally decreases as the ditches silt up in all three features showing a decrease in the amount of permanent water and deterioration in water conditions.

*Lymnaea stagnalis*, the pond snail, was found at the bottom of the ditches F62 areas 1 and 11 and F72 with the highest levels of *Armiger crista* indicating permanent water in these ditches which would have acted as drainage ditches.



### Slum species

These are essentially a fresh-water group with preference for or tolerance of poor water conditions as found in small bodies of water subject to drying, stagnation and considerable temperature variation (Evans 1972).

*Lymnaea truncatula* is amphibious and *Anisus leucostoma* can survive drying by closing the shell aperture with an epiphragm (Ellis 1969). Both these species belong to this group of slum species and can live in ditches, marshy habitat and pasture land. (Robinson 1988).

As the ditches silted up, the proportion of slum species increases, indicating poorer water conditions with areas prone to drying, F6 209 probably being dry. The presence of *Lymnaea truncatula* suggests that sheep may have been infected with liver fluke as *L. truncatula* is the intermediate host of this parasite (Ellis 1969).

### Land snails

These occurred in lower numbers than the fresh-water molluscs and are divided into the following ecological groups:

#### Marsh species

*Carychium minimum* was present which is commonly found in marshes but is not confined to them (Evans 1972). It is possible that this snail inhabited the marshy area at the edge of the water or marshy areas of the silted up ditches in F72 106 and F6 50.

#### Shade loving species

The four species of this group found on this site although found in woodland can all live in a variety of moist places such as amongst vegetation or leaf litter or beneath stones. Such places would exist within a ditch above the water level.

*Carychium tridentatum*, a snail of around 2mm in size, can be found in moist habitats within apparently open areas (Evans 1972).

*Discus rotundatus* is very common in moist sheltered places of all kinds, often amongst rubbish (Kerney and Cameron 1979), as is *Oxychylus cellarius*, which has also been found amongst human bones (Evans 1972) and is a carnivorous snail.

*Vitrea crystallina* is commonest in damp places, such as marshes and damp grassland, (Kerney and Cameron 1979) and has affinities with the catholic group (Evans 1972).

These snails can be taken to indicate a locally moist and shaded habitat, probably provided by vegetation within the ditches. They are prominent in F6 indicating an increase in vegetation during the silting of the ditch in phase 3.3A.

#### Catholic or intermediate species

These are classed together as none are particularly diagnostic of shaded or open habitats (Evans 1972). *Euconulus fulvus* is a shade loving species but is widespread in fairly moist places and has affinities with the catholic group, it could however be considered with the shade loving group as it only occurs in F6 50 with high numbers of shade loving species. *Cepaea* sp was found present in the samples but both species listed were found and identified from hand collected snails from the same contexts as the samples. No other additional species were found.

#### Open country species

Two species belonging to this group were found, *Vallonia costata* and *Vallonia excentrica*. Both these species are common in open habitats although *V. costata* is also known in small numbers from moist habitats and *V. excentrica* can occur in marshy habitats. Both are more usually found on grassland generally but *V. excentrica* is more tolerant to land disturbance by grazing or arable farming (Evans 1972).

The two species occur together in phase 3.1A in small numbers so may originate from the moist habitats on the ditch sides. Looking at the monolith sample of F62 121, *Vallonia* occurs in very low numbers at the bottom of the ditch and in higher numbers at the top of context 121. This appears to indicate that the *Vallonia* increased as the ditch silted up and originated after the ditch was constructed, possibly within the ditch or from the land surrounding it.

Phase 3.3B of F62 also has low numbers of *Vallonia* of both species included with low numbers of land snails. These land snails probably inhabited the ditch sides above the water level finding a variety of suitable habitats within the ditch. The presence of *Vallonia* indicates that the ditch was in a generally open environment.

Open country species are the most prominent in F72 phase 3.2 represented only by *V.excentrica*. This may therefore represent a more open phase with more land disturbance or may possibly represent clearance of the ditches.

### Conclusions

The molluscs present represent the fresh water molluscs which inhabited the ditches and a small terrestrial fauna which inhabited the sides of the ditch above the water level. A similar situation was found in ditches at Fengate (French 1984).

