



Humberside Archaeology

Excavations at the moated manor of Habrough South Humberside (RDX 33)

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EXCAVATIONS AT THE MOATED MANOR OF HABROUGH
SOUTH HUMBERSIDE (SITE RDX 33)

D.H. Evans,
Humberside Archaeology Unit,
Property Services Department,
County Hall,
BEVERLEY,
North Humberside.
HU17 9BA
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EXCAVATIONS AT THE MOATED MANOR OF HABROUGH (SITE RDX 33)

SUMMARY

Excavations in advance of a new gas pipe-line provided a section through the enclosure ditches and platform of a medieval moated site on the eastern side of the village of Habrough, South Humberside. The moat platform was found to be artificial; 10th century pottery was found sealed beneath this structure. The enclosure ditches had been water-filled, but had been kept clean by regular scouring until the later 16th century. At this stage, the first of a series of three roof-tile kilns was constructed at the southern end of the moat. Clay pits were dug into the former moat platform to provide the raw material for the manufacture of these tiles. In the early years of the 17th century the site was abandoned and deliberately slighted; the former moat ditches and clay pits were infilled with waste material from the kilns and domestic rubbish. The latter includes a large proportion of discarded high status possessions. The site was subsequently ploughed.

Documentary evidence suggests that this moat can be identified with the manorial site of the de Saltfleetby family during the 13th and 14th centuries. It was subsequently granted to a branch of the Skipwith family in 1365 who were to continue living here as lords of the manor until the end of the 16th century, when they are reputed to have died out. Their demise seems to have signaled the end of occupation on this site.

1. INTRODUCTION (Figs 1, 3 and 4)

The modern village of Habrough is centered around the railway station (TA 147 136) with a few outlying buildings to the north-east along the road from Immingham to Brocklesby (the B1210); however, the shape of the modern settlement is largely a result of the advent of the railway in the 1840s. The original core of the village was centered around St Margaret's church (TA 154 143), which lies almost 1km to the north-east of the railway station. The church (and village core) are sited at the eastern end of the parish on a hummock of better drained ground above the 15m contour of the till plain. These now comprise a shrunken village of some nine holdings, loosely scattered around the junction of the B1210, with a north-south road from Roxton to Goxhill Ferry on the Humber; although these days the east-west route is the major road, the 1st edition Ordnance Survey map (1824) suggests that the north-south route running through Habrough, Killingholme, East Halton and Halton Grange, was at least as important as the other: it is of course a moot point whether the settlement evolved around the intersection of these routes, or, as seems more likely, the positions of the various settlements dictated the gently meandering course of the roads.

The medieval village was sited on boulder clay on the edge of the Lincolnshire Middle Marsh; the manorial salterns lay much further to the north-east in a detached part of the parish on the Lincolnshire Out Marsh - an area now occupied by the Immingham Deep-Water Dock (formerly Habrough Northesse Marsh). The parish thus included a variety of subsoils and habitats. The soil cover around the settlement consists mainly of surface-water gleys of the Holderness Association. These are variously characterised by 'slow, permeable fine loamy and moderately permeable coarse loamy soils on chalky tills and glacio-fluvial drift, and narrow strips of clayey alluvial soils' (Jarvis et al. 1984, 212). They typically display 'seasonal saturation resulting from the accumulation of near-surface water derived either from rainfall or lateral ground water-flow in the upper soil layers' (Ellis 1990, 33).

The earthworks of the village were leveled and ploughed between 1963 and 1966 (Loughlin and Miller 1979, 163). Previous archaeological work within the parish appears to have been confined to fieldwalking and earthwork survey. Collections of pottery were recovered from a number of sites in the village, including the moat, between 1962 and 1966 (ibid., 166; Scunthorpe Museum Topographical Index). At much the same time, the presence of 'heavily fired bricks to the south of the moat' was first noted (ibid.). In 1972 Celia Bryant visited the site and made a rough plan of the earthworks, at the time when the farmer (Mr. E. Pickering) was laying field drains through the moat ditches (bloated sites Research Group notes; reproduced here as Fig. 4). Aerial photographs show the moat flanked to east and west by the earthworks of house platforms and driveways, whilst the fields to the north of the Immingham to Brocklesby road show abundant evidence of ridge and furrow. The moat itself was recorded by Bryant as measuring approximately 150ft. (45.72m) north-south by 190ft. (57.91m) east-west: this would give an area of c. 0.2668ha. A raised platform was visible in 1972 in its north-west quadrant, adjacent to a causeway which led across the ditch to a rectangular sunken area immediately to the west (see Fig. 4).

2. HISTORICAL BACKGROUND

As with many of the villages in this area, the place-name Habrough betrays a Scandinavian origin, being thought to derive from the Norse Ha-borg, meaning 'the high fort' (Lincs. Notes and Queries 6, 1901, 172). It had clearly evolved into a settlement by the Late Saxon period, as is demonstrated not only by finds of Saxon pottery in the area, but more importantly by the size and type of land holdings, which are characteristic of Lindsey district - being much smaller than those in southern and central Lincolnshire. Following the Norman Conquest, the new land division of the hundred was imposed upon the county. It was supposed to contain 12 carucates of land, and in ideal circumstances there would be one village in each of the new hundreds; however, in Lindsey most hundreds contained two or more villages, whilst in Yarborough wapentake (which included Habrough) a total of 54 villages made up a mere 14 hundreds. In the case of Habrough, the Lindsey Survey of c. 1115-18 records slightly less than 3 carucates in the vill (i.e. a quarter of the ideal size for the new Norman administrative unit). Hence, it is perhaps hardly surprising that in many medieval documents estates in Habrough are found coupled with lands in Newhouse (or Newsham) immediately to the west, Kirmington to the south-west, Keelby to the south-east, and Killingholme to the north. In 1086 the lands which were contained in the two major holdings in the vill were said to have been worth 44s. in the time of King Edward ("T.R.E.", i.e. in or before 1066).

