

# **An Iron Age and Romano-British Settlement at Hardwick Park, Wellingborough, Northamptonshire**

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With contributions by

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In 1965 Mr. P. Smith of the Westfield School Archaeological Club reported seeing the crop marks of two enclosures from the air at NGR SP 876679,<sup>1</sup> approximately one mile W.N.W. of the present centre of Wellingborough (FIGS. 1 and 2). Field walking between 1965 and 1969 by the Westfield Club and Mr. Richard Harper produced large amounts of Roman pottery and building materials, and the site was thought at the time to be possibly that of a Roman villa.

At this time an agreement was made between the Wellingborough Urban District Council and the Greater London Council for the transference of industry and population from London to Wellingborough. A revised town map was published (Northamptonshire County Council, 1972) showing the areas of development which included the building of housing estates in the Queensway-Hardwick Park area, which would, in a relatively short period of time, partially destroy any archaeological remains existing in this area.

In response to this threat, during 1968 and 1969, Mrs. G. Brown carried out two small excavations for the then Ministry of Works at NGR SP 876678 (FIG. 3) which although some distance from the enclosures did reveal a length of stone wall, a T-shaped corn dryer and a lime kiln (Brown, 1970).

Although the fields to the North of the site had been walked on more than one occasion, and had been photographed from the air, there had been no indication that the site extended in this direction. Then in July 1969 building began and roads were graded across the whole of the area from Brickhill Road to Hardwick Road. During examination of the road scrapings by the Wellingborough Archaeological Society and Mr. Harper it became clear that the settlement area was much greater than had been previously thought.<sup>2</sup> It appears to spread, in excess of 20 acres, across a broad spur which slopes gently to its southern boundary, a small stream running East-West to the River Ise. This was reported to the Ministry of Works in the hope that they would take some action before the second and third phases of development started in February and June 1970.

It became clear by the end of February 1970 that no director was available to examine the site before it was destroyed. It was therefore decided, with the permission of the Wellingborough Urban District Council, to carry out a small rescue excavation by members of the Wellingborough Archaeological Society under the direction of Mrs. Sheila Watkins. The remainder of the site was to be recorded, where possible, by Mr. Richard Harper, who would attempt to visit the site daily and record any features showing in current building operations. By plotting the features on building site blueprints, and obtaining associated pottery it was hoped to reconstruct an overall site plan with related chronological sequence.

<sup>1</sup> *B.N.F.A.S.* 2, (1967), 20.

<sup>2</sup> *B.N.F.A.S.* 4, (1970), 13.

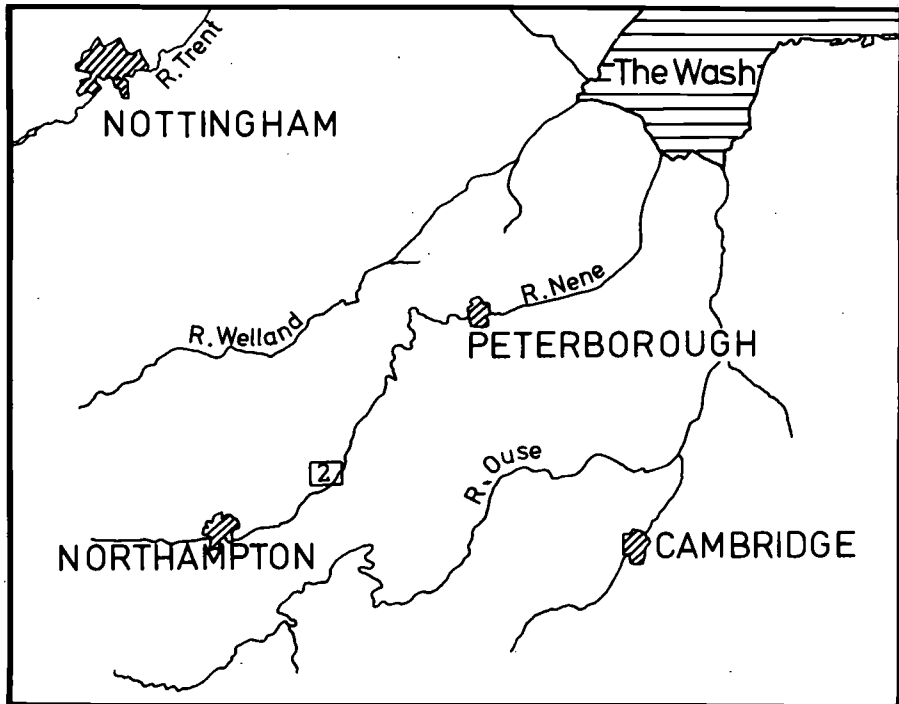
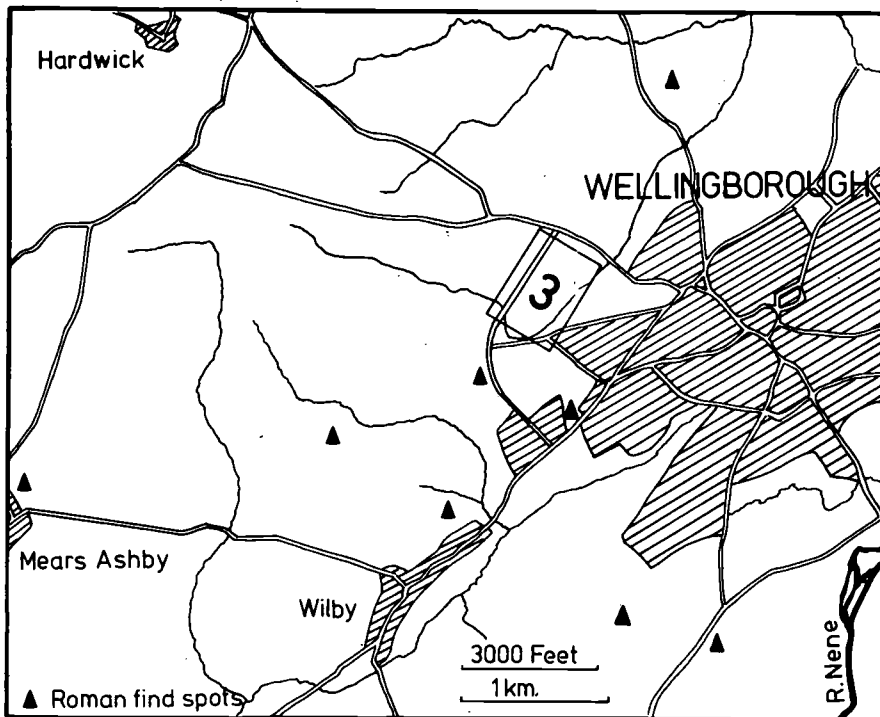


Fig. 1

Location maps, Hardwick Park

Fig. 2



## 1: OBSERVATION DURING BUILDING WORK, 1968-76

## THE OVERALL SITE RECORD

The overall site record was compiled by visiting the building site each day and checking any new earth movement. Any observed archaeological features were plotted on site blueprints provided by Mr. Paul Everson, Archaeological Assistant, Northamptonshire County Council. A record was also made of all foundation trenches, pipeline trenches, etc., that were not checked, and in the final assessment, taking into account trenches that were opened and refilled in too short a time to check, very little was missed in all the opportunities that were presented. Certainly claims of an extensive pottery industry existing here in the Roman period are proved completely unfounded by this record (Brown, 1970).

The record consists of two parts, the published account and the archive document. The archive document contains the bulk of the information and material gathered from the site in the form of detailed plottings on the blueprints, notes on features and their make-up, photographs and material finds. In this published account it was deemed necessary to describe only the major features of the site, and illustrate only such pottery as gave the chronological span and sequence of the enclosures, along with any other vessels thought to warrant comment and illustration. The archive document and all the materials are deposited with the Northamptonshire County Council Archaeological Unit.

## THE ENCLOSURE SYSTEM: GENERAL

As can be seen from the overall plan (FIG. 3) the site consists of a number of rectangular enclosures all orientated on a roughly North to South alignment. Two entrances are known with certainty, both on the southern sides of Enclosures 3 and 5. There appears to be a well defined boundary to the West of the site with few features appearing beyond F38, which may itself be a boundary ditch connecting with other lengths of ditch observed at intervals on the same alignment.

The unusual depth of overburden, as discussed in Part 2 below, could well account for the disappointing lack of shallow features usually associated with occupation areas. Several areas, however, did show distinct signs of occupation. An area to the South of Enclosures 2/3 displayed limestone walling and there were also several small features not illustrated because of the scale, which suggest occupation in this area. These may be later, Roman features and not connected or associated with the enclosure system which is basically an Iron Age system which was becoming silted up in the Roman period. The pottery from this area can be assigned to the 2nd century A.D. In a note on her excavations in this area, Mrs. Brown suggests that occupation extended beyond the mid 3rd century A.D. which would place the latest known activity of any magnitude in this locality (Brown, 1970). An area of stony flooring dated to the 1st century A.D. and found spread over the Western ditch of Enclosure 6 is described in the excavation report below (p. 72). Pre-Roman occupation is suspected within Enclosure 7 and its two sub-enclosures. Pottery from the pits, gully and enclosure ditches here can be dated to the late Pre-Belgic Iron Age. This area when observed during building operations produced indeterminate patches of charcoal impregnated earth and shallow features so ephemeral that they could not be recorded.

During the 1st century A.D. some industry was practised in the production of pottery for local use. Two pottery kilns, 1 and 4, are of a type common to the Nene valley and which seem to appear in small numbers on nearly every site investigated of this period. Three lime kilns, 2, 3 and 5, possibly of 2nd century date were also found.

The most obvious function of the enclosures is that of stockyards since none of the ditches could claim to be defensive. It is remarkable that this same function was practised with apparent continuity from around 100 B.C. to around 250 A.D. The site itself would appear to be structurally stable with its centre remaining basically constant and not as was originally thought, subjected to realignment along an axis caused by occupational drift over an extended period of time. Although the earliest features known at Hardwick Park are a group of ditches excavated at the Queensway Health Centre by Mr. P. Everson (Everson, 1976), approximately 100m. along the spur road West of the Queensway, there is a gap of approximately 350m. to the next Iron Age feature in the chronological sequence, Enclosure 1. The Health Centre site and Enclosure 1 could even both be contemporary in the Middle Iron Age, and when one considers that the area of latest occupation is next to Enclosure 1 the idea of settlement slowly "creeping" does not seem justified. Many of the enclosures are re-cut showing constant use and re-use, but without detailed excavations a true sequence of occupation cannot be worked out.

#### THE ENCLOSURES (FIG. 3)

##### *Enclosure 1*

Three sides of this enclosure were recorded. Basically an Iron Age enclosure, pottery from the upper fill belonging to the pre-conquest primary Belgic period and consisting of a few damaged rim and body sherds of dark shelly hand made barrel jars. The enclosure is re-cut on the North and most of the East side, and from its refilling 1st century A.D. debris was recovered, mainly Roman. The enclosure ditch was seen several times in full section and allowing for the angle of the cut the ditch was 3m. wide and 1.55m. deep with a fill of dark charcoal impregnated earth at the top and a stony light brown earth middle fill. The bottom 45cm. had a clean clay silting.

##### *Enclosure 2*

The upper filling of this enclosure ditch can be dated to the last quarter of the 1st century A.D. It has a close relationship with Enclosure 3 and was at some period possibly contemporary with it. The plan of this enclosure was seen in some detail yet no entrance was observed and the ditch appeared unbroken apart from an area of later quarrying which presumably masks the position of the entrance. The enclosure ditch was seen in section several times and was between 2m. and 2.50m. wide and 1.25m. deep with a dark stony fill that showed at least one re-cut.

##### *Enclosure 3*

This enclosure in plan supplements Enclosure 2, possibly as an enlargement, with the filling in of its Southern boundary. A great deal of pottery was recovered from the ditches of Enclosure 3, especially from around the entrance lobes. It is of a late 1st century/early 2nd century A.D. date range which reinforces the possibility that although appearing to be a later addition it was still used to some

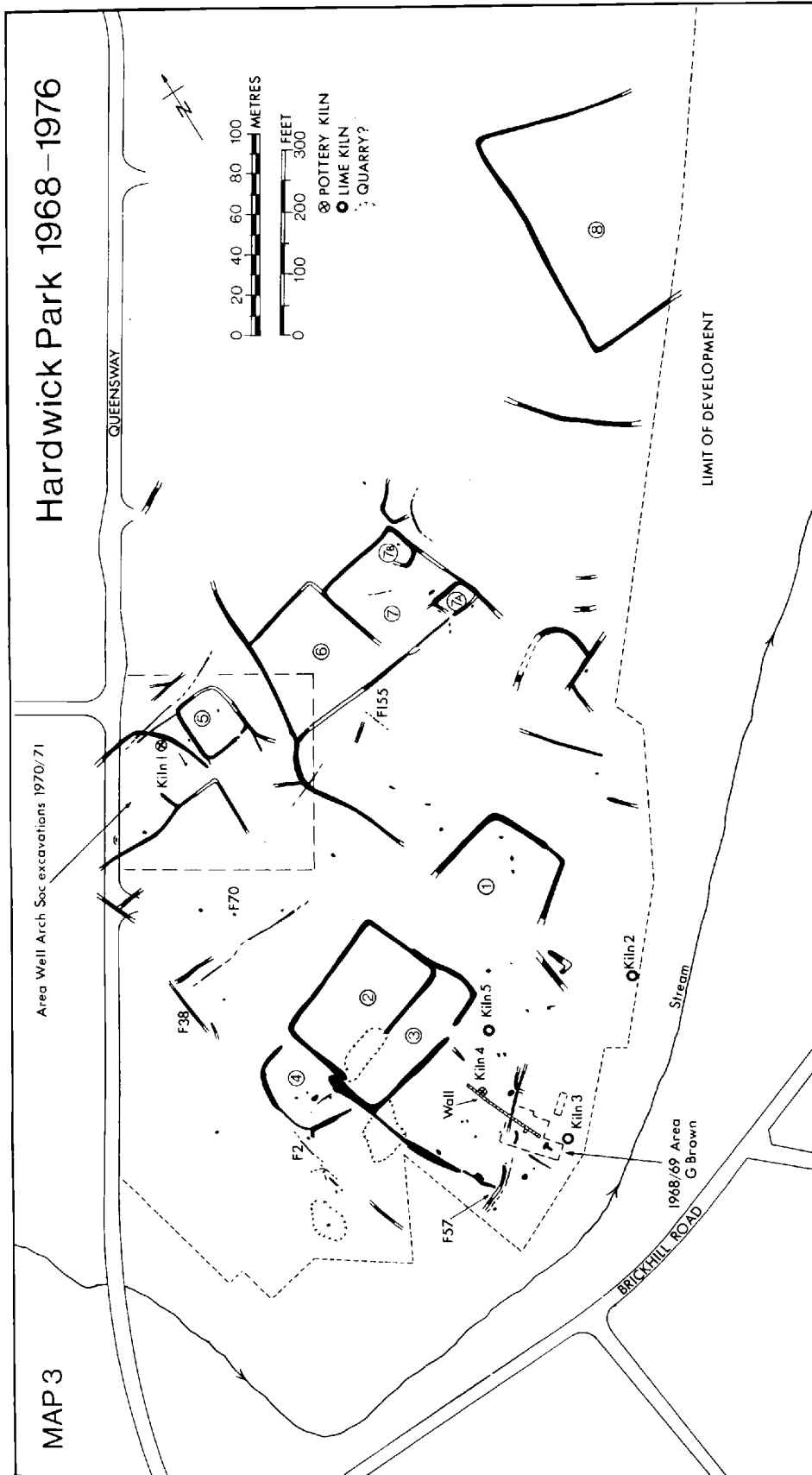


Fig. 3 Hardwick Park, site plan.

degree at the same time as Enclosure 2. Several good section sightings were made of this enclosure, one clearly showing the later quarrying in relation to the ditch. Section drawings show at least one re-cut which apart from a great deal of large stone, contained large fragments of clay roofing tile. The ditch was approximately 3m. wide and averaged 1.80m. deep for most of its observed length. The fill, apart from the usual dark charcoal flecked earths and clays, contained much burnt material and large stones.

#### *Enclosure 4*

An addition to Enclosures 2/3 and made either with or after Enclosure 3. It had been re-cut around the northern and southern arms. It had either two entrances, one to the North and one to the South or at these points it abutted on an outer bank. Too little was recovered to securely date any part of the enclosure ditch but the few body sherds are comparable to those from Enclosure 3. The fill in the upper layers is of dark soils and clays while the middle and lower layers have a high content of stone, some noticeably large pieces in a middle layer. The ditch was approximately 1.50m. wide, but was cut wider to 2m. in the re-cut portions. Depth averaged 1m.

#### *Enclosure 7*

This enclosure is part of a complex of enclosures and sub-enclosures, and is dated by a small jar of the late Iron Age Globular Phase (FIG. 12, 39) which indicates a pre-Belgic occupation in this part of the site. Sections of the ditches in this area were not often seen and measurements of even the width were not easy. Those that were made, however, showed the ditch to average between 1m. and 1.80m. in width and a single sighting of the full depth of the main enclosure ditch showed it to be 1.45m. deep. The fill was of a brown clayey soil except when observed in the area of the sub-enclosures where it was much darker with a higher content of charcoal. The two sub-enclosures 7A and 7B had a fill much darker in the upper layers than the main enclosure ditch, and the area within them contained many patches of burnt clay and charcoal.