The lowest levels of the ditches, F62 and F72, appear to have contained water permanently as indicated by the presence of *Armiger crista* and *Lymnaea stagnalis*. The sides of the ditch above the water level provided a marshy habitat indicated by the presence of *Carychium minimum*.

In F62 Phase 3.1A, shade loving species are present, but can be found in a variety of moist habitats; for example *Discus rotundatus* and *Oxychylus cellarius* are both often found living amongst rubbish. This suggests a ditch with vegetation and food waste rather than shaded by trees or shrubs. Of the snails found in F62 phase 3.1A, *Carychium tridentatum*, *Lymnaea truncatula* and *Vallonia* spp could all be found near water in grassland. *L. truncatula* is the intermediate host of liver fluke, a parasite which causes serious injury to sheep.

As the ditches silted up the proportion of fresh water slum species increased indicating less permanent water and more marshy conditions although both the species *Lymnaea truncatula* and *Anisus leucostoma* have been found to form part of the fauna on modern wet pasture. (Robinson 1988). In F62 the latest phase containing snails is 3.3B which contains snails of all groups in low numbers. This is consistent with snails living within the ditch in a relatively open environment, indicated also by the presence of open country snails in area III. There are differences in distribution of shells between the three areas of F62 which may be explained by differences in drainage, rates of deposition or preservation. Area II is the lowest area and has the deepest primary silt (context 121) but no shells preserved above this layer.

In F72 of phase 3.2 there is an increase in numbers of *Vallonia excentrica*, which may indicate a more open environment. Alternatively this may be explained by the clearance of the ditches, as numbers of the shade loving group are low and the intermediate group absent at this time.

In the following phase 3.3A the shade loving group increases in ditch F6 which contained low numbers of molluscs so larger samples were examined. This change may be explained by poor preservation or by the environment being less suitable for molluscs. As the ditch silts up there may be an increase in shading by vegetation near or within the ditch which probably becomes choked with weeds and free from permanent water.

## The plant remains

Angela Monckton

### *The sampling and sieving programme*

#### Aims

to recover the following if present:

1. Small bones
2. Charcoal
3. Plant remains
4. Molluscs (samples treated separately)
5. Artefacts

#### Sampling

115 samples were taken from 50 contexts on a judgement basis from recorded locations. The size of the samples varied from 1-15kg depending on the amount of material available. Three *in-situ* monolith samples were taken from the lowest levels of the ditches. Samples were stored in polythene bags and processed at a later date as labour and facilities were unavailable on site.

#### Method

The sample size varied, 5kg sub-samples of each sample being processed where possible. The samples were used without further drying because of the high clay content. 92 samples were wet sieved. The samples were soaked in water to disaggregate the clay and any floating material was collected in a 0.3mm mesh sieve. The samples were then wet sieved with running water in a 1mm mesh sieve stacked over a 0.5mm mesh sieve. The residues were dried at room temperature and the charcoal and carbonised material removed by water flotation of each fraction. The residues and flotation samples were then sorted under a binocular-microscope at X10 magnification for bones, charcoal, plant and animal remains and artefacts. This method was used because of the high clay content of the samples. A total of 350 kg was sieved.

#### *Identification*

Small mammal bones, charcoal, and artefacts were found and included in the relevant specialist reports. The seeds found were identified using the reference collection of the University of Leicester Department of Archaeology.

Charcoal was present in most of the samples but very few carbonised seeds and cereal grains were found. Uncarbonised small seeds and fungal sporocarps were present in some of the samples. These on comparison with those from the topsoil, were judged to be intrusive, having presumably entered the soil via root channels and soil cracks, as the site was sealed only by plough soil. These seeds were identified and recorded in the site archive.

The cereal grains found were carbonised as described for ancient grain (Green 1985) and covered with soil concretions. This together with their occurrence in charcoal rich deposits argues for their being of a date contemporary with the features.

#### *Carbonised cereal grains* (Table 16)

##### Wheat (*Triticum* sp.)

Nine grains were found which could be identified as *Triticum* sp from the characteristics of the grains. They could not be identified further as no spikelet fragments or chaff were found and the grains themselves were poorly preserved.

The wheat grains were found in the following contexts F97 177, F4 17, F91 149 and F46 40 associated with the house structures; F5 6 within the enclosure and F62 112 and F6 86 in the enclosure ditches.

Barley (*Hordeum* sp.)