Domesday Book records that there were two manors in the village, both of which were held by influential, non-resident tenants-in-chief. The larger of the two manors was held by William de Percy whose barony was based in Topcliffe (Yorkshire North Riding). The other manor was slightly smaller, but was worth more as it contained a mill; this was held by Alfred of Lincoln (one of the middle-ranking landowners in Lincolnshire), whose barony was centered at Thoresway, 17kms to the south of Habrough. In addition to these two major holdings, five other tenants held sokeland in the vill. Three of these were amongst the seven most substantial landholders in the county - namely, the King himself, Earl Hugh of Chester, and Ivo Taillebois (one of Lincolnshire's most influential barons, the Lord of Belchford and Bolingbroke). The other two tenants were Norman de Arci (a middle-ranking tenant-in-chief, whose barony was based at Nocton, south-east of Lincoln), and Ernise de Barun (another middle-ranking tenant-in-chief, whose barony was centered on Hunsingore in the West Riding of Yorkshire).

William de Percy's manor was said to comprise 6 bovates with land for 12 oxen. 'Norman, William's man, has half a team there in demesne and 2 villeins and 4 bordars and 5 sokemen ploughing with 1 team and 2 oxen, and 60 acres of meadow. T.R.E. (i.e. before 1066) it was worth 14s; now 20s; tallage 4s'. Alfred of Lincoln's manor was slightly smaller, at 5 bovates, with land for 10 oxen. 'Ralf, Alfred's man, has 1 team there (in demesne) and 1 villein and 2 bordars with 2 oxen, and a mill rendering 2s. and 20 acres of meadow. T.R.E. and now worth 30s'.

Some 30 years later, in c. 1115-18, the Lindsey Survey recorded that the seven landholders of 1086 had been reduced to six, and that between them their lands at Habrough comprised 23½ bovates (1/2 bovat short of 3 carucates). None of the Habrough land totals in the Lindsey Survey quite tally

with the Domesday entries, which might imply that the size of the holdings had been reassessed; alternatively, a certain amount of land may have changed hands between the various parties. The Percy manorial holding (held by Alan de Percy) had by this stage emerged as the largest in the vill, at 1 carucate (8 bovates): as this represents a 25% increase on the 1086 total, this suggests that the original manor had been augmented by the acquisition of 2 bovates of sokeland. The other manorial site (formerly Alfred of Lincoln's) is less obviously identified. Alan of Lincoln is listed as holding a mere 2 bovates in Haburg: if he was the heir to Alfred's estate, then the latter had dwindled to one-third of its former size, as Alfred had formerly held an additional bovat in soke as well as his demesne manor. This suggests that either a large part of the estate had already changed hands, or that the tentative identification of Alan of Lincoln's holding with Alfred's estate is incorrect. Of the other landholders recorded in the Lindsey Survey as having interests in Habrough, Earl Richard of Chester is clearly the heir to Earl Hugh's holding, which had by now increased from 1 bovat to 1 1/2 bovates; whilst Norman de Arci is clearly recognisable, although he is credited now with holding 4 bovates, rather than the 3 bovates and 2 parts of 1 bovat which he held in 1086. The other two tenants were Geoffrey, son of Payne, who held 2 bovates in Haburg, and Ranulf Mischin (the Earl of Lincoln) who held 6 bovates; it seems probable that the Earl was in possession of sokeland previously held by Ivo Taillebois and by the King (the first, because the Taillebois holdings had passed to the Earls of Lincoln by the mid 13th century; the second, because the King is the one obvious landholder from the Domesday Survey who is missing from the entry in the Lindsey Survey, yet whose socage holding is mentioned as being vested in the Earls of Lincoln in the 1245 Final Concord: see below).

Although some of the names of the families holding land at the time of the Lindsey Survey are unfamiliar, the basic pattern of property tenure had changed remarkably little in the thirty or so years since Domesday. In contrast, the next century was to see a very marked disruption of that pattern. Alfred of Lincoln's manor was largely to disappear: the de Arcy (or Darcy) family was to emerge as the principal tenants-in-chief: a new class of sub-tenants was to be created, holding their property by military service (the knight's fee), and in some cases actually living within the vill: and various religious houses were to become major landholders as a result of bequests and other land grants. The situation is neatly summarised in a Final Concord of the 30th April 1245: 'Haburg is of the fee of Henry de Lacy, earl of Lincoln, of the barony of Norman de Arci, of the fee of Robert de Nevil, and of the soke of the lord the King. The abbot of Newhouse holds in the same vill of the gift of Alan de Cotes the 12th part of 1 knight's fee in alms from the time of the last King Henry, 8 years past, and the said Alan held it of the said Henry the earl, and the said earl of the lord the King in chief de conquestu. Hugh Berner holds in the same vill of the fee of Norman de Arci 3 parts of a knight's fee by the said service, and the said Norman of the lord the King in chief de conquestu. The abbot of Newhouse holds thereof in alms 4 bovates of land, of the gift of William Berner in the time of King Henry the great grandfather 100 years past. The prioress of Cotum holds thereof in alms 3 bovates of land of the gift of the said William in the time of King Henry the great grandfather 100 years past. The abbot of Thornton holds thereof in alms 2 bovates of land of the gift of the said William from the same time. Robert Hardinst holds in the same vill 6 bovates of land and of the said abbot of Thornholm for 13... of