#### *Enclosure 8*

Although this enclosure ditch was seen in many places no pottery or other dateable material was found. The filling of the ditch appeared to be relatively clean with only clayey silts and a mid-level layer of charcoal flecks evident. Average dimensions of the enclosure ditch were 2.30m. wide and 1m. deep.

#### *Ditch F2*

A small ditch, briefly seen in a road scraping and a pipeline trench, to the West of Enclosure 4; it may be part of the western boundary ditch alignment. The dimensions of this ditch were 1m. wide and 40cm. deep with a fill of black soil, containing ash and charcoal.

#### *Ditch F38*

This ditch is part of the western boundary ditch alignment to the N.W. of Enclosure 4. It had an average width of 2m. and a depth of 75cm. with a filling of black earth containing much burnt material and charcoal, with many potsherds in the upper layers.

*Ditch F57*

The full extent of this 2.50 m. wide ditch was never seen as pipeline trenches were never deep enough to reveal the lower part of it. The upper layers, however, had a filling of earth and clay mixed with much stone. Many bones and burnt stones were observed and a small amount of Belgic and Roman pottery was recovered.

*Pit F70*

A small pit, 90 cm. in diameter and 60 cm. deep, with a filling of black clayey soil containing much charcoal.

*Ditch F155*

A small ditch, 60 cm. wide and 40 cm. deep, with a filling of brown earth containing much Roman pottery.

*Ditch F161*

This ditch was observed in the road scraping for the Queensway, entering the excavation area from the West. It is numbered Ditch F2 and described fully in the excavation report (see 2 below).

## POTTERY KILN

*Kiln 4 (FIG. 4)*

This kiln was found badly mutilated by the building operations, with only part of a scraped down furnace bowl left surviving. It is difficult to fit the structure into a classification, but it possibly belongs to type 2A or 3C (Woods, 1974) dated from the mid-to late 1st century A.D. It was orientated S.W.-N.E., quite the reverse of Kiln 1 (p. 71). It was not possible to investigate the structure in detail, but the furnace bowl appeared to be unlined and there were no fixed furniture structures evident *in situ*. Some loose kiln furniture was found resting on the floor of the furnace bowl, but not necessarily *in situ* and although not all the kiln furniture need belong to this kiln it is still possible that the two types of pedestal found could have been used in combination together, along with the wide, flat kiln bars. Some stratification was preserved and is shown in a diagrammatic section (FIG. 4).

The burnt clay wall may be subsoil smoothed out and fired hard when the kiln was used. Layer I. Green/grey clay with much burnt clay kiln fabric. 8 cm. thick. Layer II. Burnt earth with fragments of burnt clay and small gravels. 6 mm. thick. Layer III. Clayey earth with pottery, burnt clay and charcoal. 13 cm. thick.

*The kiln furniture and other materials (FIGS. 4 and 5)*

1. A small removable pedestal of prefabricated clay. It is shaped as a square-sectioned block with the ends pressed flat and expanded to act as a base on which to rest kiln bars. It was broken 30 cm. from the end and was also damaged along its length as it lay in the kiln when the contractors scraped down the overburden.

2 and 3. Two large fragments of what must be broken parts of the same structure. A rectangular block of pre-fired clay 53 cm. long and 8 cm. thick,

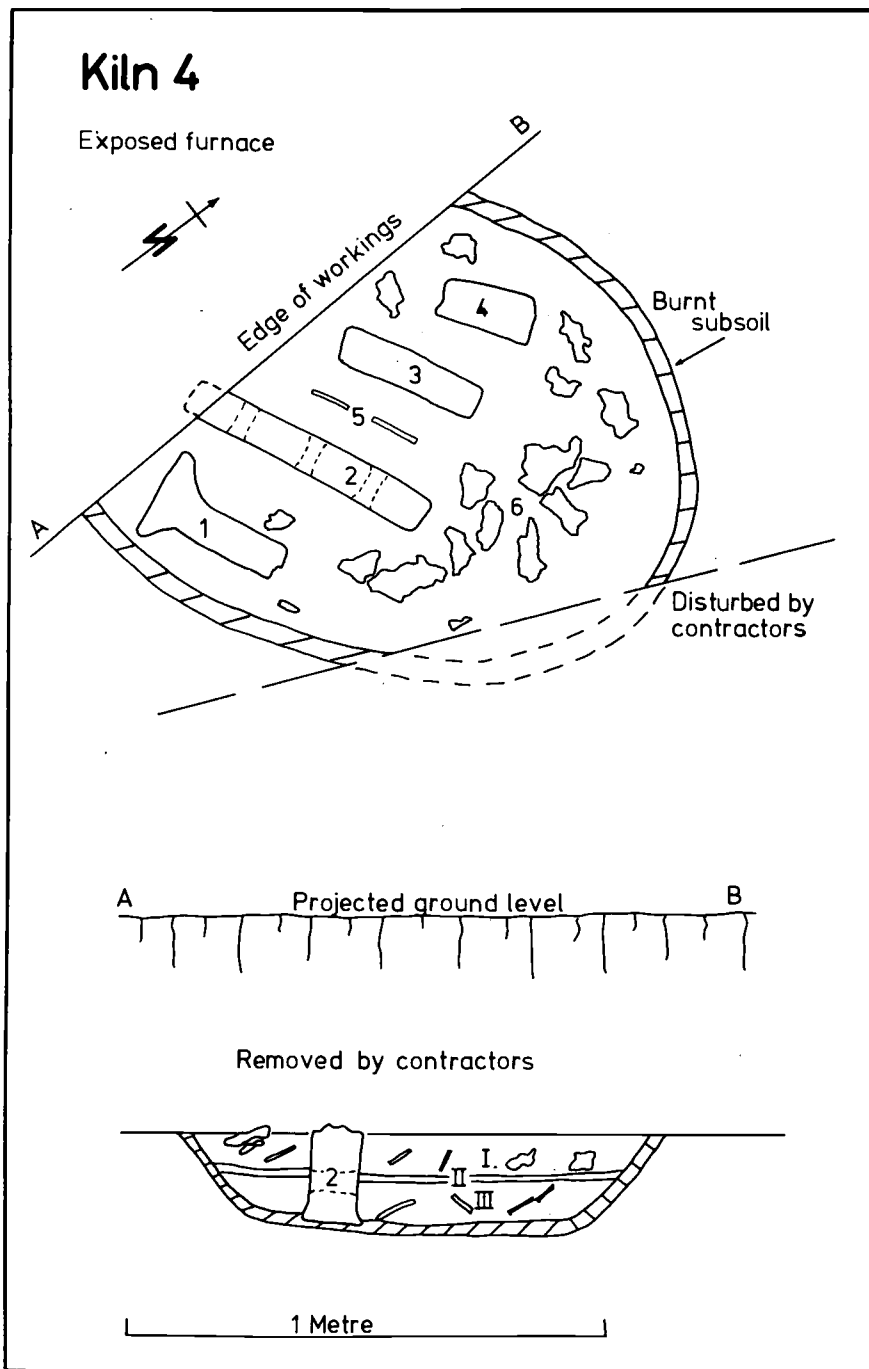


Fig. 4 Hardwick Park, Kiln 4.



damaged so that its height cannot be assessed. At least two rows of three holes, 3-4cm. in diameter, are regularly spaced along its length. These are presumably to facilitate the circulation of hot gases around the furnace. It has been suggested that this was also a removable pedestal (Woods, 1974), but on close inspection it was noted that one edge of fragment 3 was burnt red and had been torn from a welded position in the floor or the side of the kiln.

4. A flat, wide kiln bar of hard fired clay. It is broken at both ends, surviving only to a length of 18cm. and with a width of 8cm. and a thickness of 2cm.

5. Pottery fragments of large storage jars were found standing on edge between pedestals 2 and 3. Joining fragments show colour and heating differentiations that could well have been caused by pieces of these large jars being deliberately used in the kiln structure, possibly as a stabilising dome over the pottery to be fired and upon which the turf superstructure was built. Similar pieces were found in Kiln 1. An example is illustrated as K4/2 which also shows the broad, shallow tooled lines forming a large open squared pattern.

#### THE LIME KILNS (FIG. 6)

##### *Kiln 2*

This kiln was seen in section only in the side of a service trench and as the bottom of the kiln was deeper than the trench, it was not observed. No material was recovered from this feature and so no date can be offered, and although it would not be out of place with the other Roman lime kilns, it could possibly be 19th century.

The fill consisted of loosely packed earth and stones. It contained burnt stones, burnt clay and a lot of charcoal. The sides of the feature consisted of natural clay subsoil burnt red to a depth of 8cm. The size and shape of this kiln suggests lime burning as its function.

##### *Kiln 3*

This kiln was noted in the side of a house foundation trench. Limestone masonry seven courses high was seen and at the time the fill appeared to be of burnt rubble. Some of the plan could be made out and it was thought to have a possible flue hole to the South, and that the limestone wall had been robbed away on the western side. Later, someone dug into the kiln and it could be seen that 2nd century rubbish had been tipped into it from the robbed out side and that indeed there was a flue hole on the southern side. The masonry walls stood to a depth of 1.22m.; at this depth a clay formed ledge ran around the internal circumference of the structure. A number of limestone blocks were scattered around on its floor. The lower rubbish free layers did not produce any pottery or dating evidence. The size and the structure of this kiln are similar to that excavated at Weekley, Kettering (Jackson, 1973).

##### *Kiln 5 (not illustrated)*

This lime kiln was totally excavated by Mrs. G. Brown in her 1968/69 excavations, but was published as a 2nd to 3rd century pottery kiln (Brown, 1970). The size and structure of this kiln were very much the same as that of Kiln 3,

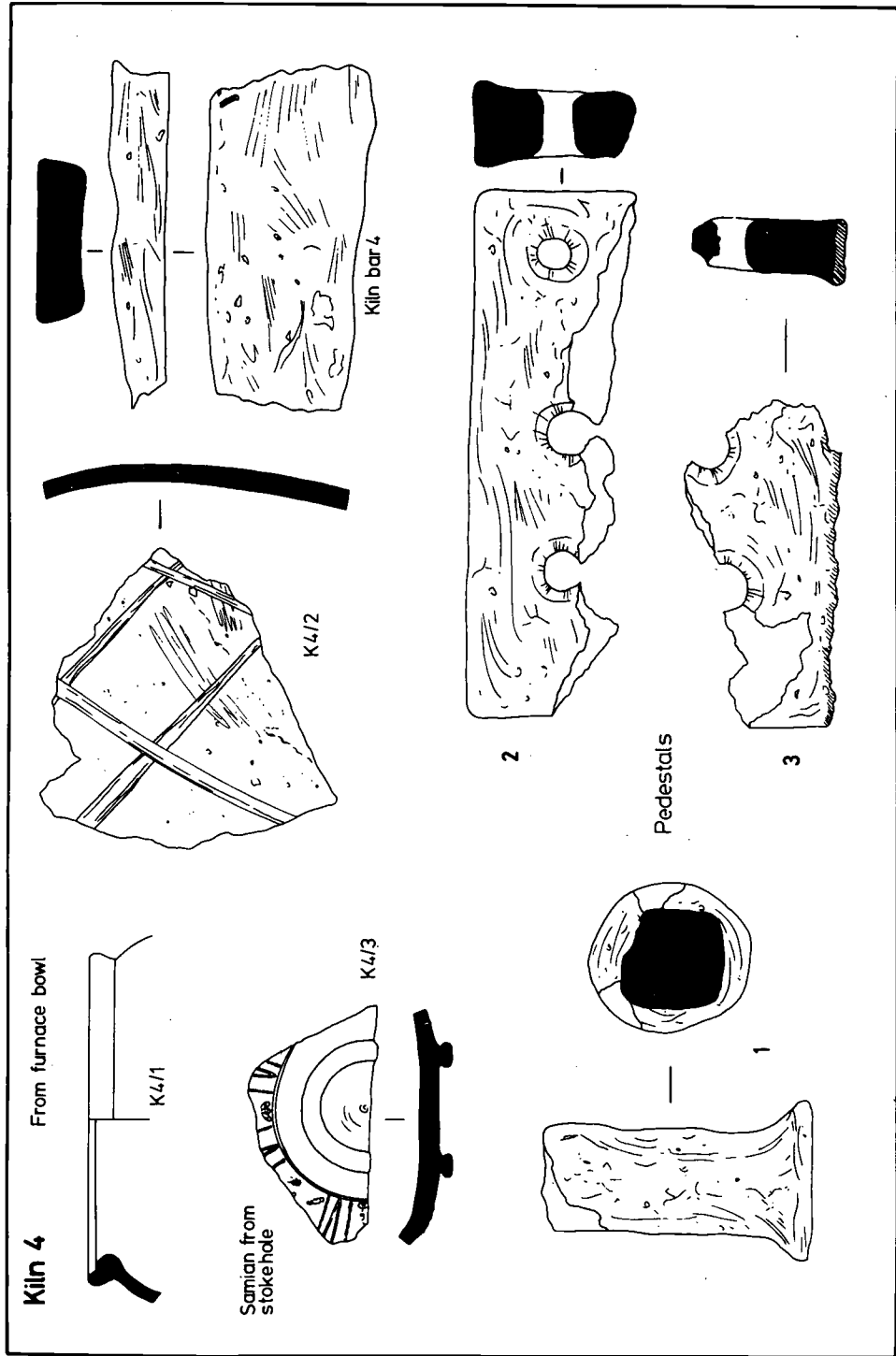


Fig. 5 Hardwick Park: Kiln 4: pottery and kiln furniture (K4, 1-3, 1/4, 1/8; kiln bar 4, 1/3).

but the limestone walling of the furnace was more circular in plan. It had the same clay shelf around the internal diameter. A clay lined bowl served as the furnace floor. Although it was not possible to investigate this structure in more detail its dimensions and construction are so closely allied to the proven lime kiln at Weekley that its function cannot be in doubt.

Since none of the lime kilns can be adequately dated it is difficult to comment upon the relationship between them and the rest of the site. They do not appear to be part of an industrial complex such as that at Iversheim in Western Germany, where a battery of six kilns and associated structures formed a single large industrial unit with lime burning as their primary concern (Sölter, 1970). The Wellingborough kilns appear to be individual structures, not necessarily contemporary, specially built for a specific or limited production. A possible clue to their purpose is that in the Roman period lime was not used to any degree on the land, but slaked lime was used in the building industry for plastering and mortar (White, 1970).

It is noteworthy that the local examples can all be found close to Roman villas, e.g. Weekley, and a villa at Ringstead<sup>3</sup> where lumps of quicklime were observed in patches when an adjacent field was recently ploughed. The Wellingborough examples may be seen as having been built to serve the short term requirements of a nearby villa, being built and refurbished as necessary.

The two basic requirements of lime burning and slaking are available readily on site — the water from the stream and the limestone which outcrops extensively on the slopes. Vague areas of deep disturbance have been labelled on the site plan as quarries (FIG. 3).

Although no villa or comparable building was seen on the site, large areas were left undisturbed as public open space, and stone walling found in a pipeline trench near the stream on this land may be significant.

Many more features were recorded and details can be found in the archive record. It was felt however, that to try to include all such features in this account would add to confusion rather than to understanding.

## 2: THE EXCAVATIONS, 1970 AND 1971 (FIGS. 7-9).

This is an account of the excavations conducted in 1970 by Mrs. Sheila Watkins and in 1971 by Mr. Patrick Foster and Mr. Richard Harper on behalf of the Wellingborough and District Archaeological Society.

Permission was obtained from the Wellingborough Urban District Council to carry out limited rescue excavations prior to development, and in April 1970 work began with only five weekends left for work before the site would have to be vacated. The aim was to trace the continuation of features noted during the road construction and to obtain from them stratified, dateable groups of pottery. In spite of the daunting discovery that the disturbed overburden was up to 60cm. thick, which more than doubled the work of digging out and refilling, this aim was achieved.

By May 31st the site was ready for the builders. Building did not start at once, so the Wellingborough Urban District Council was again approached and

<sup>3</sup> D. A. Jackson, 'A Roman Villa at Ringstead, Northants', forthcoming.