Three grains were found in F48 51 within the enclosure. The grains were identified as cultivated barley from the grain characteristics and found to be a hulled variety as fragments of palea were found adhering to the grains.

## Cereal

Three carbonised fragments which could only be identified as cereal, were found in contexts 17 and 86.

Grasses (*Gramineae*)

Four fragments of carbonised seeds of the larger grasses were found in contexts 169, 177, 86 and 61. Carbonised grass seeds have been found mixed with cereal grain on sites of this date either as contamination or possibly as part of the crop (Jones 1981). Grass seeds may also derive from fodder or other uses or may simply constitute part of the weed flora of the site.

*Carbonised weed seeds* (Table 16)

Carbonised seeds of *Veronica hederifolia* L. were found in contexts 169 and 238 and *Galium aparine* L. in contexts 169 and 122 from the same features as the carbonised wheat grains described above.

These two species are autumn germinating weeds of cultivation, both of which have large seeds of around the same size as grain which can remain with the grain after the grain has been processed (Salisbury 1961). The occurrence of these species with grain indicates Autumn sowing (Jones 1981) *Galium aparine* is known as a weed of wheat crops on heavy soils (Salisbury 1961). Unfortunately too few seeds and cereal grains were present to allow definite conclusions to be drawn.

*Lemna* sp. Uncarbonised

Seeds of *Lemna* sp. (duckweed) were found in contexts 169, 177, 17, 180, 225, 120, 121, and 124. These were the ditches F9 and F62 and the eaves-drip trenches F4 and F97.

*Lemna* thrives in organically polluted water and has been linked with high phosphate levels (Murphy 1983). The contexts containing *Lemna* were found to have high phosphate values using a spot test (Schwarz 1967) results of which are recorded in the site archive. The source of the phosphate may be suggested by the other contents of the contexts such as

Table 16: Carbonised seeds and cereal grains

Weight Kg	40	30	15	5	5	5	5	5	5	5	20	10
Phase	2.1A	2.1A	2.1A	2.2A	2.2B	2.2B	3.2	3.2	3.3B	5.1A	5.1B	6
Feature	F97	F97	F4	F91	F47	F46	F9	F6	F62	F48	F5	F62
Context	169	177	17	149	236	40	219	86	112	51	6	61
<i>Veronica hederifolia</i> L. (Ivy-leaved Speedwell)	5	-	-	-	1	-	-	-	-	-	-	-
<i>Galium aparine</i> L. (Cleavers)	1	-	-	-	-	-	-	-	1	-	-	-
<i>Triticum</i> sp. (Wheat)	-	2	2	1	-	1	-	1	1	-	1	-
<i>Hordeum</i> sp. (Cultiv. hulled barley)	-	-	-	-	-	-	-	-	-	3	-	-
Cereal (Grain fragments)	-	-	1	-	-	-	-	1	-	-	-	-
<i>Gramineae</i> sp. (Grass)	1	1	-	-	-	-	1	-	-	-	-	1

bone, food refuse or burnt organic material. Fouling with excreta has been suggested as an explanation in the absence of other material remains (Murphy 1983). The presence of *Lemna* also suggests the presence of standing water as *Lemna* only sets seed in these conditions. These seeds appear to have been preserved sealed in the clay layers of the ditches and although their survival is difficult to explain they do occur in contexts with no other apparent contamination so may be a chance survival. There is much as yet unknown about the survival of organic material under different soil conditions and these seeds are reported as a possible example.

### Conclusions

A small number of carbonised wheat grains (*Triticum* sp) as found in features F4, F5, F46, F62, F91 and F97. There was insufficient evidence to identify the wheat further.

A few carbonised grains of barley (*Hordeum* sp) were found in F48 and identified as a hulled variety of cultivated barley.

Carbonised seeds of the larger grasses were found in F97 and F9 which may have been mixed with the cereal or originate from the surrounding vegetation. Carbonised weed seeds of *Veronica hederifolia* and *Galium aparine* were found in the same features as the wheat grains. These are both Autumn germinating weeds of cultivation and may suggest the presence of an Autumn sown wheat such as spelt, bread wheat or a variety of emmer (Jones 1981), but there is insufficient evidence for definite conclusions.