annual rent, and the same abbot had them of the gift of Robert de Nevil in alms from the first foundation of the house, who holds them of the lord the King in chief de conquestu. Gilbert de Hagham and Sibilla his wife hold whatever there is in it of the soke of Castr', and this is mixed with the vill of Kirnynton, but they claim to have gallows a conquestu, but it is unknown by what warrant'. (Lincs. Notes and Queries 7, 1904, 19).

The Berner family appear as sub-tenants of the de Arci holding in Habrough and Killingholme from the reign of Henry II (1154-1189) until at least 1303 (Feudal Aids III, 142), and were responsible for the land grants to the Abbey of Newhouse (or Newsham), Cotham Priory and Thornton Abbey, mentioned above, in the reign of Henry II. William Berners also gave two acres to the church of Habrough for the upkeep of the altar of the Blessed Katherine. Through their benevolence, Alfred of Lincoln's former manor appears to have been irreversibly broken up and dissipated to various ecclesiastical bodies, leaving only a rump as the Berner holding by the early 14th century. Two of the main recipients of their generosity were the nearby 12th-century foundations of Newsham or Newhouse Abbey (a Premonstratensian Abbey founded in 1143 on the other side of the Skitter Beck 2kms to the south-west of the parish at TA 128 132) and Cotham or Nuncotham Priory (a Cistercian nunnery founded probably in the reign of Stephen, 2½kms to the south of Habrough Church at TA 157 112). Other benefactors included William de Romara (Earl of Lincoln) who gave the advowson of the parish church at Habrough to Newhouse Abbey as part of its original endowment (V.C.H. Lincoln II, 201). The likelihood is that the bulk of the lands given to these new religious houses would have lain in those parts of the parish adjoining the grounds of these houses (i.e. in the south and west of the parish), and it is in precisely these areas that we find modern farms with such suggestive names as Habrough Grange or The Grange (TA 148 130), and Immingham Grange (TA 168 133). If our assumption that these land grants have been carved out of Alfred of Lincoln's Domesday manor is correct, then we should be looking for the site of that manor in the west of the parish, adjoining the grounds of Newsham township. This is suggested not only by the grants to the Priory, but also by the reference to a mill (which would have been a water-mill in 1086) in the Domesday extent of this manor: the one major source of water running through the parish is the Skitter Beck, which forms a natural boundary between the grounds of Newsham and Habrough. Hence, it comes as little surprise to find a large complex of earthworks, which could correspond to an early manorial site, at the west end of Station Road at TA 145 135 (centre), in an area well away from the early post-medieval village core.

If this complex by the railway station is the site of Alfred of Lincoln's manor, then the logical corollary is that the moat to the east of the parish church is likely to have been the site of the successor to the Percy manor of 1086. The descent of this manor is far from clear, but by 1245 Gilbert de Hagham and his wife appear to have gained possession of the former Percy interest: as the Final Concord of that year so elegantly puts it, "but it is unknown by what warrant". In the 1274-5 Hundred Rolls the two major landholders in Kirmington and Habrough were Hugh de Nevill and Gilbert de Hawham, the latter holding his lands, once again, "per quod servitium et quo warranto nesciunt". The Haugham/Hagham/Hawham family (presumably taking their name from Hougham in S.W. Lincolnshire - yet another possession of the Percy family) continued to hold a major interest in this manor into the early years of the 15th

century: in 1401-2 the Book of Fees records that William de Skipwith de Haburgh and Thomas Hagh (sic) hold in Haburgh and Kinnyngton 1 knight's fee in capite, of which Thomas de Hagh holds one-third part (Feudal Aids III, 243). Once again, we appear to be dealing with a non-resident family of tenants-in-chief. Although they appear intermittently for two centuries in the entries of the Book of Fees, at no time is Habrough ever listed amongst their possessions in any Inquisitions Post Mortem; however, the latter do consistently list the manor of Habrough as the possession of the de Saltfletby family from the 1270s until 1365, and it is this family who are clearly the resident holders of a mesne manor at Habrough; and it is probably this family who were responsible for the construction of this moated site. Quite when they took up residence in the vill is uncertain, as they are consistently absent from the entries in the Book of Fees, even when they were clearly in residence (reference is invariably to the tenants-in-chief, and not to the occupiers): hence, they may well have been in residence as early as the 1245 Final Concord, but at present we have no way of proving this). Whether they built their new moat over part of the site of the earlier Percy manor or on fresh ground is equally unknown; however, there was nothing in the archaeological record to suggest earlier structures underneath that part of the platform which was examined during the excavation.