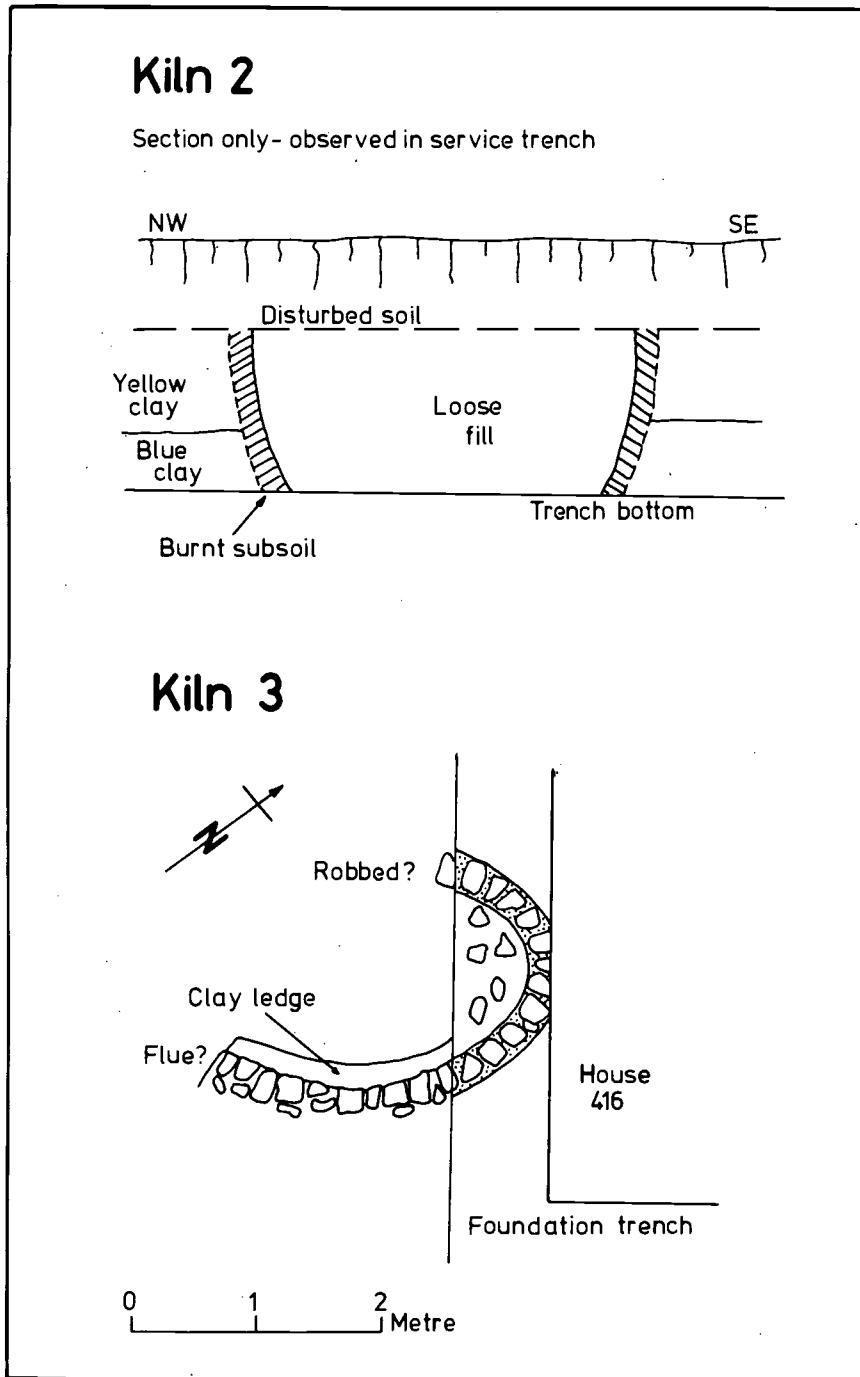


Fig. 6 Hardwick Park: lime kilns, Kilns 2 and 3.

permission obtained for a further limited excavation. It was decided to uncover an area 9m. by 12m. It was estimated that this could be done by hand in six weekends. During July the then Ministry of Works generously offered a grant to pay for the cost of mechanical stripping, which became available in August and made it possible to examine a much larger area. At the end of September the trenches were again refilled ready for building operations to start. Building was again delayed and this made it possible for some further work to be done on the site during 1971, unfortunately with a greatly reduced labour force and without further grants.

#### THE OVERBURDEN

The humus was about 25cm. thick, but disturbed soils extended to depths varying from 35cm. in Area B to 60cm. near the Queensway (FIG. 10). Below the humus was a layer of brown soil containing specks of charcoal, medieval and modern potsherds, a door knob and other rubbish including a brass plate inscribed "Wren Bros. Castlethorpe". This disturbance was, therefore recent.

It is not certain whether this layer represents deep ploughing on a few occasions or the levelling of the field resulting in extra topsoil being spread over this area. The lack of recognisable buried topsoil suggests the former, while the complete absence of Romano-British sherds in this layer indicates the latter. In view of this all depths in this report are given from the surface of the undisturbed subsoil.

#### THE SUBSOIL

The subsoil is boulder clay varying in colour and consistency from a stiff purplish-brown clay with no stone, to a yellow, almost gravelly deposit containing many small pebbles of decayed limestone and flint or chert. Oolite outcrops in the next field on the slope to the stream and a small outcrop was also encountered during 1971 (marked "rock", FIG. 7).

#### AREA. A (FIG. 7)

The earliest features were found in the area nearest the new road, Queensway. During the road works, ditches containing 1st century A.D. pottery and patches of burnt subsoil had been noted. It was not possible to dig nearer than 8m. from the road because of the graded bank of the road cutting. Throughout this area irregular lumps of fired clay bearing impressions of grass or straw were common. This material, presumably from temporary tops built over kilns, will be referred to as kiln debris. It was present in all features except Pit 1 and Ditch 3.

As kiln debris is so common in all the surrounding features its absence in these two cases needs consideration. Either it is: (a) pure chance that no kiln debris was incorporated in the fill, or (b) the features were already closed when kiln debris first occurred on the site, or (c) the features were deliberately filled with material from elsewhere which did not contain kiln debris.

#### *Ditch 3*

This ditch was very small, 50cm. wide and 25cm. deep. It was excavated for a length of 5m. The fill was a fine clay silt and contained 8 very small sherds of 1st century A.D. pot. As this ditch crossed over two earlier ditches which both

contained kiln debris and as the silt had certainly accumulated *in situ*, (b) and (c) can be ruled out and only (a) remains. In any case this ditch was notably barren.

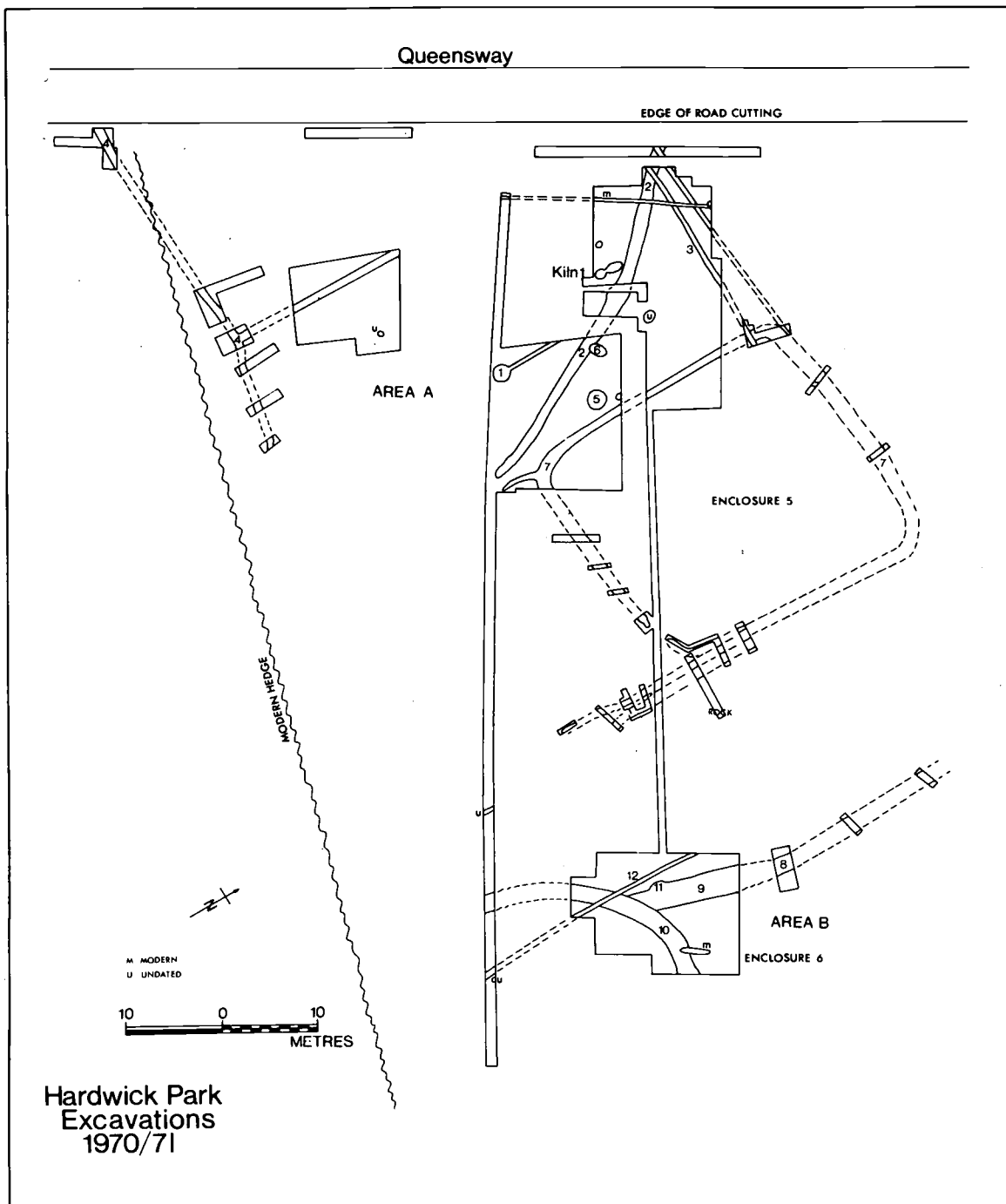


Fig. 7 Hardwick Park: plan of the excavations 1970-71.

*Pit 2*

This pit was roughly circular and 2m. across. It was 75cm. deep with a flat bottom about 50cm. across and sloping sides. On the up-hill side a small straight ditch 30cm. wide and 15cm. deep ran into the pit. The ditch was uniformly filled with fine brown silt containing nothing else except a lump of ironstone. It seemed to be a single structure with the pit, but the fill of the pit was mainly a mixture of earth and stones, some of which showed signs of burning, pottery and bones of cow, pig and sheep. This had not accumulated slowly, but had the appearance of having been put into the pit all together to fill it up. There was no silting at the bottom of the pit at all. It seems impossible that no primary silting occurred and it can only be assumed that the pit was cleared out before being refilled with rubbish. In this case all three explanations for the absence of kiln debris remain open.

This pit might have been intended to collect and hold water or to act as a drainage sump, or have some function in relation to the nearby kiln, though it is not certain that the two are contemporary. During the excavation the pit flooded and held water for two days after the other pits and ditches had drained, which suggests that the pit would have been more suitable for water collection. It was, however, unlined.

*Ditch 2*

This ditch ran N.W. -S.E. across the roadway and Area A in a slight curve. It varied in width and depth. The smallest section was 1m. wide and 45cm. deep while the largest was 2.25m. wide and 1.25m. deep. Because of the great variation in size, six different sections were cut through it. The layers were fairly consistent through all sections except the smallest. From the top they were:

*Layer 1.* A dark brown layer containing pottery in small fragments. This layer sometimes covered only part of the ditch, perhaps indicating the loss of the upper part of this feature through ploughing.

*Layer 2.* A black deposit containing much ash and charcoal with pottery which included many complete or nearly complete vessels, some apparently broken by being thrown into the ditch.

Some kiln debris was found in these two layers.

*Layer 3.* The main fill of the ditch was very much like the surrounding subsoil. It was sometimes difficult to distinguish from the subsoil and in the first section cut, it was mistaken for the subsoil and not excavated. This layer contained some pottery, mostly as isolated sherds, but at the very bottom of one section was the lower half of a large storage jar.

There was no primary silting except for a very thin layer, less than 5mm. thick, of fine grey silt which was noted at the bottom of two of the sections, hardly more than would result from a heavy rain storm on a newly disturbed surface.

The nature of layer 3 and the lack of silting indicated that this ditch had been refilled very soon after it was cut. The great variation in width and depth suggests that the ditch was never finished, assuming that the intention would have been to make it as wide and deep as the largest section. Nothing was found to show positively why this had happened, but it seems to have occurred in the middle of

the 1st century A.D. and to have been followed by slight changes in the economy of the inhabitants (see Appendix B).

Most of the pottery fragments came from layer 2 and all those illustrated are from this layer (FIGS. 14 and 15, 9-26). Also in this layer were found part of a rotary quern, an iron knife and a glass bead (FIG. 19, Nos. 9 and 10). A brooch (FIG. 19, 1) was found in this layer of the ditch where it crossed the roadway.

In layer 1, which probably accumulated gradually as the filling of the ditch settled, some dross from smelting a copper based alloy was found (see Appendix A). A dump of shelly clay, about a bucketful, was found at the junction of layers 1 and 2 in the area near the kiln, presumably useless or surplus clay dumped by the potter.

1,306 sherds were retained from this ditch and 77 vessels were drawn. There were 32 calcite gritted jars which had been used for cooking and of these 24 had one or more channels on the rim. Well made jars in the Belgic tradition of fine, slightly sandy fabrics formed the next largest group. There were 18 in all and nine were carinated. The rest were all locally common forms and the whole group is similar to the pottery from the late Belgic site at Irchester (Hall and Nickerson, 1968).

#### *Ditch 4.*

This ditch was 1 m. wide and 50 cm. deep. It had filled up over a fairly short period and was not re-cut. No layers were distinguishable in the fill. It contained a great deal of kiln debris, part of a kiln bar and a fired clay plate (FIG. 21, 19 and 20). These were similar to those found at Weston Favell, but not like those from the kilns on this site either in form, texture or colour. The highest concentration of kiln debris was not found in the part of the ditch nearest the kiln, which in any case was 37 m. away. It was not possible to investigate to the South of this ditch because of the overgrown modern hedge and dumps of building materials, and in the area uncovered to the North no trace of any kiln was found. It is possible, however, that the patches of burnt subsoil noticed in the road works were the remains of kilns.

Although this ditch yielded only half as much pottery as Ditch 2, the forms were more varied (FIG. 16, 27-45) and included some Romanised types. It would appear to be somewhat later in date than Ditch 2.

Fortunately Ditch 4 contained various objects which help to date it. A samian potter's stamp was found and identified by Mr. Hartley as belonging to Bio, made between 45 and 65 A.D., a coin of Cunobelin identified by the British Museum Coins and Medals Department as Mack no. 248, and a brooch of post-conquest type (FIG. 19, 2). It would therefore seem that this ditch can be dated to the second half of the 1st century A.D., but probably before about 80 A.D.

There were 9 calcite gritted jars which had been used for cooking and of these 7 had one or more channels on the rim, roughly the same proportion as in Ditch 2. Only one of the jars in the Belgic tradition was of the carinated type out of 11 examples.



*Pit 5.*

This pit was a shallow circular bowl nearly 2m. across and only 30cm. deep. The bottom contained fine orange-brown silt which was completely barren. This had been partly dug away and the remains of fires dumped in the centre. This layer contained a prepared flint core (FIG. 20, 15). Above this was a thin layer of grey silt covered by a fine black soil containing pottery and some burnt stones.

*Pit 6.*

This was also a shallow pit, 30cm. deep, but oval in shape and about 2m. long. It was partly cut into the fill of Ditch 2 (see FIG. 7). Whatever its original purpose, this pit was eventually used for rubbish including animal bones, the remains of fires, large stones and pottery. Both Pits 5 and 6 contained some kiln debris.

*Enclosure 5.*

It was suspected in 1970 that Ditch 7 was an enclosure ditch and this was proved in 1971. The enclosure was nearly square and about 26m. x 28m. The ditch was 60 to 80cm. deep and between 1m. and 1.80m. wide. Pottery was not prolific, but was of the same general type as that from Ditch 4, and included a decorated sandy grey ware base very similar to pot 32. It seems that these ditches are roughly contemporary. As well as kiln debris this ditch contained dumps of shelly clay similar to that in Ditch 2. One dump was reddened on the upper side by later fires in the ditch. These dumps were found in the part of the ditch nearest to the kiln. Ditch 2 layer 1, Kiln 1 and Ditch 7 are therefore presumably contemporary and from the type of pottery would seem to be of roughly the same date as Ditch 4.

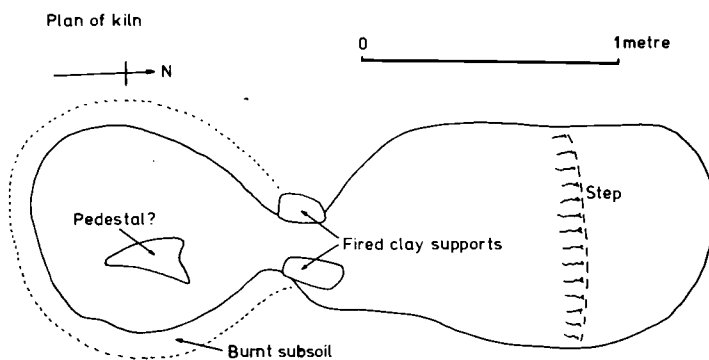


Fig. 8 Hardwick Park: Kiln 1.

*Kiln 1 (FIG. 8).*

The kiln was aligned roughly N.-S. with the furnace to the South. It would appear to come within the type 3C classification (Woods, 1974). The furnace was just under 1m. across and 40cm. deep. The stokehole was the same depth and 1.50m. long. The kiln had been cut into the clay subsoil which was burnt to a red colour around the furnace. There was no lining. The reddening was 8cm. thick at the surface of the subsoil, but tapered to nothing under the floor of the furnace. There was no reddening around the stokehole. The fired clay supports of the flue

arch were found in their original positions and another piece of kiln furniture, either a broken pedestal or part of the lintel to the flue, was found in the top of the fill of the furnace (FIG. 21, 21-23).