The cereal grains were found in features associated with the houses so may constitute refuse from food preparation. No evidence of crop processing or of the origin of the cereals was found, but the presence of the grain does indicate that wheat and cultivated hulled barley were part of the diet of the occupants of the site in the late Iron Age.

### Cereal impressions

Angela Monckton

The pottery and fired clay from the site was all examined for secondary evidence of plant remains in the form of impressions. Impressions were found and casts made by Mr. T. Sturge formerly of Leicestershire Museums using PVC moulding compound Vinagel 9004 cured at 180°C for 20 minutes.

The casts were examined and the cereals identified by Lisa Moffett of Birmingham University. Of the twenty impressions found seven were unidentified partial impressions. Thirteen impressions of cereals were found, but identification was made difficult by the coarse fabric of the pottery and clay which did not preserve sufficient detail of the cereals. Six impressions were identified as wheat (*Triticum* sp), one as barley (*Hordeum* sp), and one as oat (*Avena* sp). Two were identified as being from the larger grasses and the rest as indeterminate Cereal, Impression No.10 identified as possibly emmer (*Triticum dicoccum?*), and impression no.5 as cultivated barley of a hulled variety (*Hordeum vulgare*) probably a six rowed type (Table 17).

### Conclusions

The pottery with cereal impressions all dated from the late second to the first century BC and may not be local so no conclusions about cereals on the site can be made but see above p.40. The pottery impressions have both wheat and barley present. The fired clay most probably derives from the houses and associated features and includes impressions of wheat (*Triticum*) from phases 5.1A and 5.3A. The wheat impression from phase 5.1A is possibly emmer and is from a hearth (F137), however due to the coarseness of the fabric the identification of the wheat species cannot be confirmed. The occurrence of cereal impressions does add to the scanty evidence from carbonised grains for the use of cereals on the site.

Table 17: Cereal impressions from pottery fabrics and fired clay

Wheat <i>Triticum</i> sp.					
Find No.	Imp. No.	Part	Fabric	Phase	Context
576	1	glume	B	2.2B	F2.41
575	2	grain	B	2.2B	F2.41
580	8	glume	A1	3.1A	F179.403
916	10	grain	FC	5.1A	F137.400
917	16	glume	FC	5.3A	F63.62
917	18	glume	FC	5.3A	F63.62
Barley <i>Hordeum</i> sp.					
Find No.	Imp. No.	Part	Fabric	Phase	Context
573	5	grain	A	5.2A	F107.182
Oat <i>Avena</i> sp.					
Find No.	Imp. No.	Part	Fabric	Phase	Context
918	12	2 florets	FC	2.2A	F98.163
Cereal					
Find No.	Imp. No.	Part	Fabric	Phase	Context
578	7	grain	A	3.1A	F179.384
574	11	floret	A	2.2A	F98.163
917	17	floret	FC	5.2A	F63.62
Grasses <i>Gramineae</i>					
Find No.	Imp. No.	Part	Fabric	Phase	Context
918	13	2 florets	FC	2.2A	F98.163
918	14	floret	FC	2.2A	F98.163
FC = Fired Clay					

**The charcoal**

Graham C. Morgan

Phase	Species Present
1	Oak ( <i>Quercus</i> sp.), Ash ( <i>Fraxinus excelsior</i> L.)
2	Oak, Ash, Field Maple ( <i>Acer campestre</i> L.), Poplar ( <i>Populus</i> sp.) Blackthorn ( <i>Prunus spinosa</i> L.), Hawthorn type ( <i>Crataegus</i> sp.).Hazel ( <i>Corylus</i> sp.) Rowan type ( <i>Sorbus</i> sp.)
3	Oak, Ash, Field Maple, Poplar, Blackthorn, Hawthorn type, Hazel
4	Oak, Ash, Field Maple, Poplar, Hawthorn type
5	Oak, Ash, Field Maple, Poplar, Blackthorn, Hawthorn type

**Radio-carbon dates**

Harwell Laboratory

Although two charcoal samples were submitted for C<sup>14</sup> dating, only one was large enough to produce a result.

Sample 1 Phase 2.2B F2 41 Oak, Ash, Poplar, Field Maple, Rowan fragments.  
(HAR-9410)

Age BP 1870 + 90                      Calibrated range (Stuiver and Reimer 1986) AD 30  
- AD 240 (68%) and 100 BC - AD 300 (95%)

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