In 1277/78 Herbert de Saltfletby was seized of the manor of Haburg, 'which long before his death he gave to Sibyl his daughter and the heirs of her body' (Cal. Inq. post mortem II, 252). In 1308/9 Herbert de Saltfletby was seized of lands in Haburgh, Kirlington and Keelby. He held here a capital messuage, 72 acres of arable, 9 acres of meadow, 15 acres of salt meadow in the marsh, a saltpit, a fishery, rents etc. (full extent given with the names of tenants), held of the king in chief by service of 1 knight's fee (Cal. Inq. post mortem V, 144). In 1356/7 Robert de Saltfletby of Haburgh was seized in Haburgh of a messuage, 6 bovates of arable, each containing 6 acres, 12 acres of meadow flooded by the sea, and E4 4s. per annum rent of free tenants, held of the king by knight's service (Cal. Inq. post mortem X, 295). The reference here to bovates is extremely interesting, as it is a measure of land which would probably not have been used in the 1350s, except when citing a much earlier legal document: the six bovates correspond exactly to the size of the manor of William de Percy in 1086, and this also enables us to accurately assess the size of the original holdings at Domesday, for we now know that in Habrough a bovat contained 6 acres. The references in both of these 14th century inquisitions to salt marshes and other maritime holdings would make most sense, if the manor to which they related was sited in the eastern part of the parish, closer to the saltings in Habrough Northesse Marsh.

On the 28th November 1356 the Lincoln County escheator was ordered to deliver to John, son and heir of Robert de Saltfletby of Haburgh, the lands late of his said father; "as the king, by pretext of the good service rendered to him in Gascony, has respited his homage, until his return to England" (Cal. Fine Rolls 1356-1368, 23-4). On the 20th March 1359 a license for £16 was paid by three clerics "for John de Saltfletby to enfeof them of the manor of Haburgh held in chief. And afterwards the king pardoned the fine, as appears by a letter of p.s. which remains on the files of this year" (Cal. Pat. Rolls 1358-1361, 188). John de Saltfletby presumably died intestate at some stage in the following six years, for on 1st July 1365 the same three clerics paid £10 for a license to grant to John de Skypwyth, Ralph his son, and the heirs male of the

body of Ralph, the manor of Haburgh, held in chief, with remainder to the right heirs of John (Cal. Pat. Rolls 1364-1367, 133). The manor was to remain in the possession of the Skipwiths of Haburgh until at least the later 16th century. In 1431 William of Skypwyth of Haburgh, squire, was seized of lands and tenements in Haburgh and Kirmington which were worth E10 (Feudal Aids III, 343). In 1486/87 the manor of Haburgh was said to be worth £6 (Cal. Inq. post mortem, new series, I, 244). In 1545 an Inquisition post mortem of Edward Skipwith of Haburgh stated that John de Elsham and others were seized of the manors of Haburght and Kyrnynton, and of 24 messuages, 20 cottages, 40 acres of land and E13 6s 8d rent in Haburght, Kyrnynton and Little Lymber (Massingberd, History of Ormsby..., 59). Two years later, the Inquisition post mortem of Thomas Skipwith of Haburgh found that he was seized inter alia with 120 acres in Habrough, which were late parcel of the Priory of Nun Cotton (ibid., 60). In common with other branches of the Skipwith family during the first half of the 16th century, the Habrough branch were enlarging their estates by purchasing former monastic lands. In May 1540 Edward Skipwith junior of Habrough paid 400 marks for the house and site of Nuncotham Priory. The Diocesan Returns for the County in 1563 recorded 51 households in Habrough and 31 in Kirmington: either the population had nearly doubled since 1545, or more likely, the Skipwith estates amounted to only 50% of the holdings in these parishes.

Massingberd records that "it is stated that the Skipwiths of Haburgh became extinct towards the end of the 16th century" (op. cit., 60). His source is not credited, and this may simply have been a tradition in the Massingberd family. The demise of this family presumably prompted the sale of the estate, and may well have signaled the abandonment of the former manorial site. The history of the estate during the first half of the 17th century is as yet unclear. A list of the gentry of Lincolnshire in 1634 records one John Drake from Habrough on Humber (Lincs. Notes & Queries 2, 37), but fails to state which property he held within the parish. By 1672 the manor had come into the possession of Edward Maddison, the son of the former sheriff of the County. At his death in that year he was seized of the manors of Fonaby, Calcethorpe, Cadeby, Bardany, North Somercotes, South Somercotes, Nettleton, and Habrough, with free warren in Habrough. This enormous estate had an annual rental of E2,600. The size of this holding suggests that Maddison had bought a number of properties which had been sequestered after the Civil War. His estate was the subject of a protracted Chancery suit from 1674-78. Eventually, one of his daughters, Mrs. Lomax, recovered the manor of Habrough in 1694-5, by which date she had remarried, to one John Arnopp of Kensington (Lincs. Notes & Queries 6, 1901, 139-40). By the beginning of the 19th century it had passed into the hands of the Earl of Yarborough. The two large open fields of the village were enclosed by Act of Parliament in 1813.

3. THE GEOPHYSICAL SURVEY by John Gater

The field in which the moat lies contains a series of low earthworks. It was hoped that a magnetometer survey would establish whether there were any associated archaeological features.

The fieldwork was carried out by two teams during the course of one day on site. An area 200m by 60m was investigated by a combination of scanning and detailed work. The detailed work was centered approximately on the centerline of the pipe, whilst the scanning investigated 20m wide strips on either side (Fig. 1).