The furnace had been cleaned out after use. Very little ash remained on the floor except in and around the flue where there was a layer of scraped up burnt clay and ash not more than 6cm. thick. There was no socket for a pedestal, no ledge or holes in the walls for fire bars and no fire bars were found. It is difficult to see how the pots were supported during firing although it is possible that the deep disturbance of the overburden had removed that level of the structure. Some large sherds from the kiln were blackened all round the edges and might have been used to bridge gaps between supports and form a base for pots being fired, or as a dome support over the kiln load.

There was a change in level of about 10cm. depth across the floor of the stokehole. Whether this step was intentional or caused by repeated scraping out of the fire by somebody standing in the other end of the stokehole is not certain.

Some silting had occurred, particularly in the stokehole, before the kiln was filled in with a mixture of kiln debris, earth, some pottery and a few large stones. There was little pottery, 124 sherds in all. Of the pots from the kiln (FIG. 17, 46-51) two jars were unused and some of the sherds of one had been blackened by fire after breakage as mentioned above. It is possible that these two pots were made in the kiln, although this is by no means certain.

Always remembering that the disturbance of the soil to a depth of 45 to 60cm. may have removed a great deal of evidence, particularly of buildings, it would seem that this area was in use at about the middle of the 1st century A.D., this being mainly represented by Ditch 2. There were then changes in the layout of the settlement, represented by the other pits, ditches and the kiln, which remained in use during the third quarter of the century. After that, this part of the site was apparently not occupied.

#### AREA B (FIGS. 9 and 10).

Two long trenches cut by machine right across the site showed a group of features at the East side of the field. One trench was widened to investigate these. The overburden in this area was only 35 to 40cm. deep.

#### *Ditch 8.*

The earliest feature of this group was a ditch running approximately N.-S. (FIG. 9, 8). In the fill were layers, or lenses, of sand and fine grained charcoal among finer silts, as though this had been a water channel. The land here slopes very slightly to the South. There was little pottery and it consisted mainly of small worn sherds, but there were lumps of material, samples of which Dr. Tylecote has identified as iron working slag (see Appendix A). The ditch varied in width from 1.25m. to just over 2m. and in depth from 50 to 70cm.

#### *The Floor.*

Above Ditch 8, sealing it, were the remains of a hard floor (FIG. 9). This consisted of a compact layer of stones of various sizes from 15cm. to small gravel. It was preserved where it crossed the ditch and for up to 1m. to the West of the ditch

where it rested on the subsoil (FIG. 10). It rose gradually to the disturbed layer and had, presumably, been ploughed out on both sides. To the South it was cut away

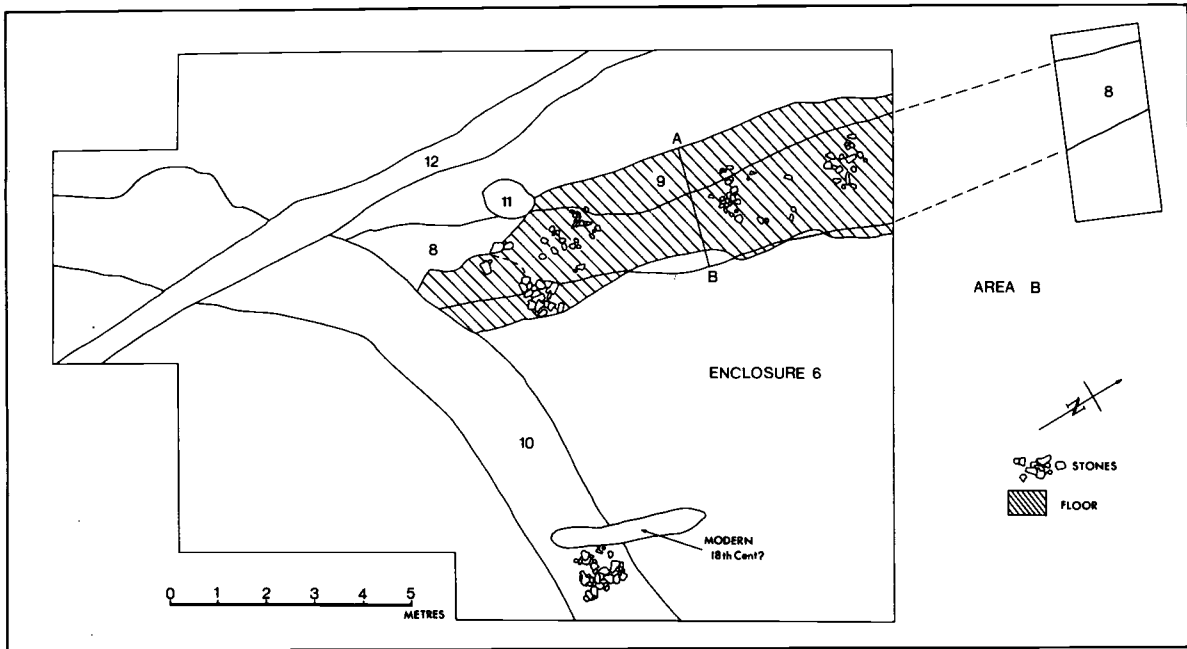


Fig. 9 Hardwick Park: Area B, 1970-71.

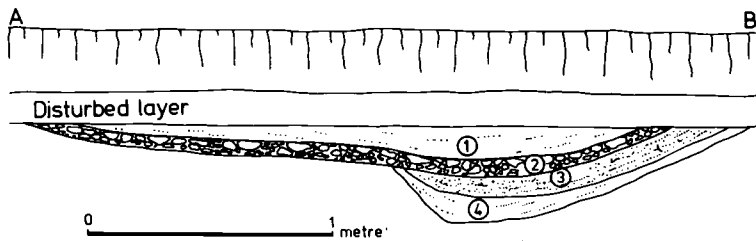


Fig. 10 Hardwick Park: Area B, section A-B.

by a later ditch and to the North it became gradually thinner and more gravelly in nature. A small trench was opened to cut the ditch about 4m. further North (FIG. 9) and no trace of the floor was found there. A Colchester brooch was found lying on top of the fill of the ditch beneath the floor and another, Nauheim derivative sealed between the floor and the subsoil (FIG. 19, 5 and 3).

Another brooch, (FIG. 19, 4), some nails and a twisted piece of iron, possibly a goad, were found above the floor in a layer of black sticky earth. These brooches are all of types current before the conquest, but which did not survive for long afterwards. The floor can, therefore probably be dated to the second quarter of the 1st century A.D. Embedded in the top of this layer were patches of stones mainly 15 to 25cm. across. These were almost all oolite and, though rather small for building stones, could have fallen from a building or a boundary wall. A similar patch was found on the surface of Ditch 10 about 5m. away (FIG. 10). The nearest

oolite outcrop is about 20 m. away (FIG. 7). The stones were firmly embedded in the layer of black sticky earth and had not been dragged across it during ploughing. No sign of wall foundations or post holes were found around the floor and it remains an open question whether it was inside a building or part of a yard.

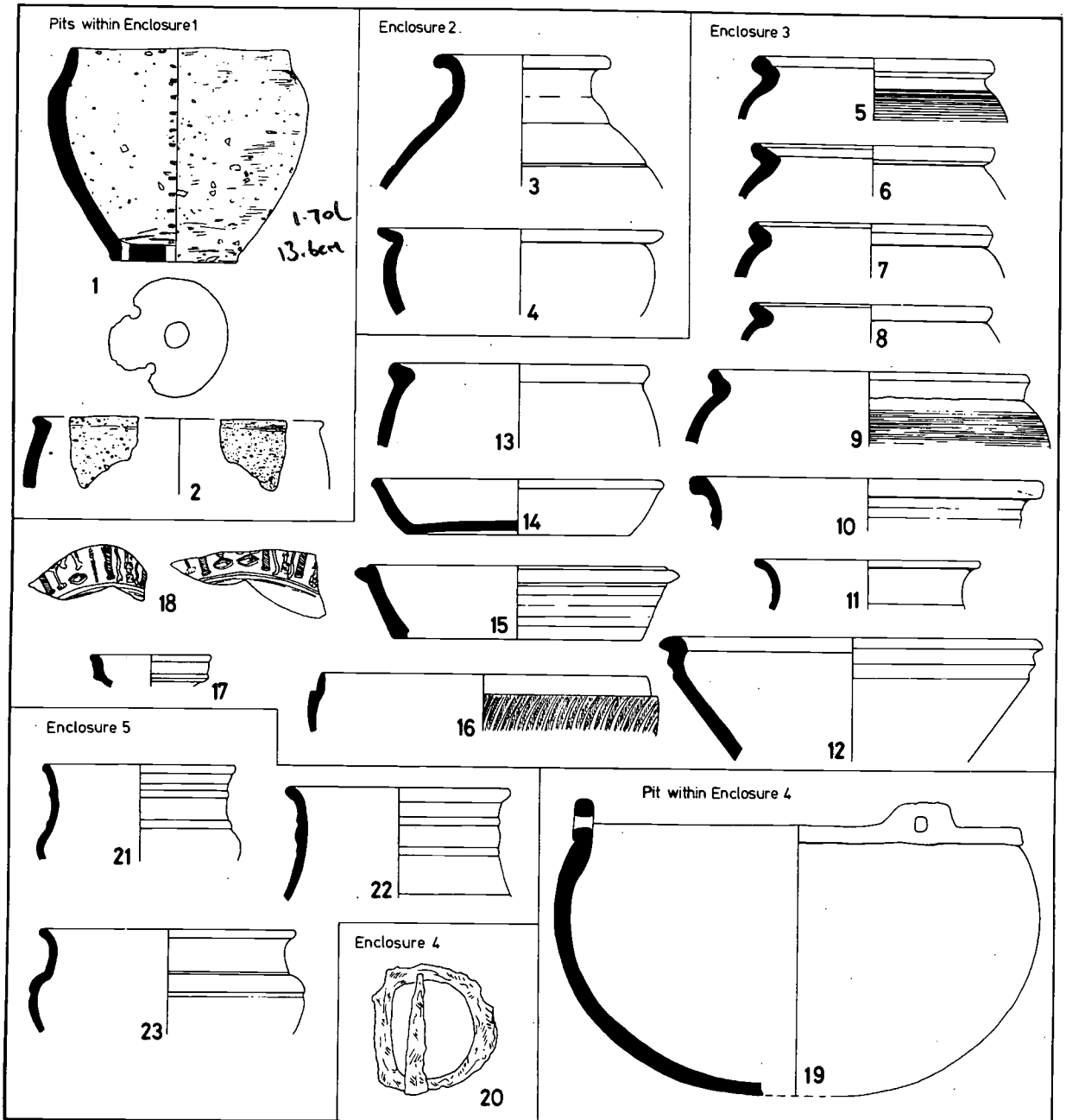


Fig. 11 Hardwick Park: pottery from observation during building work (1/4).

The pottery from the layer above the floor (FIG. 17, 52-57) includes a ring necked jug and seems to be late 1st century A.D. in date, though it could be as early as about 60 A.D. The date of the ditch is uncertain though obviously earlier than the floor.

#### *Enclosure 6.*

A later ditch, No. 10, belonging to Enclosure 6, was cut across the corner of the floor and obliterated both floor and ditch to the South. This ditch was approximately 1.60m. wide and 75cm. deep. The pottery (FIGS. 17 and 18, 58-68) includes early 2nd century A.D. types and further tracing of this ditch in 1971 brought to light a samian potter's stamp which dates this ditch to the first third of the 2nd century A.D. Observations during building work enabled the outline of this enclosure to be completed (FIG. 3).

## THE FINDS

### POTTERY

#### 1: FROM OBSERVATION DURING BUILDING WORK

##### *Features within Enclosure 1 (FIG. 11)*

1. Shouldered upright jar. Surfaces and break dark brown and where the surface is undamaged by wear some burnishing is evident, but this is by no means a fine vessel. Rim and surfaces are irregular, but quite smooth. The base is perforated with a central hole made before firing and two satellite holes drilled after firing, apparently causing the fracture of the vessel. This form has a long life in the Pre-Belgic Iron Age. It appears before the Globular Phase and has been suggested as a precursor of the globular jar in Northamptonshire. Many examples have scored side walls (Jackson, 1975). Although they survive until the end of the Globular Phase no local examples have been found with curvilinear decoration. The date range at its widest is 200 B.C. to 15 A.D. This example is thought to be earlier rather than later. (Jackson, 1975, FIG. 23 no. 24, and FIG. 24, no. 11.)
2. Barrel jar with everted rim. Dark pink/brown, finely shell gritted, hand made or on a slow wheel, with regular surfaces. These vessels appear to have had a narrow life within the primary Belgic phase and cannot be easily seen to develop from the preceding Globular Phase. They are superseded by channel rim jars. (Williams, 1974, FIG. 20 nos. 151 and 155).

##### *Enclosure 2 (FIG. 11)*

3. Narrow necked globular jar. Black fine sandy ware. (Cunliffe, 1971, FIG. 102 no. 171).
4. Globular bowl with everted rim. Fine grey ware. (Kenyon, 1948, FIG. 23 no. 3).

##### *Enclosure 3 (FIG. 11)*

The pottery recovered included many examples of channel rim jars in a hard, white slurried pasty fabric, and to a lesser degree shelly fabrics. There are examples of large roll rim storage jars and a quantity of grey ware. Also present were thick brick-like tile fragments.

- 5-9. Channel rim jars. Light grey, hard and slurried. Some with horizontal body rilling.
10. Plain jar. White, hard fabric with stony inclusions.
11. Plain jar. Fine grey ware. (Frere, 1972, FIG. 107 no. 280).
12. Deep bowl. White, slurried with hard stony fabric. Similar to that found in Ditch 10 and illustrated as no. 64 in 2 below.
13. Jar with expanded rim. White, hard, with stony inclusions.
14. Pie dish. Fine grey ware.
15. Pie dish with flange. Fine grey ware.
16. Castor box. Metallic red/brown to blue. Fluted rouletting.
17. Flagon. Pink, granulated ware.
18. Samian. Dr. 37 in the style of the group of potters associated with Quintilianus of Lezoux. c. A.D. 125-150.

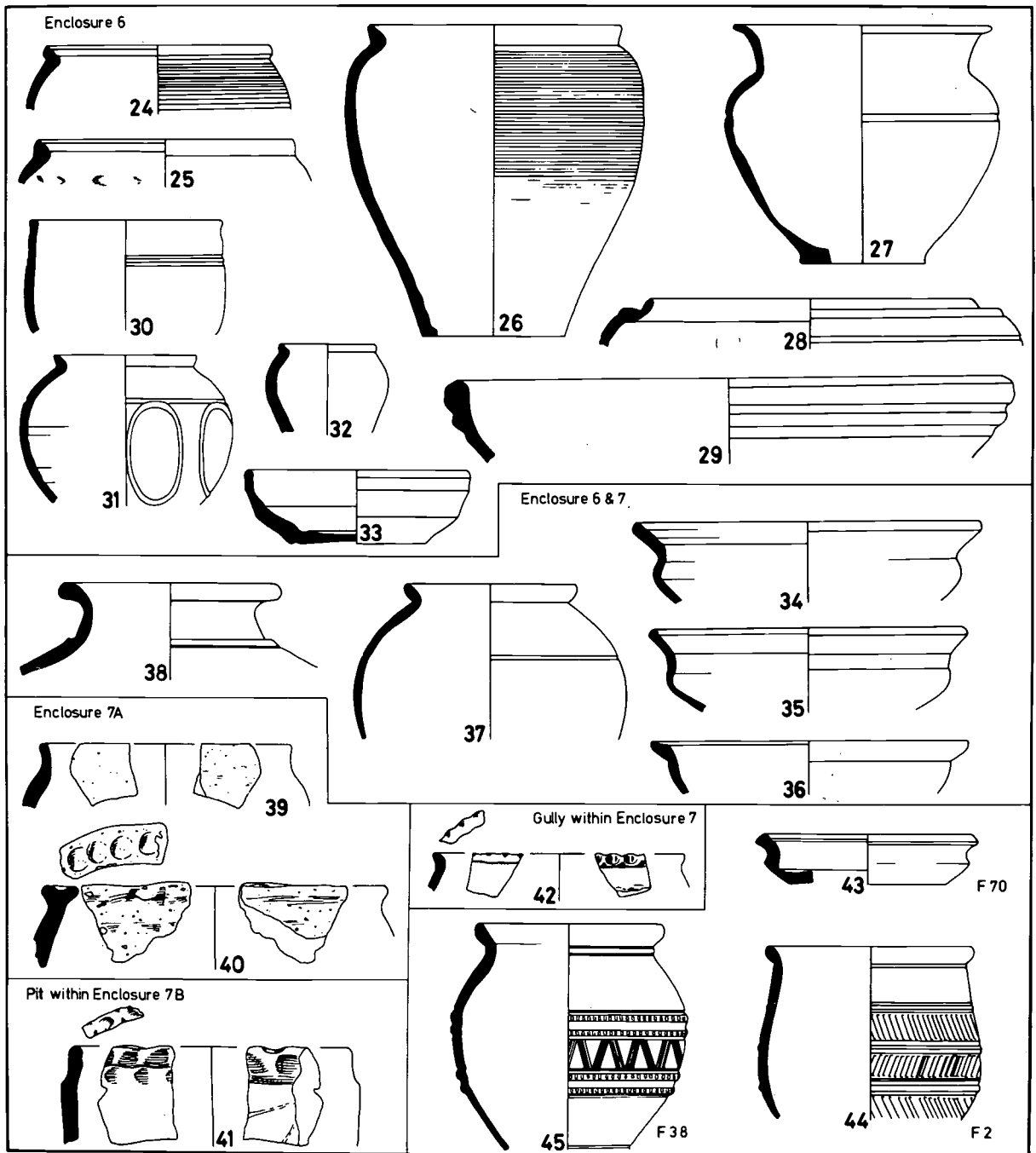


Fig. 12 Hardwick Park: pottery from observation during building work (¼).

*Features within Enclosure 4 (FIG. 11)*

From a pit.

19. Hanging cauldron. Pink with profuse small shell grits. Rim with incised channel. The holes through the handle tabs were drilled after firing. Hand made, or on a slow wheel. Possibly mid-to late 1st century A.D.  
From the surface of the re-cut of Southern arm of enclosure.
20. Iron buckle.

*Enclosure 5 (FIG. 11)*

Pottery additional to that described in 2 below.

21. Cordoned beaker. Hard reddish/brown slightly sandy ware.
22. Cordoned beaker. As above
23. Necked globular jar. Fine sandy grey ware.

*Enclosure 6 (FIG. 12)*

Pottery additional to that described in 2 below.

24. Double channel rim jar. Orange/pink with blackened exterior. Horizontal rilling around body. Sparse small shell and red grits. From the lower layers.
25. Double channel rim jar. As above but without the rilling.
26. Channel rim jar. Blackened pinkish/buff with small red grits. Horizontal rilling around body. Well fingered internally around the base.
27. Necked globular jar. Fine grey ware.
28. Large globular vessel with lid seating. Light to dark sandy ware.
29. Deep bowl. Mottled buff/light brown with blackened interior. Sparse medium large shell inclusions, sandy fabric.
30. Small upright beaker. White sandy ware. (Frere, 1972, FIG. 106, nos. 208 and 210; Woods, 1970, FIG. 41, no. 298).
31. Globular beaker. Black sandy ware with applied trail decoration in circles sited around the body.
32. Small jar. Light pink with blackened exterior. Small shell and red grits.
33. Dish. Grey/light brown with large area of internal blackening. Sandy ware with very sparse, large shell inclusions.

*Enclosure 6/7 (FIG. 12)*

Pottery additional to that described in 2 below.

- 34- Angular dishes. Brown to pink/brown, very hard with slurried surfaces. Quartz grain and stony inclusions.
36. Plain globular jar. Sandy fine grey ware.
37. Large narrow necked jar. Off white, hard slurried ware with stony grits.
38. Globular jar. Hand made in a dark brown quite hard fabric with small shell grits. May have been burnished.
39. Wide mouthed jar with finger tip indentations on rim top. Brown uneven surface with some shell gritting. These rather crude jars are not out of place in the Globular phase; many examples have been found at Weekley associated with fine decorated globular jars.<sup>4</sup>

<sup>4</sup> D. A. Jackson, current excavations at Weekley, near Kettering.

From pit within Enclosure 7B (FIG. 12)

41. Upright jar. Finger impressed rim top and sides. Pink shelly ware, slight scoring on outer surface. Again a hand made Pre-Belgic vessel which cannot be dated accurately on its own.

Enclosure 7 (FIG. 12)

From gully within enclosure.

42. Jar. Rim top lightly finger pressed and with fingernail pinching around outer rim edge. Blackened pink/brown, grey on break. Small prolific shell but in a hard Belgic/Roman fabric. Would not be out of place in a primary Belgic context.

Pit F70 (FIG. 12)

43. Dish. Dark brown with very hard slurried fabric and stony inclusions.

Ditch F2 (FIG. 12)

44. Butt beaker. Burnished orange with panels of alternating diagonals stamped between small cordons. A hard sand gritted fabric.

Ditch F38 (FIG. 12)

45. Butt beaker. Grey sandy ware with combed chevrons between notched cordons. Associated with this beaker were many channel rim jars and grey sandy wares.

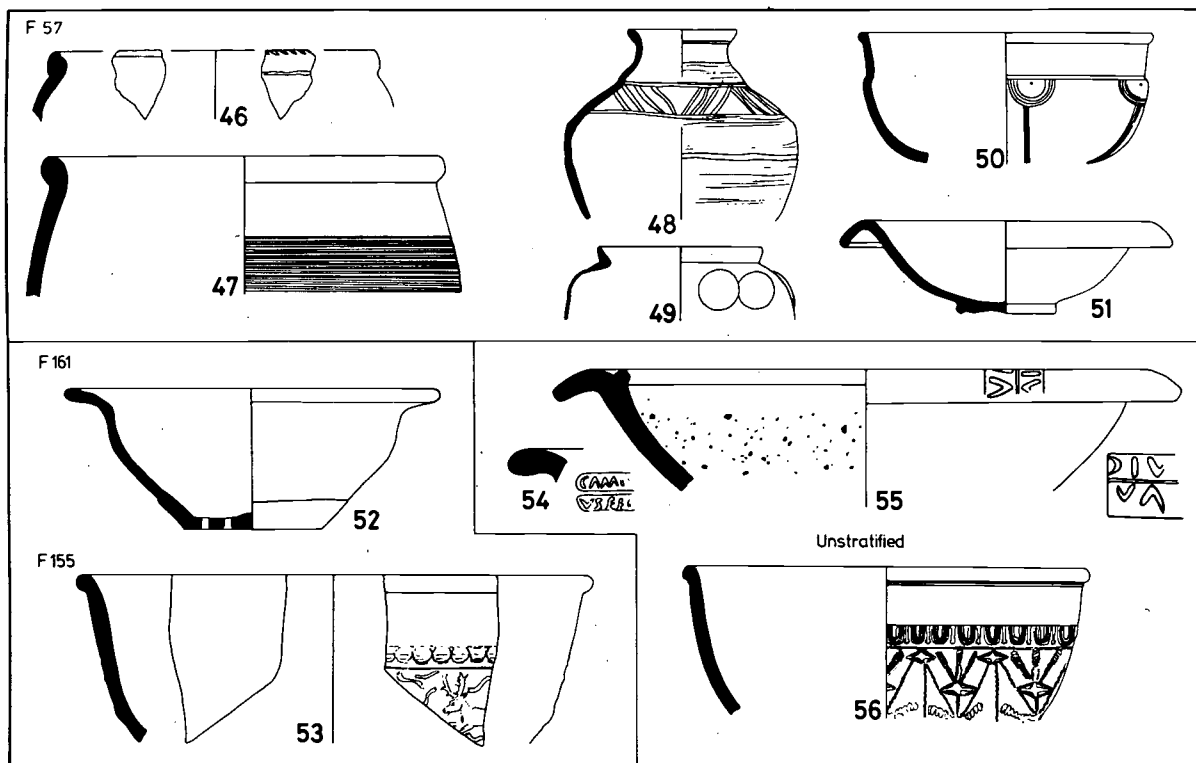


Fig. 13 Hardwick Park: pottery from observation during building work (1/4).

Ditch F57 (from the ditch terminal) (FIG. 13)

46. Channel rim jar with slashed rim edge. Red/brown hard fabric. (Williams, 1974, FIG. 20 no. 162).

47. Bead rim barrel jar with rilling. Pink/brown, hard shelly fabric.

A suggested date for these two vessels is the 2nd quarter of the 1st century A.D.



HARDWICK PARK EXCAVATIONS

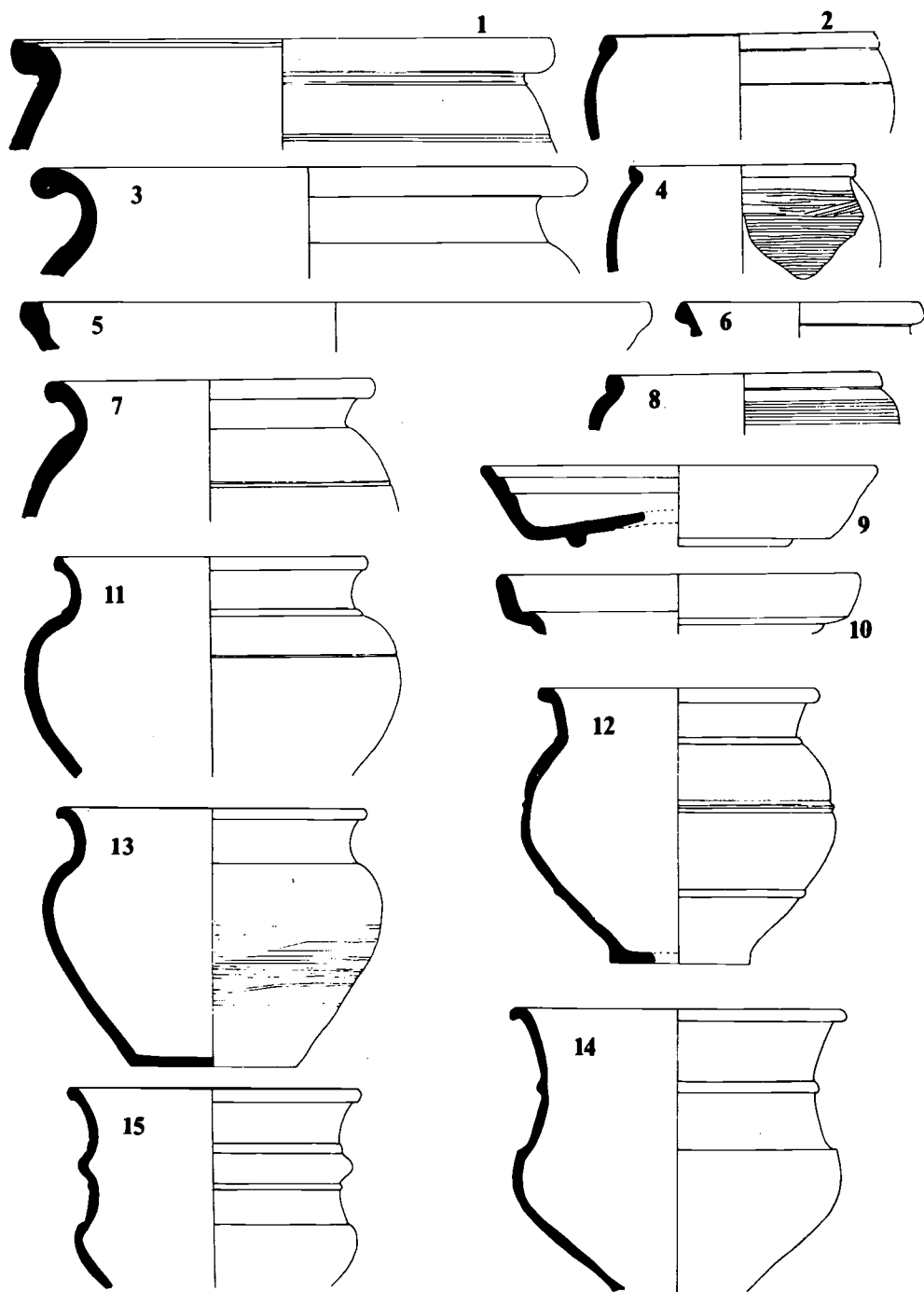


Fig. 14 Hardwick Park: pottery from the excavations (1/4).

From the same ditch but at some distance to the West, the following group illustrates a later deposit dated to 100-150 A.D.

48. Narrow necked jar. Black with white break, a very fine hard sandy ware. Wheel turned but hand moulded with decorative burnished lines.
49. Globular beaker with bossed decoration. Fine orange/red colour with mica dusting. The bosses were formed by pushing from the inside against a mould. (Cunliffe, 1971, FIG. 110, no. 274).
50. Bowl imitating Samian Form 37. Fine micaceous smooth dark burnished ware. Compass drawn circles with incised lines. London ware. (Frere, 1972, FIG. 119 no. 694; Woods, 1970, FIG. 37 no. 262; also from Elton (Northampton Museum no. 263)). An example is also in Kettering Museum from Blandford Avenue, Kettering (unpublished).
51. Bowl with plain rolled rim. Fine hard smooth grey ware. (Frere, 1972, FIG. 113 no. 495).

*Ditch F161 (Ditch 2 in the excavation report) (FIG. 13)*

Additional to that described in the excavation pottery report 2 below.

52. Plain bowl with splayed rim. Light orange with a coarse shell and grit fabric. Pre-fired perforated colander base. Similar vessel from Late Belgic ditch at Wakerley.

*Ditch F155 (FIG. 13)*

53. Dr. 37, in the style attributed to Donnaucus of Les Martres (*cf.* Stanfield and Simpson, 1958, PL. 47, no. 555). *c.* A.D. 100-130.

*Unstratified (FIG. 13)*

54. Mortarium with stamp. White with a thin pink/orange sandwich on break. Very sparse dark brown and orange grit.
55. Mortarium with stamp. White with sparse dark grit. This vessel was found in a pipeline trench outside the development area and close to the stream to the South of the site. Also recorded at this point was a dressed stone wall with associated Roman pottery.
56. Dr. 37, style of Medetus-Ranto of Les Martres de Veyre. For a closely similar bowl, see Stanfield and Simpson, 1958, PL. 30, no. 365. *c.* A.D. 100-125.

*Kiln 4 (FIG. 5)*

- K4/1. Channel rim jar. White/pink to orange in colour. Very hard slurried fabric with sparse, medium large stony (limestone?) inclusions showing lumpily under the surfaces. Finger print marks are very sharp and clear and the pot surfaces have a very fresh appearance which indicates either possible manufacture in this kiln or early breakage and disposal in the kiln filling. Pots found at Kettering, *in situ* in their kiln of manufacture show resemblance in form, colour and fabric, and were thought to date from the late 1st century to early 2nd century A.D. (Foster, 1976).

K4/2. Storage jar. Described above as part of the kiln structure.

K4/3. Samian. Dr. 37 Central Gaul. The potter is not identifiable, but form and fabric indicate a Hadrianic-early Antonine date. The single short gadroon motif is unusual.

## 2: FROM THE EXCAVATIONS

### (a) SAMIAN WARE, by B. R. HARTLEY

Ditch 2, Layer 2. i. Form 15/17, burnt slightly, S. Gaul, certainly Pre-Flavian, almost certainly Claudian.

ii. Form 18 (R?) S. Gaul, Pre-Flavian.

Ditch 4. i. Form 18 R, S. Gaul, probably Neronian.

ii. Form 15/17, S. Gaul, Neronian or early Flavian.

iii. Base of Form 18 with fragment of potter's stamp. Bio of La Graufesenque. This is one of the less common stamps, noted only on Form 18 at Alesia and on Form 27 from Vechten and Verulamium. There is no closely dated site involved, so recourse to Bio and his forms is necessary. Taking this into account I should suggest *c.* A.D. 45-65 for this Form 18.

Kiln 1. Form 35, S. Gaul, not closely dateable within the 1st century.

HARDWICK PARK EXCAVATIONS

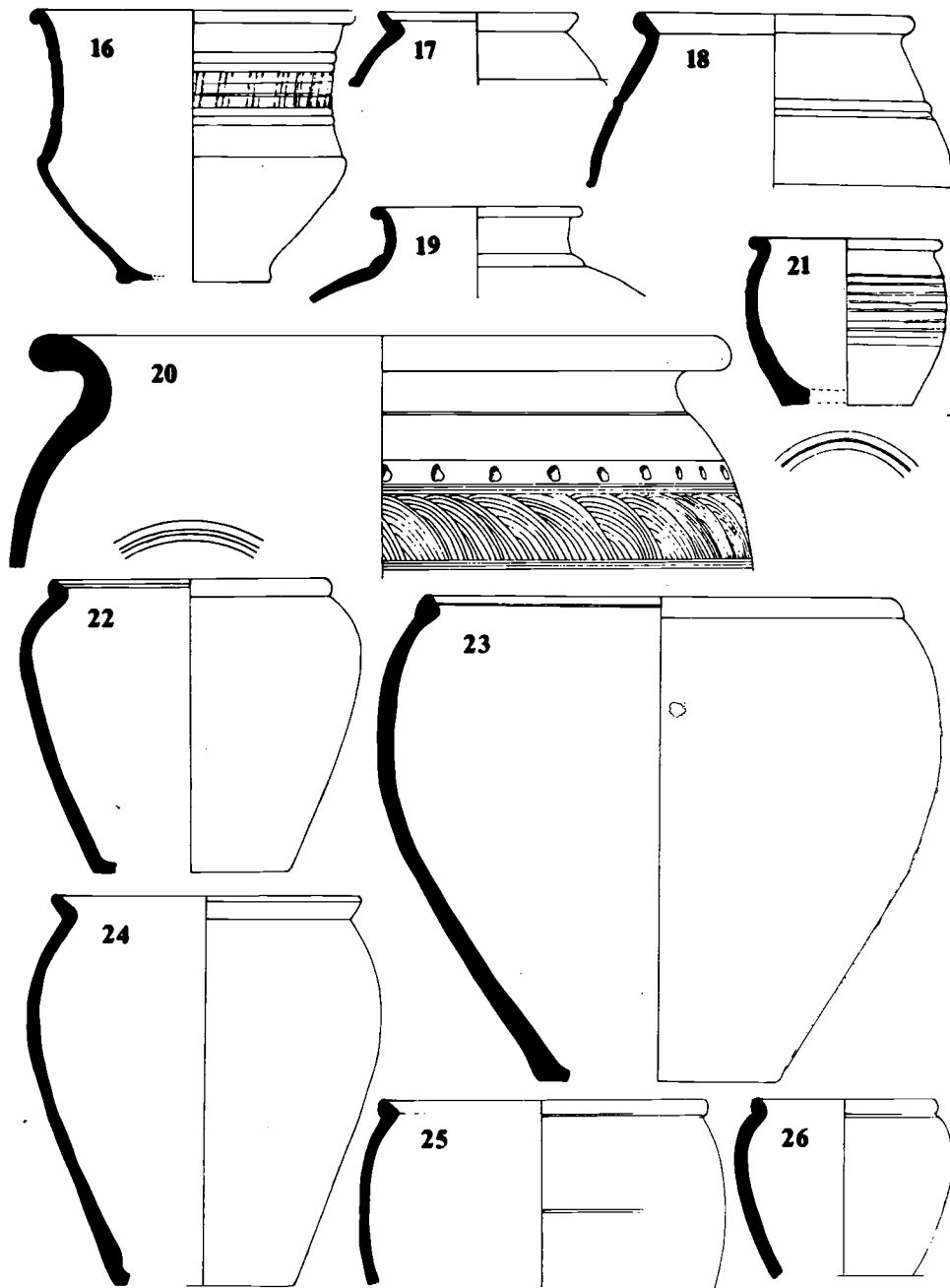


Fig. 15 Hardwick Park: pottery from the excavations (¼).