The results are displayed as dot density plots and X-Y profiles (Fig. 2). A simplified interpretation diagram is also included.

While setting out the survey grids at this site, dense concentrations of brick and tile were noted in the topsoil. In addition, scatters of pottery and slag were noted. The material had the appearance of being post-medieval in date, but no expert advice was available to substantiate this.

In general, the magnetic response was quite noisy throughout the field. Areas of greater magnetic disturbance were seen apparently to coincide with some of the artefact concentrations. The results are indicative of small-scale activity or dumping. The anomalies at A are particularly interesting (see X-Y traces), as they have magnetic responses characteristic of a kiln. Lengths of ditch and some pits are also visible.

Scanning indicated that anomalies of similar strength occur throughout the entire 60m corridor investigated.

The magnetic results suggest a complex of features which appear to be of archaeological interest. It is possible that some of the results are a product of dumping in the field, but this would have to be tested by excavation or a more extensive detailed survey.

4. THE EXCAVATION

A two-week excavation was undertaken on this site by a team of eight from the Humberside Archaeology Unit in late July and early August 1991 for Kinetics Ltd., in advance of the construction of the Theddlethorpe to Killingholme Pipeline. A 57m long and 2m wide north-south trench was cut by machine through the moat platform and the northern arm of the perimeter ditch (Fig. 5). An additional section was cut by hand across the southern arm of the ditch. Subsequently, an area of some 630 sq. m, was examined on the top of the moat platform, and a brick-built structure on the edge of the southern arm of the ditch (corresponding to an anomaly identified on the geophysical survey) was investigated: a number of features cut into the top of the platform were identified and excavated, whilst the brick-built structure was found to be a kiln.

The natural subsoil consisted mainly of hard, pale yellowish-brown boulder clay which was variegated with blue-grey flecks and occasional small fragments of worn chalk. In places this clay was interleaved with lenses of clean, pale yellow sand. The moat platform had been sited on a terrace which sloped gently downwards from north to south -the difference in height between its northern and southern extents being almost 1m. The modern water-table has clearly been lowered by drainage, but it is evident that the presence of water was a major factor in the original choice of this location for the manorial site: the presence of reduced blue-grey clays in the lower fills of the ditch, and of waterlogged levels in the base of pit 5 (see Phase III, below), indicate that the moat would once have been filled at least periodically with water. The 1st edition Ordnance Survey map (1824) shows a stream flowing eastwards from the ground to the south of the moat; it then turned northwards to skirt Immingham, and eventually emptied into the Humber at Immingham Haven (Fig. 3).

Four main phases of activity are evident on the moated site, and there is also a small amount of artefactual evidence for pre-moat activity. The latter spans the period from the 10th to the 13th centuries, whilst the main phases range from the 13th to the 20th centuries.

PRE-MOAT ACTIVITY

No structural evidence was found for a relict landscape, but a solitary sherd of a Lincoln Shelly ware cooking pot of 10th-century date was found sealed beneath the moat platform at a depth of 1.15m. A number of other sherds covering the period from the 10th to the 13th centuries were recovered in residual contexts (such as the fill of the northern arm of the perimeter ditch) or from topsoil, and clearly attest Late Saxon and Early Medieval activity in the immediate vicinity. As no evidence was found for rig and furrow beneath the moat, it is possible that the medieval manorial site was established in the former crofts of Late Saxon tenements.

PHASE 1 ?c. 1200-c. 1400 (Figs 5-7; Pls 1-2)

The onset of this phase is marked by the construction of the moat. The solitary 10th-century cooking-pot rim sealed beneath the platform offers a terminus post quem for its construction, but there is no other hard evidence to

indicate when the moat was created. It seems reasonable to assume that this moated site is the 'capital messuage' of Herbert de Saltfleetby which is mentioned in an Inquisition post mortem of 1308/9. Given the quality of the post-medieval finds on the site, it is also reasonable to argue that this site continued to be the manor of the de Saltfleetbys until 1365, and thereafter of the Skipwiths. Conversely, it may be argued (but not yet proven) that this site housed the manor of the de Saltfleetby family in the mid 13th century, or possibly even earlier, for in 1277/8 an Inquisition post mortem of an earlier Herbert de Saltfleetby recorded that he had given the manor of Haburg to his daughter 'long before his death' (Cal. Inq. post mortem II, no. 252). The fashion for building moated sites can be assigned mainly to the 13th and 14th centuries. An analysis of the evidence from moated sites in Yorkshire (as available in 1973) suggested that 60% of the sites originated in the period c. 1200-c. 1325, with a marked decline in moat building after the mid 14th century (Le Patourel 1973, 19, Table 11). Moreover, whilst it was suggested that a further 20% could have been of later 12th-century date, in most cases the evidence was equivocal. A similar pattern has been observed elsewhere in Central and Eastern England.

The moat platform (feature 6) was 1.15m thick and was formed from the upcast of the excavation of the perimeter ditch. It comprised a fairly homogeneous dump of very firm, dark orange-brown clay which incorporated occasional medium-sized fragments of rounded chalk, and small flakes of flint and pinkish sandstone; small quantities of burnt daub, charcoal and coal were also present, but the greater part of the clay dump was free of any inclusions. In a few places the platform also incorporated pockets of pale yellowish-brown sand (e.g. context 9) : these were clearly localised, and were typically no larger than 0.50m in diameter and 0.30m deep.