- Ditch 7, Layer 1. Form?, S. Gaul, 1st century.
- Above Floor, 9. i. Form 29, S. Gaul. Too little of the decoration survives for useful discussion but the general style suggests Pre-Flavian, probably Neronian date.  
 ii. Form 27, very weathered, S. Gaul. Not formally dateable but the fabric looks Pre-Flavian.  
 iii. Small scraps including Form 27 and 35. All S. Gaulish, probably Pre-Flavian though most not formally dateable.
- Ditch 10, Layer 1. Form 18, S. Gaul, Pre-Flavian.
- Layer 3. i. Form 15/17 or 18 (probably the latter) S. Gaul, Pre-Flavian, probably Claudian. Note kiln grit still stuck to the interior, the footring and part of the outside base — i.e. not much used.  
 ii. Form 15/17 or 18. Base with stamp of Vitalis. This man worked at Les Martres de Veyre c. A.D. 100-125. His work turns up at sites evacuated c. A.D. 125 (e.g. Malton) and also in the second Fire of London c. A.D. 120-125.

#### (b) COARSE WARES

The pottery is arranged in contemporary groups. Each group is from a single feature or one layer within a feature. The groups are not necessarily in strict chronological order but are in the order which they are discussed in the text.

##### *Group 1, from Pit 1 (FIG. 14.)*

1. Storage jar. Rough shelly fabric, brown surfaces, grey on break. Heavy, coarse shell (to 4mm.). Fabric similar to many of the cooking pots. Two grooves on the rim.
2. Jar with beaded rim. Fabric sandy and rather soft with fine, heavy shell (to 1.5mm.). Outside burnt black, inside brownish orange. (Knight, 1968 FIG. 123, no. 21).
3. Storage jar. Soft friable fabric with many small pits in surfaces, some medium shell. Corky orange-brown surfaces, dark grey on break.
4. Cooking pot. Rough fabric with heavy medium to coarse shell, burnt black with use. Combed decoration done by hand but rim wheel turned.
5. Bowl or plate. Fine hard, smooth fabric, dark brown-black right through. Wheel turned.
6. Butt beaker. Fine textured, slightly sandy fabric, very firm. Pale buff right through (Hall and Nickerson, 1968, FIG. 81, no. 37).
7. Jar. Firm fabric with smooth, slightly soapy surfaces, heavy medium shell (to 3mm.). Orange surfaces, grey on break, outside partly blackened.
8. Cooking pot. Firm fabric with moderate medium-coarse shell. Greyish brown but blackened right through on one side in use. Wheel made with rilling.

##### *Group 2, from Ditch 2, layer 2 (FIGS. 14 and 15)*

9. Bowl with footring and slight kick. Firm smooth fabric with fine black grit showing on break, brownish black surfaces and right through (Hawkes, 1947, PL. L, type 31c).
10. Bowl with cordon. Hard grey sandy ware, light grey with dark turning streaks. (Vessels of this type vary in colour from light silver grey to almost black. Fine white sand is used in the fabric which feels hard and sandy. For simplicity these will be roughly grouped into light, medium and dark hard grey sandy wares) (Hawkes, 1947, PL. L, type 24 and Mynard, 1966, FIG. 3, no. 11).
11. Necked jar. Sandy fabric, coarse sand, firm. Orange surfaces, black on break, some burnt patches on shoulder (Mynard, 1966, FIG. 3, no. 12).
12. Jar with bead rim. Fine textured, smooth fabric with surfaces much pitted either in use or in the soil. Mid-brown on surfaces, light grey on break. Unusual in having cordon below the widest part.
13. Jar. Fine textured fabric with smooth finish, burnished lines on sides. Black surfaces, red/grey/red on break. Very pitted especially on the inside (Mynard, 1966, FIG. 3, no. 14 and Hawkes, 1947, PL. LXXVI, type 221).
14. Carinated jar. Fine textured lightly sandy fabric, firm but not very hard. Pinkish brown surfaces, dark grey on break (Woods, 1969, FIG. 12, p. 70, no. 70).
15. Girth beaker. Fine texture, smooth slurried surfaces, orange-brown, dark grey on break. Burnt areas on shoulders (Hall and Nickerson, 1968, FIG. 90, no. 102, with similar pressed out cordons and FIG. 85, no. 53).

HARDWICK PARK EXCAVATIONS

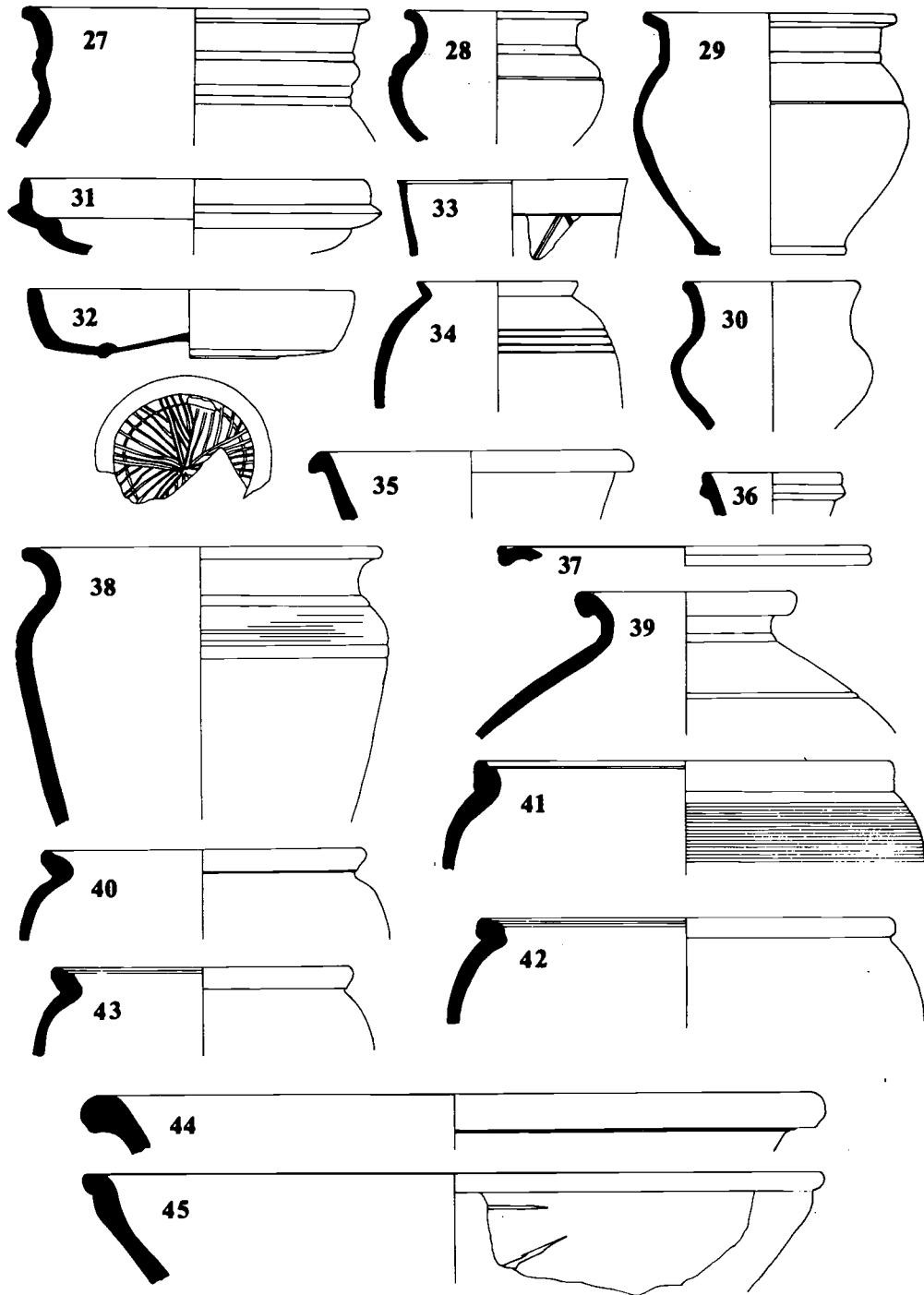


Fig. 16 Hardwick Park: pottery from the excavations (1/4).

16. Carinated jar. Fine textured fabric with smooth, slightly sandy surface, bright orange surfaces, dark grey on break. Decorated band between two double cordons consisting of groups of three nearly vertical lines and two free-hand horizontal lines.
17. Jar with everted rim. Medium hard grey sandy ware with lighter streaks. Grey through break.
18. Jar derived from butt beaker form. Fine smooth fabric with soft sandy surfaces, grey on break. (Hall and Nickerson, 1968, FIG. 83, no. 44 and FIG. 85, no. 59).
19. Necked jar with bead rim. Smooth slurried surfaces with shelly lumps underneath, red-brown surfaces, black on break.
20. Large storage jar. Coarse shelly fabric (to 4mm.), rough orange surfaces, black on break. Strong and assured decoration of a combed pattern below a row of stab impressions (Knight, 1968, FIG. 125, no. 34 and Woods, 1969, FIG. 72, no. 89).
21. Jar. Firm smooth fabric, no shell, rough horizontal combing on outside. Pinkish buff inside, burnt black outside, some grey on thicker breaks (Woods, 1969, FIG. 73, no. 101).
22. Jar with everted rim. Heavily shelled fabric, mostly fine shell but with some pieces up to 5mm. across. Originally buff but much blackened inside and out, buff-brown on break. Double groove on rim.
23. Large jar. Coarse heavily shelled fabric (to 6mm.). Orangy-brown, burnt black inside and in patches outside, dark grey on break. Single groove on rim.
24. Jar with everted rim. Firm fabric with heavy medium shell, very rough surfaces. Orange-buff blackened patches on outside, dark grey on break (Johnston, 1969, FIG. 6, no. 42).
25. Jar. Firm fabric with moderate large shell (to 4mm.). Orange surfaces and right through with some blackened patches on outside. A single horizontal groove below the shoulder does not go all round the pot.
26. Small jar. Firm fabric with moderate fine shell and black grit. Brown inside, grey-brown on break, burnt black outside.

*Group 3, from Ditch 4 (FIG. 16)*

27. Girth beaker. Firm, fine textured, slightly sandy fabric with fairly soft surface. Mid-brown surfaces, dark grey on break (Mynard, 1966, FIG. 3, no. 18).
28. Small jar. Firm fabric, hard sandy surface. Buff surfaces, blackened patch on rim, grey on break (Frere, 1972, FIG. 283, no. 267).
29. Jar with everted rim and vertical neck. Medium hard grey sandy ware, no conspicuous turning streaks (Johnston, 1969, FIG. 7, no. 49).
30. Small jar. Soft sandy fabric with some coarse shell, rather roughly made, no cordons, simple rim. Orange surfaces and right through. Two other very similar pots from this ditch but none like it from the rest of the site.
31. Bowl or lid with central flange. Soft, fine textured fabric tending to powder away on the fingers. Pale grey surfaces and through break. This could be either a small bowl, as shown, or a lid with a central flange.
32. Bowl with internal cordon and slight kick. Medium hard grey sandy ware with dark turning streaks on the sides. There is a cordon inside the base. Within this is a pattern of dark burnished lines as illustrated. A similar base was found in Ditch 7.
33. Straight sided bowl. Sandy surface, fine texture, well made and finished. Medium to dark grey surfaces, dark orange on break. Incised decoration. (Hall and Nickerson, 1968, FIG. 85, no. 58. Painted).
34. Jar with small everted rim. Light hard grey sandy ware, mottled but not streaked. Four grooves on shoulder.
35. Bowl with rounded rim. Dark hard grey sandy ware (Dakin, 1961, FIG. 59, nos. 5 and 6, but these examples are of a much later date, Trajanic or later).
36. Flanged rim of a flagon or jar. Soft powdery fabric with angular grog. Light orange surfaces, grey on break.
37. An outcurved rim with double beaded edge. Light hard grey sandy ware. (Hawkes, 1947, PL. LXXX, type 246A and Johnston, 1969, FIG. 7, nos. 68 and 69).

HARDWICK PARK EXCAVATIONS

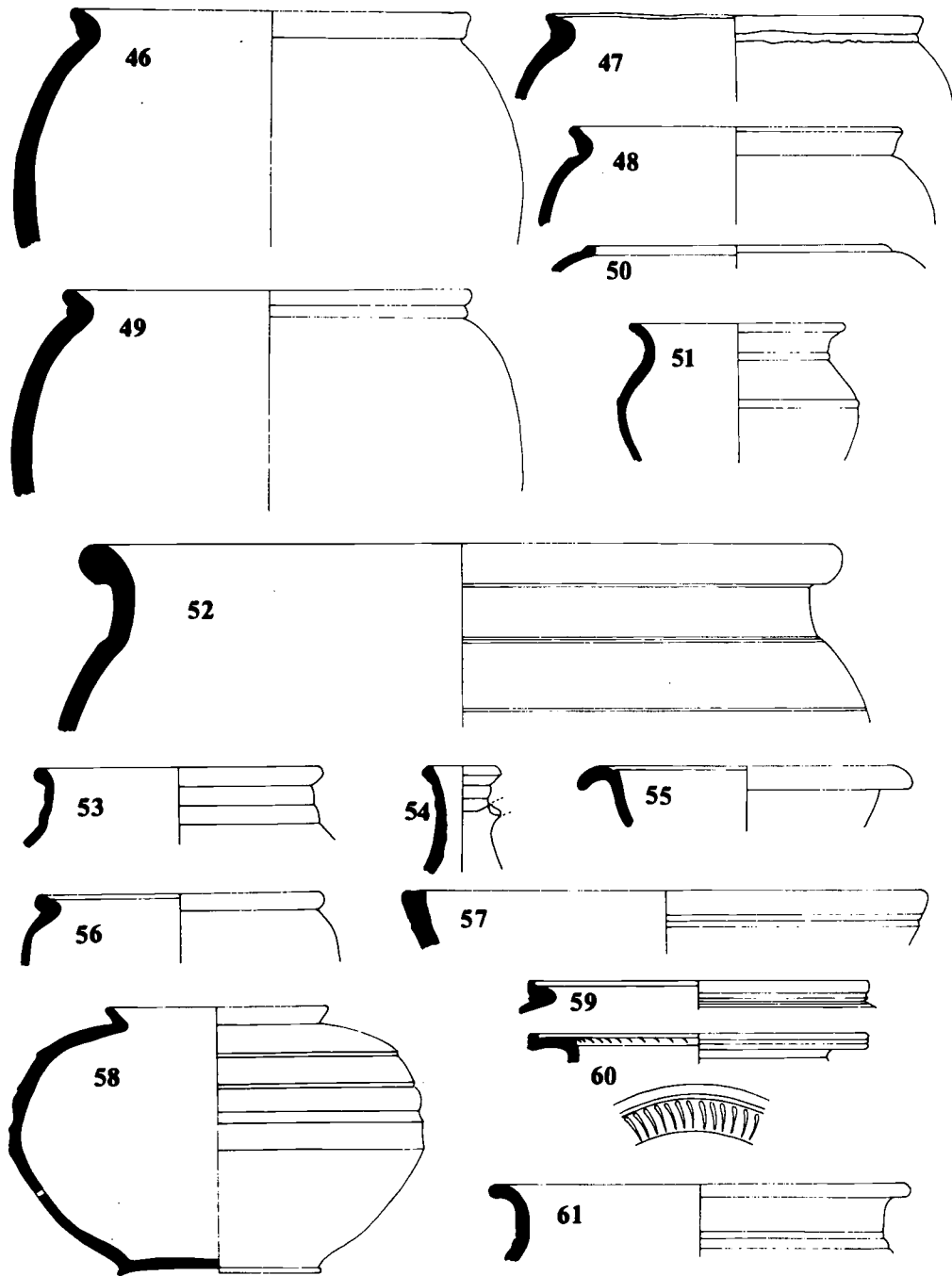


Fig. 17 Hardwick Park: pottery from the excavations (1/4).

38. Jar with high shoulder. Orange-buff on inside and through break, brownish-buff exterior. Firm sandy fabric with coarse white grog (quartz?).
39. Large narrow necked jar. Soft fabric with coarse hard grog including some crushed pot. The surfaces have worn away so that the grog stands out. Buff surfaces, pale grey on break (Woods, 1969, FIG. 86, no. 183).
40. Jar with thick everted rim. This pot is decorated with very faint, fine irregular horizontal combing which is not shown on the drawing. Light buff surfaces blackened in patches on outside, light grey on break, fine fabric, slightly sandy to the touch.
41. Wide mouthed jar with internal groove. Fabric very rough with much coarse shell (to 4mm.), firm, hard. Rim well turned and precise with a single internal groove. Horizontal rilling on body. Brownish buff outside, burnt black inside.
42. Jar with internal rim grooves. Firm fabric with much medium shell. Surface orange, blackened on outside, buff on break. Three grooves on rim.
43. Jar with slight internal rim grooves. Fabric very similar to the cooking pots from the kiln, see pot no. 46. Pinkish buff surfaces and through break, blackened by fire on outside. Two grooves on rim.
44. Rim of large storage jar. Hard smooth fabric with slightly sandy surface. Light orange-buff outside, dark grey on break, blackened inside.
45. Large bowl with slight groove on the rim. Originally light brown but surfaces blackened by fire inside and out, dark grey on break. Hard smooth fine textured fabric. Single groove on rim. Slash marks on body appear to be accidental damage during making, rather than decoration (Knight, 1968, FIG. 123, no. 48).

*Group 4, from Kiln 1 (FIG. 17)*

46. Jar. One of three from the kiln with almost identical fabric. Fabric firm and smooth, not particularly sandy but not soapy. Some fine grog including brick red specks, apparently ground pot. Pale buff surfaces and through break. The fabric of pots 43, 48 and 49 is similar. This is apparently new and unused.
47. Jar. Black surfaces and right through break, smooth, fine sparse shell, very roughly made. Rim irregular and the cordon below it smeared and very variable. Almost certainly hand-made but probably distorted during firing also.
48. Jar. Well made on wheel. Fabric as 46, slightly more orange colour.
49. Jar. Colour and fabric as 46. Rim slightly irregular.
50. Jar with inbent rim. Orange surfaces, brownish grey on break. Fabric smooth, firm and fine textured (Knight, 1968, FIG. 123, no. 21 and Kenyon, 1948, FIG. 36, nos. 19, 20 and 24).
51. Jar with outcurved rim. Medium hard grey sandy ware, not streaked or mottled.

*Group 5, from above the floor, Area B (FIG. 17)*

52. Large storage jar. Light orange brown surfaces, grey on break. Sparse medium shell, smooth, slightly soapy surfaces. Well made.
53. Wide necked jar. Light hard grey sandy ware.
54. Ring necked flagon. Orange surfaces and through break. Fine white sand used but fabric much softer than the hard grey sandy wares (Kenyon, 1948, FIG. 28, type 2 and FIG. 39, nos. 1, 2 and 3).
55. Flanged bowl with small bead. Light orange surfaces, cream on break. Fine sandy fabric (Kenyon, 1948, FIG. 38, no. 17 and Frere, 1972, FIG. 299, no. 495).
56. Jar with internal groove on rim. Pale buff fabric, very like 46.
57. Large bowl with groove on top of rim. Much smoke blackened on all surfaces, brownish buff on break. Firm, smooth, solid fabric (Hawkes, 1947, PL. LII, type 43).



HARDWICK PARK EXCAVATIONS

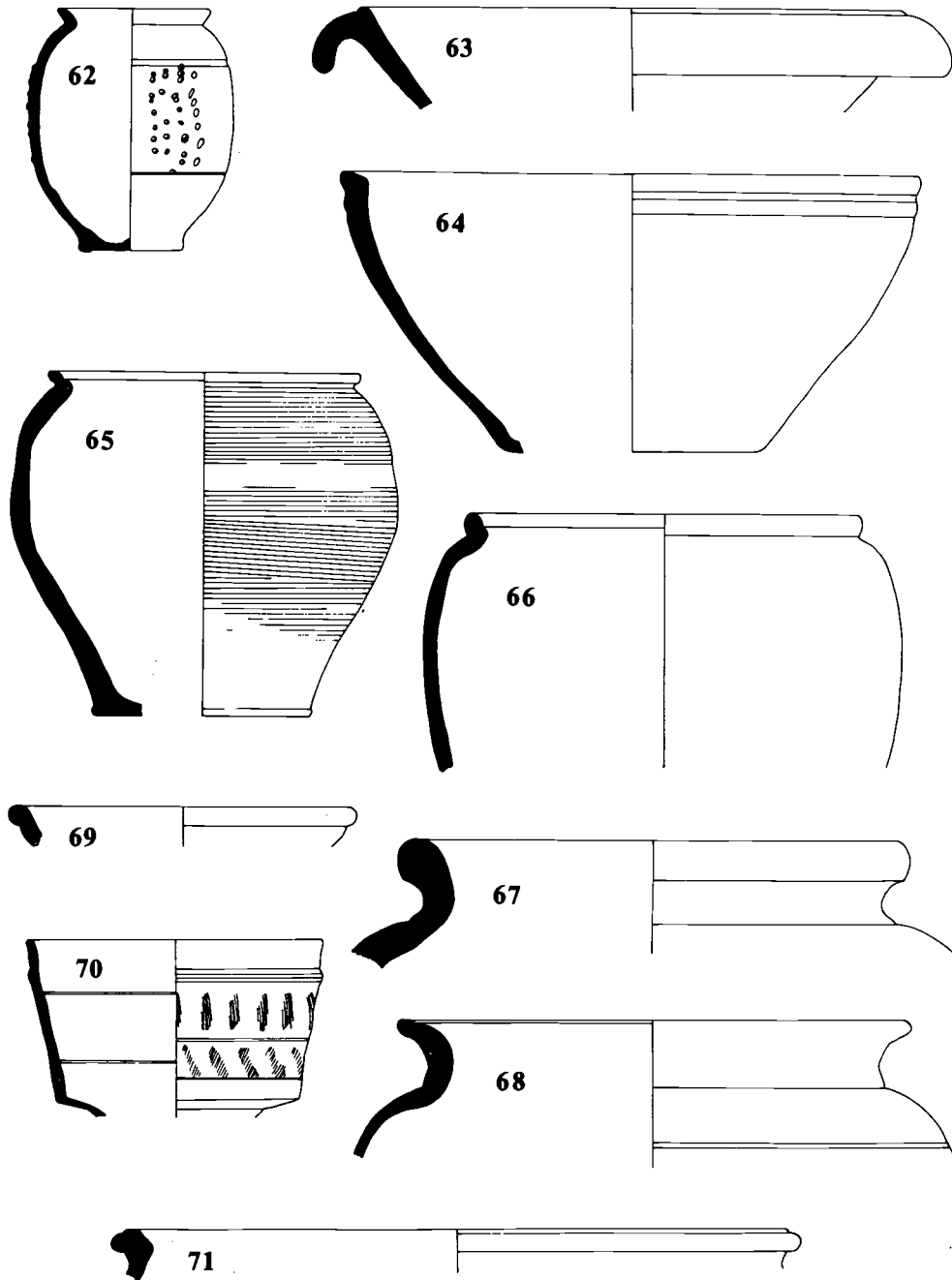


Fig. 18 Hardwick Park: pottery from the excavations (1/4).

*Group 6, from Ditch 10, Enclosure 6 (FIGS. 17 and 18)*

58. Ovoid jar with small everted rim. Brownish orange surfaces, black on break. Smooth surface, sparse quartz grit and sand (Kenyon, 1948, FIG. 38, no. 31).
59. Jar rim. Buff surfaces, blackened, grey on break. Smooth slurried surface, coarse shell (to 6mm.). The horizontal rilling is less pronounced than it appears in the illustration.
60. Outcurved rim of bowl or platter. Dark hard sandy grey ware, almost black. Impressed decoration on rim. Similar to no. 37.
61. Wide mouthed jar. Medium grey ware.
62. Jar with small everted rim. Fine dark grey sandy fabric with orange core very like no. 33. The decoration, between horizontal incised lines consists of groups of three rows of barbotine and one row of indentations, roughly vertical, repeated at intervals around the pot (Frere, 1972, FIG. 297, no. 424).
63. Bowl with hooked rim. Cream surfaces and through break. Smooth powdery fabric with fine quartz grit. This could be a mortarium with the grit in the body.
64. Deep bowl. Brown surfaces, blackened on outside, black on break. Smooth fabric with some lumpy shell. Rim possibly hand finished. Similar to nos. 5, 45 and 57.
65. Jar. Orange surfaces, black on break. Smooth slurried surfaces, moderate medium shell. Horizontal rilling distinct.
66. Jar. Orange surfaces and break, blackened right through in patches. Fine sandy texture.
67. Storage jar. Pale buff to grey surfaces, greyish buff break. Fine slightly sandy fabric, similar to no. 46. Inside badly pitted. Some sparse shell.
68. Large jar. Pale greyish cream surfaces and through break. Fine sandy fabric with some large shell (to 6mm.).

*Group 7, from Pit 11, cut through floor (FIG. 18)*

69. Rim of a bowl. Light hard sandy grey ware with very thin oxidised layer in patches (Johnston, 1969, FIG. 5, no. 2).
70. Straight sided carinated bowl, derived from Samian Form 30. Dark grey sandy ware, orange through break. This fabric is similar to nos. 33 and 62. It resembles the hard grey sandy wares but is softer and not evenly baked right through. Decoration consists of fingertip sized patches of fine combing between horizontal grooves. There are two horizontal grooves on the inside. Well made and carefully finished (Frere, 1972, FIG. 313, no. 697).

*Group 8, Medieval, Ditch 12 (FIG. 18)*

71. Rim. Fabric very soapy and crazed on inside. Smoke blackened on all surfaces. On break yellowish grey. Some shell (to 2mm.). Identified by Mr. D. Mynard as 11th century and similar to material of that date from Buckinghamshire.

## SMALL FINDS FROM THE EXCAVATIONS

### 1. THE BROOCHES, by D. MACKRETH (FIG. 19)

1. Nauheim Derivative (Ditch 2). As No. 3 below, except that the catch-plate and part of the pin are missing. Neither No. 1 nor No. 3 have any marked feature to help tie down the dating. The type had developed by the first century A.D. when it runs *pari passu* with the Colchester to the end of the type's currency, and then the Nauheim Derivative runs on, becoming less common into the last quarter of the first century.
2. Hod Hill (Ditch 4). The design of the bow falls into two parts. The upper part consists of a trapezoidal panel, with the wide end at the top; this panel has a ridge, with cross-cuts, down each side and two plain ridges down the middle. Across the top and bottom is a plain cross-moulding and at each of the top corners is a "wing" with two mouldings. The right hand one has a trace of a third moulding. The lower part of the bow is lozenge shaped with a flat front face on which there is a punched dot line roughly down the middle with diagonal punched dot lines down either side. The foot-knob is of the usual type with a small cross-moulding above. The catch-plate has a circular hole.

Hod Hill brooches are derived from the Aucissa type. In the present case, the evolution has achieved its ultimate so that the original relationship is virtually lost. This development had largely happened by the time of the Conquest and Nos. 2 and 6, one with multiple cross-

HARDWICK PARK EXCAVATIONS

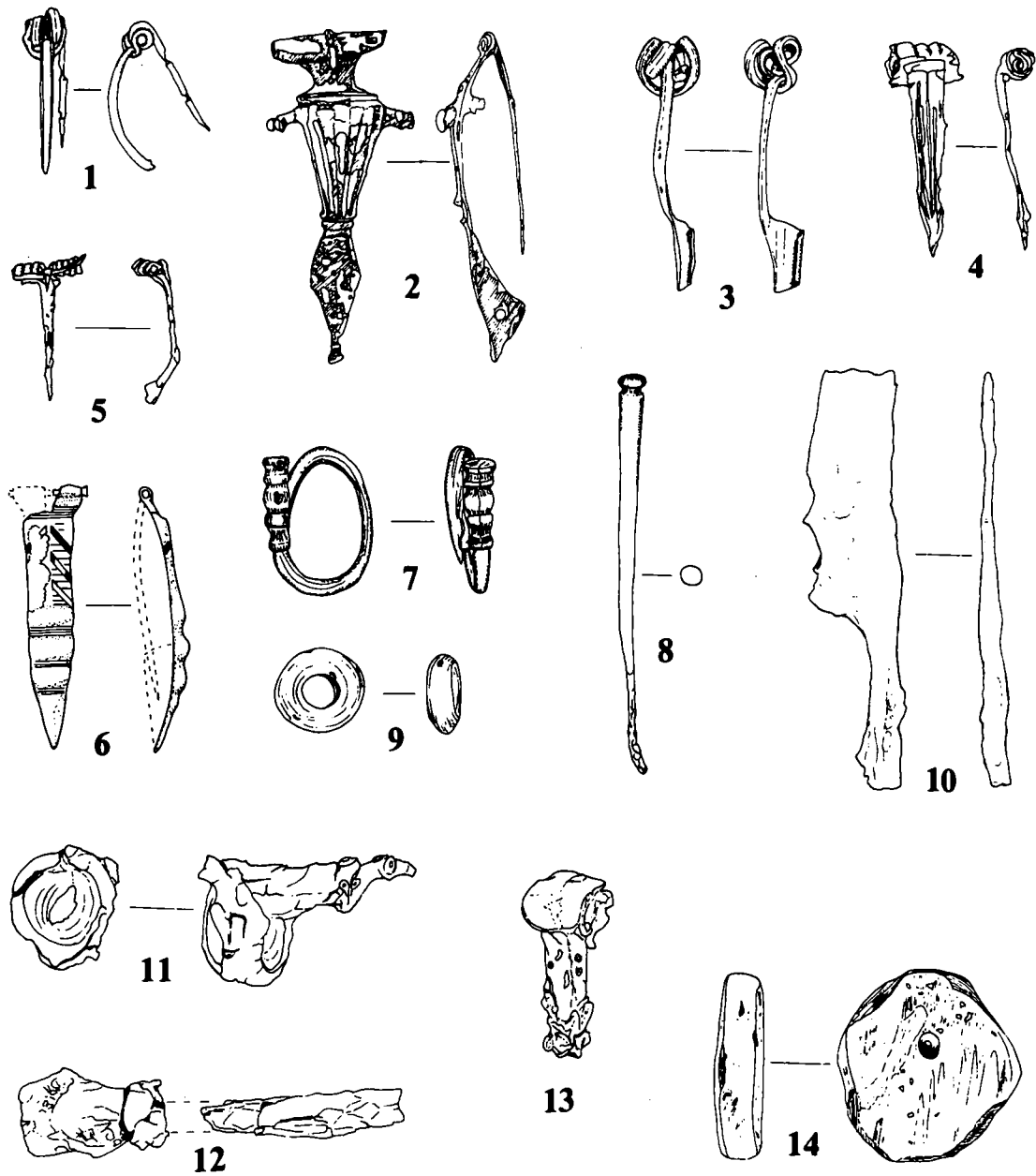


Fig. 19 Hardwick Park: small finds from the excavations (1/1).

mouldings, the other with its exaggerated design, are almost certainly post-Conquest. The Hod Hill, however, was in decline by 50 A.D. although there are many specimens to be found up to c. 60 A.D. From this date onwards, the type declines rapidly.

3. Nauheim Derivative (Ditch 8, under floor). A plain, round sectioned bow with the usual four coil, internal chord spring, and with a slight recurve to the lower part by the catch-plate. The pin is missing.
4. Langton Down (Ditch 8, above floor). The spring is housed in a case which is made up of thin bronze flaps to top and bottom of the head of the bow and these are folded round the spring. The bow is vertical and its face is separated from the spring case by a horizontal moulding. The flat face of the bow has a bordering ridge on each side and four more ridges run down the central panel. The pin is missing and the edges of the spring case and bow are corroded. Most of the catch-plate is missing.

The Langton Down is a contemporary of the Rosette in its later years. Both types come to an end at almost the same time but whereas it is relatively easy to determine which Rosettes are likely to be in Britain before the Conquest, it is much harder to distinguish the early varieties of Langton Down. There is no certainty that the Hardwick Park brooch is later than the more complex curved reeded type. However, there is no need to seek a pre-Conquest date as the type runs on to c. 50 A.D., by which time it is obviously no longer very much in manufacture.

5. Colchester (Ditch 8, under floor). A corroded brooch with just the beginnings of wings surviving, a plain bow, but with relatively large spring which projects to each side. Only a small part of the catch-plate survives and the pin is missing.