The northern arm of the perimeter ditch (feature 1) was 8.70m wide with a maximum depth of 1.55m (from the lip of the ditch to its base). Like most moat ditches (cf. Le Patourel 1973, 1), it was basically U-shaped, with a flattish bottom (P1. 1); there were two slightly rounded scarps on its northern or outer scarp (Fig. 6, S1) . No trace of a bank was found on either the inner or outer edge. The southern arm of the ditch (feature 36) was of similar construction, but was 8.90m wide, with a maximum depth of 1.10m. As with the northern arm, there were two rounded scarps on the outer edge of the ditch, whilst the inner or northern edge sloped upwards at about 25° (Fig. 7, S2 and particularly S3). Indurated clay in the base of the primary fill of the ditch (layer 41) suggests that it regularly held water.

PHASE II c. 1400-c. 1550

Small quantities of later medieval pottery were recovered from the topsoil clearance over the top of the moat platform and ditch. As with previous fieldwalking collections from this site (Hayfield 1985, 259; Hurst 1991, Table 1), these attest activity throughout the later medieval period within the moated enclosure.

The one feature which might be assigned to this phase was a small U-shaped pit (12) which was exposed in the western section of the north-south machine trench. This pit was 0.66m wide, with a maximum depth of 0.25m, and was cut into the top of the moat platform. It had a rounded base, with a stepped profile

on its south side; a basal fill of firm grey clay loam with chalk, charcoal and coal inclusions (layer 11) was sealed by an upper layer of pale yellow-brown clay containing fragments of burnt daub and charcoal. Whilst there were no datable finds in its fills, the general character of this pit differed sufficiently from the more obvious Phase III pits to suggest that it might belong to an earlier phase.

The two ditch sections suggest that the perimeter ditch was kept clean throughout this phase by regular cleaning out.

Phase III c. 1550-c. 1650 (Figs 5-10• Pls 1-4)

The majority of the excavated contexts can be assigned to this phase. During its duration a series of roof-tile kilns was erected just outside the southern edge of the moat, and a number of clay pits excavated in its interior. This phase terminated in the abandonment and deliberate slighting of the moat.

Primary silting of the ditch

In the southern arm of the ditch (feature 36) the primary wash consisted of a fine to medium/dark greyish-brown clay (context 41); this formed a fluctuation deposit up to 0.21m in thickness in the base of the ditch (Fig. 7, S2 and 3: P1. 2). Fragments of bone incorporated in this fill were stained dark blue or black, indicating that reducing conditions were present in the base of the moat at the time of their deposition: this suggests that at least the lower part of the ditch was regularly filled with water. The rim and neck of a large Freshen stoneware jug of the late 16th or early 17th century was firmly sealed within this deposit. A similar pattern of deposition was observed in the northern arm of the perimeter ditch (Fig. 6, S1: Pl. 1).

The tile kilns (Figs 8 and 9; Pl. 3)

A series of kilns was constructed on the external lip of the southern arm of the perimeter ditch. The remains of three successive kilns were apparent - all on a north-south alignment, and occupying much the same position (Fig. 8). The two later kilns may merely represent rebuildings of the original structure, albeit with modifications to the design in order to make it work more efficiently. The interpretation of these structures as tile kilns is based on the finding of enormous quantities of standard peg tiles strewn around the immediate area and dumped in the adjacent ditch and in all of the pit fills of this phase.

The earliest kiln had been largely destroyed during the construction of its successors, but the lines of its side walls are preserved in their robber trenches. It consisted of a large single-flued kiln on a north-south alignment, with a centrally placed stoke-pit at its southern end. The main north-south walls were set in a broadly rectangular, vertically sided, flat-bottomed foundation trench (24: Fig. 9, S6). This was 7.35m long and 2.85m wide, narrowing to 2.10m at either end. The cut sloped downwards at the southern end into a sub-rectangular stoke-pit, which measured c. 2 x 2.90m in extent. The west wall of the flue had been largely removed during the construction of the second kiln, but its east end survived as wall 21, and the line of its south end is indicated by a cut which continued into the stoke-pit. Wall 21 survived to a height of two courses, and was 0.60m wide; the width was achieved by

laying two full bricks and one half-brick at right-angles to the line of the wall. The bricks were hand moulded, and measured 230 x 110 x 55mm in size. The line of the east wall of the flue was indicated by wall 20 at its northern end; the rest of the wall had been removed to facilitate the construction of the second kiln. Wall 20 was of similar construction to its western counterpart, the surviving portion being 0.57m wide and two courses high. Where the walls of both flues had been robbed, their positions had been preserved by fire-hardened lines of mortar in the base of the foundation trench (Fig. 9, S6). The central flue of this kiln was at least 5.30m long and 0.90m wide, opening into the stoke-pit at its southern end. At the northern end part of its ash fill survived, sandwiched between the two side walls beyond the end of the second phase kiln: this consisted of an 0.05m deep layer of banded yellow-white ash and charcoal (45). The floor and sides of the construction trench (24) were baked throughout to a dark orange-brown fired clay, whilst an area of black ash survived outside the walls of the second phase kiln at the point where the western wall of the earliest flue would have fed into the stoke-pit.