The Colchester brooch belongs to the first half of the first century A.D.: it may have been common before, but unfortunately there is a dearth of dated specimens. There is a tendency for early Colchesters to be large and relatively straight bowed, but the small version of which the present specimen may be an example had also developed by the Conquest. The Colchester survives for at least a decade after the Conquest although by the end of that time it is being increasingly replaced by its progeny.

6. Hod Hill (Unstratified). A very corroded brooch on which a series of bulbous horizontal mouldings can be distinguished.

*Note on two of the brooches* supplied by Mr. David Tomalin, Area Museums and Art Galleries Service, as a result of microscopic examination during conservation and cleaning.

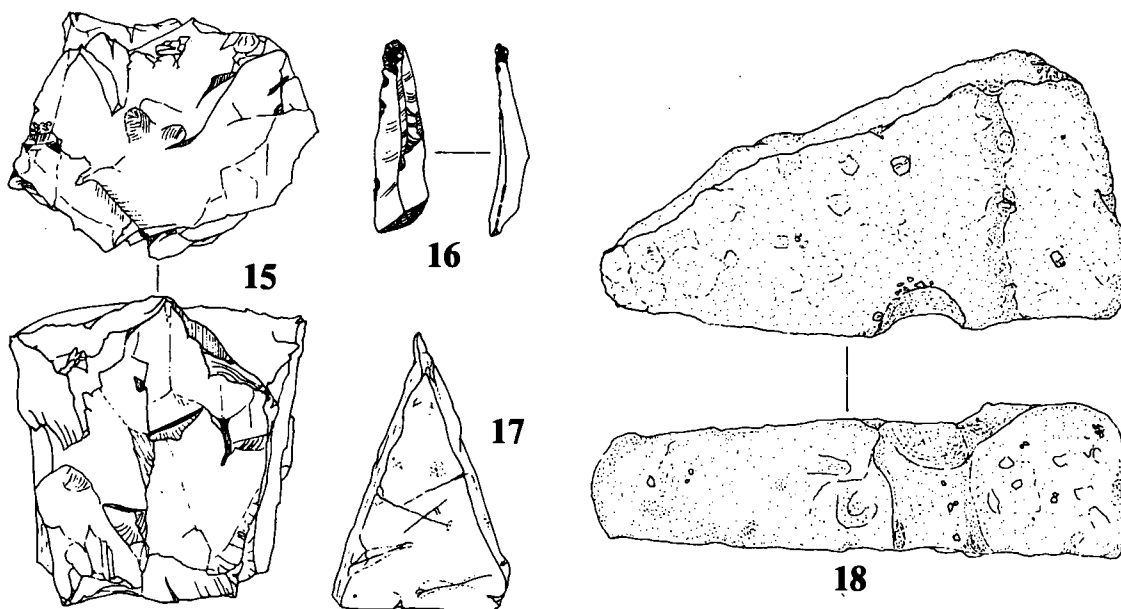


Fig. 20 Hardwick Park: small finds from the excavations: No. 16 1/1; rest 1/2.

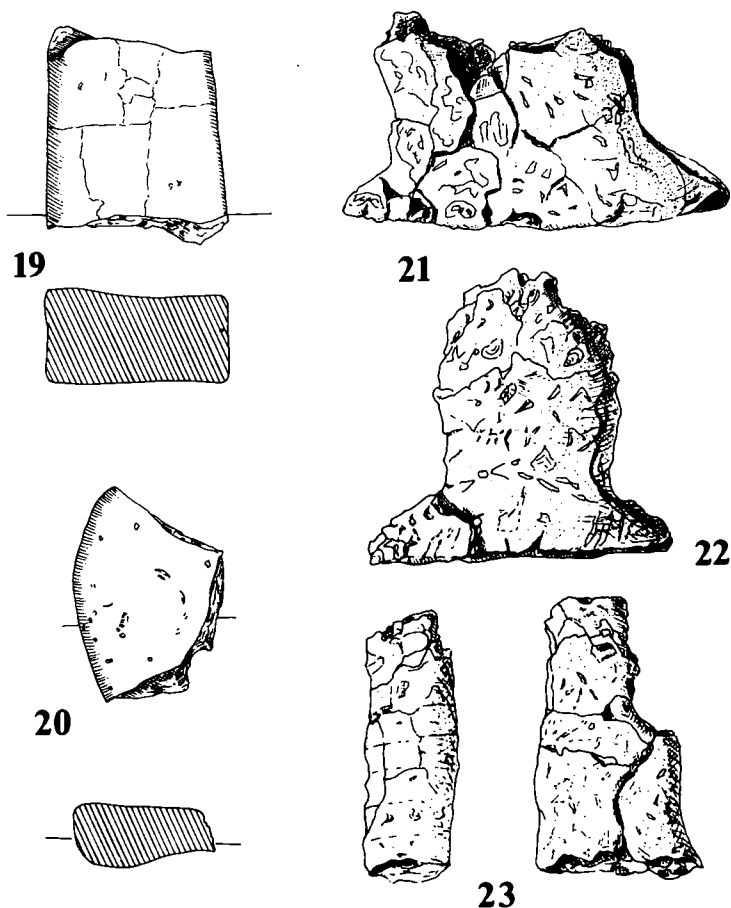


Fig. 21 Hardwick Park: small finds from the excavations (1/4).

*Brooch 2.* This has been shown by cleaning to be plated with silver on the front face. The upper features of the bow are simple moulded relief, but the lozenge shaped plate which forms the lower part is decorated with small punched depressions randomly spaced around a centre line of similar marks.

*Brooch 6.* It is plated with silver and inlaid with a dark metal, which is in all probability niello. The face of the brooch is much obscured by corrosion and is best observed under a stereo microscope.

2. OTHER SMALL FINDS (FIGS. 19-21)

7. Part of bronze bracelet. Ditch 10.
8. Bronze pin. Simple head with single groove below. Ditch 10.
9. Glass bead. Clear greenish glass. Ditch 2.
10. Part of an iron knife, tip missing. Ditch 2.
11. Iron coil with curved, pointed tip. Possibly an ox goad, above the floor. Ditch 8.
12. Iron object with a flat head and tang or handle. Ditch 7.
13. Iron nail. Above the floor. Ditch B.
14. Spindle whorl reject. Made from a potsherd and discarded because the holes drilled on each side do not meet. Ditch 4.

15. Lump of flint. This was submitted to Dr. E. Tratman for his opinion. He writes, "There is no doubt in my mind that this block has been shaped by man. The fractures are all so unweathered that they cannot have been formed while the block was in the boulder clay by ice/earth movement. What puzzles me is the general shape and the absence of well defined positive or negative bulbs of percussion. Perhaps this is due to the rather cherty nature of the flint. As a core from which flake tools were to be struck off, it does not look very like what one might expect. This does not alter the fact that it has been deliberately shaped to its present form by man for an uncertain purpose. This purpose, on balance, was likely to be as a source of raw material for making blade-like flakes, which could be subsequently trimmed into a variety of tools." Pit 5.
16. Trimmed flint flake. Ditch 2.
17. Triangular prism of chalk. Possibly a small, unfinished loom weight? Ditch 4.
18. Part of a rotary quern. Broken across hole, probably during manufacture. Ditch 4a.
19. Part of a kiln bar. Smooth sandy surface, firm, orange brown colour. Ditch 4.
20. Part of a fired clay plate. Fabric, colour etc. as 19. Ditch 4.
21. Part of a kiln bar/pedestal. Found in top of fill of kiln furnace. Colour yellow/buff, very coarse texture with large lumps of shell. Roughly made. Kiln 1.
- 22 and 23. Flue arch supports found *in situ* on W. and E. sides of flue respectively. Fabric as 21. Kiln 1.

#### APPENDIX A.

##### METALLURGY by DR. R. F. TYLECOTE

*Specimen from Ditch 2, layer 1.* Copper base alloy. Dross containing drops of leaded bronze or gunmetal with equivalent tin content of about 10%. The drops retain their "as cast" structure and therefore have not been subject to heat for very long after dripping from the crucible or mould.

The hardness is in the range 88-92 HV5.

*Specimen from Ditch 3.* Good iron ore.

*Specimen from the ditch parallel to Ditch 3,* not numbered on plan (FIG. 7). Dross containing low-tin leaded bronze or gunmetal. The metal has been heated for a long time in the hearth and has lost its "as cast" structure; this is now of the equiaxed type. There is a considerable amount of light phase which is probably crucible slag. The hardness is 46 HV5 and would suggest a tin content not exceeding 5%.

*Specimens from Ditch 8,* the ditch below the floor. 1. Iron smelting slag; 2. Iron working slag (smelting or smithing).

*Note.* Gunmetals are ternary alloys of copper, zinc and tin. They do not usually contain more than 5% Zn and thus are very different from brasses which contain more than 20% Zn and usually little tin. The lead content in these two cases would be about 5%.

#### APPENDIX B.

##### BONES by MRS. C. ORR.

###### *1st and 2nd Centuries*

The bones are very fragmentary, only 3% are whole. Species are cattle, sheep, pig, horse, dog and possibly deer. None of the bones has been worked. Chop marks are present on the bones from Ditch 4 only, the cattle bones from there being noticeably larger than from the other features.

There are more cattle bones than sheep and this is more pronounced in the later features (Area B). As more meat comes from cattle bones than from sheep bones it can be assumed that more beef was eaten on the site. The minimum number of cattle represented is 19. Five are very old, 14 are in the 2½-3½, or possibly 4 year age group. This might indicate that the majority of the cattle were killed for meat at the optimum age and were probably bred for meat. The proportion of 1st and 2nd class meat is approximately equal, so it was probably killed and eaten on the site.

The minimum number of sheep is 24. Ditch 2 has the highest % of sheep bones, being more than cattle for this feature only. Of the sheep 2 are very old, 2 over 4 years, 14 adult, 4 are 1½ years and 2 are 6 months. As most of the animals were in the 2-3 year age group they were probably kept primarily for meat rather than wool, when one would expect larger numbers in an older age group.

HARDWICK PARK EXCAVATIONS

Few pigs are represented and there are none at all in area B. All the pig bones occur in features 1, 2, 4, 5, and 7. Ditch 2 has a minimum of 4 pigs, 1 very old, 2 adult and 1 about 1½ years. Ditch 4 has mostly feet and jaws, i.e. no first class meat.

Six horses are represented, all with very worn teeth, and all are very old. These were probably draught animals but were doubtless eaten in old age.

Ditch 2 produced bones that are probably deer. They are too small to be cow and too large for sheep but very fragmentary and not diagnostic so it is assumed that they are deer.

Four dogs are represented, 2 in Ditch 3. One was fox sized and one very large, Alsatian size.

Ditch 2 shows some differences from the rest of area A. It has a higher number of sheep bones than cattle, more pig than elsewhere and deer bones are present only here.

Table I shows the total number of bones for each feature and species, tables II and III details of the cattle and sheep bones and approximate age, following the tables in *Science and Archaeology* (1963) by I. A. Silver. Tables IV and V give measurements of cattle and sheep bones respectively.

TABLE I

Feature	Cattle	Sheep	Pig	Horse	Other	Whole bones
1	10	8	2			1
2	67 + skull	73	8	5	6 deer	7
3	16	12		1	2 dog	1
4	35	22	6	5	12 dog	3
4a	10	4				
5			1	4		
6		5		6 + skull		1
7	34	18	4	1		
Kiln		1				1
8	25 + skull	9		2	2 dog	3
9	72	25				3
10	19	15			2 dog	
11		5				
Total	289	197	21	25	18 dog 6 deer	20

TABLE II, CATTLE BONES

Feature	1st Class	2nd Class	Teeth	Min. no.	Age
1.	1 tibia 5 rib 2 radius	1 metatarsal	1	2	2 yr + adult
2.	3 humerus 1 radius 1 scapula 1 long bone 1 vertebra	3 jaw 1 metatarsal 2 metacarpal 1 calcaneum 1 horn core 28 skull frag.	19 (3 old)	3	3-4 yrs. Under 3 yrs. Very old
3.	3 unidentif.	3 lower jaw 1 horn 4 skull frag.	6	2	2½-3 yrs. Old worn tooth
4.	2 tibia 2 scapula 4 humerus 1 radius 1 ulna 4 pelvis 6 long bone	2 metacarpals 2 calcaneum 1 phalange	8	2	Young adults approx. 3 yrs.
4a.	1 tibia 1 rib 8 long bone			1	Over 3 yrs.
7.	1 tibia 2 radius	1 metacarpal 1 metatarsal	12	2	2½-3 yrs. 1 old

	1 ulna 3 humerus 5 fragments	7 skull frag. 1 jaw frag.			
8.	1 femur 2 scapula 3 long bone frags.	6 jaw 2 lower jaw 1 horn 4 horn cores 42 skull frags. 1 phalange 1 metatarsal	5	5?	2-3 yrs. 3 adult 1 old
9.	2 ribs 4 long bone frags. 15 unidentified	1 metacarpal 1 metatarsal 1 phalange 1 foot bone 11 jaw frags.	4	3?	Adult
10.	2 tibia 1 humerus 17 frags.	1 hoof 3 jaws 1 astragalus	8	2	2-3 yrs. Very old

TABLE III, SHEEP BONES

<i>Feature</i>	<i>1st Class</i>	<i>2nd Class</i>	<i>Teeth</i>	<i>Min. no.</i>	<i>Age</i>
1.		4 metacarpal	4	3	Under 1 yr. Over 1 yr. Adult
2.	3 tibia 1 ulna 3 scapula 1 radius 6 long bone 3 humerus 3 pelvis	11 jaw frags. 3 phalange 2 horn core 1 calcaneum 2 hoof 3 metacarpal 3 metatarsal	32	7	2 at 1½ yr. 2 over 3 yr. 2 over 4 yr. 1 at 6 mths.
3.	1 rib 2 unidentified	4 phalange	5	2	1 adult 1 very old.
4.	2 radius 3 unidentified	2 jaw 1 metacarpal	14	2	1 young (milk teeth) 1 adult
4a.	2 frag.	1 metacarpal 1 metatarsal		1	Adult
6.	2 vertebra	1 lower jaw 2 metatarsal		1	
7.	1 humerus 3 frag.	3 metacarpal 1 metatarsal	10	2	1½ yr. Adult
8.	1 tibia 1 longbone 2 humerus 1 femur	1 phalange 1 metacarpal	3	4	1 old 3 adult
9.	9 frag.	1 phalange 1 astragalus	4	1	Adult
10.	1 humerus 3 unidentified	1 metacarpal 1 phalange	9	1	Adult
11.			3		Adult
Kiln		1 metacarpal		1	Adult



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TABLE IV, CATTLE BONE MEASUREMENT

Feature	Bone	Length	Distal width	Approx. width
2.	2nd phalange	3.8		3.5
	1st phalange	5.4	3.0	3.0
	metatarsal	(circumference 5.5)		3.7
7.	metacarpal	18.0	5.2	5.4
8.	2nd phalange	4.4	chipped	2.7
	1st phalange	6.0	2.5	2.6

TABLE V, SHEEP BONE MEASUREMENTS.

Feature	Bone	Length	Distal width.	Approx. width
1.	metacarpal	11.5	2.2	1.8
2.	1st phalange	3.6	1.0	1.1
3.	phalange	2.0	0.8	0.6
	phalange	2.0	0.8	0.6
8.	1st phalange	3.0	0.7	1.0
10.	phalange	2.0	0.7	0.6
Kiln	metacarpal	11.4	2.3	1.8

*Medieval*

There are 46 bones from ditch 12 of which 36 are whole and measurable. There are 40 cattle bones, 1 sheep and 5 teeth from a very old horse. The bones are very fragmentary but show no obvious chop marks.

The cow bones are from a minimum of 2 animals, one adult but not old and one approximately 2½ years. The bone measurements are comparable to those from the Medieval site at Somerby, Lincs.

The sheep metacarpal is large and compares with modern sheep. The complete lack of pig bones is interesting and if this is a representative sample of the bones of this period it would seem that the diet was almost exclusively beef.

Tables VI and VII give details of the cattle bones.

TABLE VI, MEDIEVAL BONES, FROM DITCH 12.

Cattle, 40.

Sheep, 1 large metacarpal.

Horse, 5 teeth, old.

TABLE VI, MEDIEVAL CATTLE BONES

1st Class	2nd Class	Teeth	Min. no.	Age
2 tibia	1 ankle bone		2	1 young (under 2½ yrs.)
1 radius	2 metacarpal			
1 humerus	unfused			1 adult
1 rib	2 phalange			
1 ulna	1 calcaneum			
26 longbone	1 astragalus			
frags.	1 horn			

TABLE VII. CATTLE BONE MEASUREMENTS.

Bone	Length	Distal width	Proximal width
Metacarpal	19.3	5.2	5.0
unfused			
Astragalus	6.5	4.1	4.1
	5.8		

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Grateful thanks are due to the Wellingborough Urban District Council for permission to excavate and their continued help thereafter, to the Area Museum and Art Gallery Service for conserving the bronze objects, to Mr. D. Tomalin for drawing brooch no. 6, to Mrs. G. Gent for drawing the small finds, to Mr. P. Everson for providing site blue prints and to the many building contractors for their help and interest at all times. Also to Mrs. Joanna Bird for providing notes on the Samian ware found during the watching of building work.

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