At some stage the kiln was rebuilt as a shorter and narrower structure. This second phase kiln was moved further to the east, placing it off-centre to the original stoke-pit. This new structure was built of brick and had walls surviving to a height of seven courses (Pl. 3). The main differences between this and its predecessor are that it had a north end wall (26) which lay 0.60m to the south of the earlier flue end; the west wall was moved 0.55m to the east of its predecessor, thereby narrowing the flue from 0.90m to 0.72m; and both side walls to the flue were extended over part of the original stoke-pit, which thus contracted considerably in size.

Walls 27 and 28 formed the major part of the west and east walls (respectively) of the second phase kiln. They were 0.365m wide and survived to a height of 0.43m, or seven courses (Fig. 9, S4 and 5). These new walls were built of bricks measuring 230 x 110 x 55mm in size, which were laid directly onto the baked clay floor of the construction trench for the first phase kiln, after the earlier walls had been dismantled and removed. All of the new brickwork was bonded with a sandy orange-red mortar, and the internal faces of the walls had been vitrified by the heat of the kiln. The central section of the west wall was revetted externally by an additional retaining wall (31). This was 2.91m long, and extended the width of the flue wall to c. 0.74m. It was constructed with a row of stretchers backed by a row of headers, butted up against the west face of wall 27. Similar revetment, albeit on a smaller scale, was placed against the east face of wall 28. Once again, it was constructed as a line of stretchers, backed with a line of headers (wall 32). It survived to a height of three courses, but it appears to have been built as alternate courses of headers and stretchers. It extended the width of the east wall to 0.68m. The greatly increased width of the flue walls in the southern half of the kiln, together with a very pronounced change in the pattern of bonding at 2.30m from the northern end of the kiln, indicate the position of a substantial kiln arch (or, more probably, arches) over the southern half of the flue: the tiles would have been stacked on top of such arches, with the hot flue gases passing underneath. The northern end of the flue was closed by a 2.11m long and 0.345m wide brick wall (26), which survived to a height of five courses. It was of similar construction to the two side walls, to which it was butted. Projecting buttresses to east and west took the thrust of an end arch. The form of the southern end of this second phase kiln is uncertain: two short narrow walls (29

and 30) continue the surviving structure further southwards into the stoke-pit, but these have the appearance of later additions to the main structure, and hence are described here as part of the third and final kiln.

Once the superstructure of the second kiln was complete, the remainder of the cut for its predecessor was infilled with an 0.55m deep deposit of buff-brown plastic clay and brick and tile debris (25). The floor of the new kiln consisted of an 0.04-0.06m thick layer of compacted, fire-hardened, dark orange-brown and grey clay which lapped up against the vitrified faces of the side and end walls. At the southern end of the flue, adjoining the stoke-pit, the floor was dark orange-brown in colour and heavily flecked with charcoal; however, this became progressively harder and more reduced, as one moved northwards up the flue, until by c. 1.50m from its south end the clay floor had been baked to an extremely hard grey colour. Overlying this floor was a very firm layer of light grey ash (19); nearer the stoke-pit, this was heavily intermixed with charcoal. At the northern end of the flue, this ash layer continued beneath the end wall (34) of the final phase kiln. This, in turn, was overlain by an 0.32m deep layer of loose, yellowish-white ash (35) which incorporated fragments of brick and tile.

At some stage, the design of this second phase kiln was modified by the insertion of a new north end wall, and the addition of a new south end, which encroached even further into the original stoke-pit. The new north wall (34) was one brick wide, and was simply butted against both of the side walls of the second phase kiln. It stood to a height of five courses (0.31m), and consisted of reused stretchers and occasional half-brick headers, bonded together with a fine, loose greyish-white sandy mortar (Fig. 9, 58). The southern (or internal) face of the brickwork was heavily vitrified. At the other end of the flue, walls 27 and 28 were extended 0.65m southwards into the former stoke-pit by walls 29 and 30. These insubstantial footings were a single brick wide, but survived to a height of five courses. The flue was closed at the southern end by wall 33, which was of similar construction to walls 29 and 30, to which it was butted. The internal length of the new flue was 4m - some 0.70m shorter than its immediate predecessor, and 1.20m less than the earliest kiln. Overlying the flue deposits of the second phase kiln was an 0.10m deep layer of very fine, loose ash (19) which clearly relates to the use of this latest kiln. At the southern end of the flue layer 19 was replaced by a 1.12 x 0.72m spread of compacted trample: this consisted of an 0.05m thick layer of dark grey and orange-brown clayey loam, which was intermixed with ash and charcoal, and which contained occasional fragments of brick and tile (layer 39).

The clay pits (Figs 5 and 10)

The raw material for the manufacture of the tiles was excavated out of large clay quarries which were sunk into the top of the medieval moat platform. Two such quarries were located in the north-south machine trench which was cut across the site: one of these certainly continued well beyond the excavated area, and there may well have been others.

The smaller quarry (7) was sub-rectangular, and measured 2.45 x 2.80m in extent (Fig. 10); it was 0.45m deep, and had a fairly flat bottom and steeply sloping sides. The larger quarry (5) was never fully excavated, and almost

certainly continued beyond the western limit of excavation. A north-south section was dug across this feature by hand (Fig. 5). It established that it was at least 11.10m long and 1.75m deep, with steeply sloping sides.

The end of Phase III

Both clay pits were deliberately infilled with a mixture of midden material and tile and brick debris from the kiln. The southern arm of the moat ditch was similarly infilled with large quantities of brick and tile debris, in the area immediately in front of the kiln. It is suggested that both campaigns of deposition are contemporary, and mark the abandonment of this manorial site and the deliberate slighting of any structures still standing on top of the moat platform.

Pit 7 was infilled with a fairly homogeneous deposit of loose, crumbly, black or very dark grey ash, which was interspersed with occasional lenses of ashy clay (Fig. 10). Incorporated in this fill were fragments of at least four Martincamp flasks, a Late Humberware cistern, a Brown Glazed Coarseware cistern, a probable Low Countries Redware dish, a Raeren stoneware drinking mug, several fragments of a ridged glass vessel (perhaps a goblet?), a piece of twisted lead window came, and several iron nails. In addition to these datable finds, the pit contained fragments of cattle, sheep, dog/fox, fallow deer, brown hare, goose, domestic fowl, wild bird (e.g. corvid, plover species and owl species) and fish (e.g. cod) bones, large quantities of marine molluscs, coal, brick and tile.

Quarry 5 was waterlogged at its base. Its lower fill was similar to that of pit 7, consisting of dark ashy loams and clays. These were capped with a compact dump of light grey-brown clay which was heavily flecked with charcoal and contained fragments of crushed shell, chalk, sandstone and coal (layer 4). Incorporated in this fill was a large miscellany of 16th and very early 17th century material: this included a silver petard of Phillippe le Beau (1482-1506), a brass coin weight of 1594, a Melling jug, a Beauvais medallion jug, six Frechen jugs, a Westerwald biconic jug, a Martincamp flask, two sherds of Anglo-Netherlands tin glaze, four Cistercian ware vessels and a probable Midlands Yellow ware chafing dish, and a large copper alloy vessel bound with iron hoops (see Pl. 4 for a selection of the pottery). The faunal assemblage included bones of cattle, sheep, pig, dog, cat, rat, goose, domestic fowl, duck, fallow deer, rabbit, brown hare, wild birds (e.g. plover species and wader species) and fish (e.g. cod and large gadid). There were also large quantities of marine molluscs, coal, brick and tile, and a solitary piece of masonry.

The southern arm of the perimeter ditch (36) was infilled with an 0.26m thick dump of brick and tile fragments set in a medium brown clay matrix (layer 40: Fig. 7, S2 and 3). The southern half of this layer comprised a fairly compact dump of peg tile fragments, but their numbers decreased markedly beyond the midpoint of the ditch, being replaced by more and more of the clay matrix with some chalk inclusions (see Pl. 2). Midden material was noticeably absent from this deposit: only 15 fragments of bone and not a single sherd of pottery were recovered from the excavated ditch section.

In the northern arm of the perimeter ditch (1) a similar process of deliberate

infilling seems to have taken place - only, here, there was no such suitable source of hardcore so conveniently at hand. In this case, the ditch was infilled with a massive dump of medium to dark grey-brown clayey loams, to a depth of 0.65m (Fig. 6, S1: Pl. 1). These deposits incorporated occasional fragments of brick, small stones, crushed chalk and charcoal. As only to be expected, given the quantity of material used in the infill, there is a certain amount of midden material present in this deposit (layer 2): contemporary pottery probably includes a sherd from the belly of a Frechen Bartmann, and several fragments of Brown Glazed Coarseware, whilst the faunal assemblage includes c. 60 fragments of cattle, sheep, horse and domestic fowl.

The final version of the tile kiln appears to have been deliberately dismantled. The upper part of its flue and the tops of the walls were covered with an 0.05m deep spread of compacted orange-brown sandy clay which was mixed with brick and tile dust, and which incorporated pieces of smashed up bricks and medium sized tile fragments (layer 38). Not only did this deposit cover the full length of the kiln, but there was a dense scatter of brick and tile extending outwards in every direction for some 7m. Whilst it could be argued that some at least of this surface scatter must have been caused by modern deep ploughing, sufficiently large quantities of broken bricks were recovered from sealed horizons in the south ditch and in the fills of the clay pits to demonstrate that large-scale demolition of a major brick structure took place at the end of Phase III. Moreover, the association of these brick fragments with quantities of broken peg tiles tends to suggest that both types of building material emanated from the same source.

PHASE IV c. 1650 + (Fig. 11)

This phase is represented by agricultural activity on the site following the abandonment of the moat platform. The infilling of much of the former enclosure ditch at the end of Phase III would have greatly facilitated access onto the former platform, and at some stage this was ploughed over - although no dating evidence was recovered from any of the furrows to suggest whether any interval of time elapsed between these two events. Another consequence of this ploughing is that more soil became spread over the tops of the former ditches, settling over the slumped infill. The final activity on the site is represented by two different programs of field drainage - the last taking place as recently as 1972.

The top of the platform had been extensively disturbed. In places, such disturbances took the form of linear discolourations running from east to west; in other places, it was harder to define clear features from a generally churned up surface. Three of the linear features were investigated (13, 15 and 17: Fig. 11). These were shallow linear cuts set at a little over a metre apart: the deepest was 0.15m, with the shallowest a mere 0.04m. In profile, they had slightly rounded bases and gently sloping sides. Their fills consisted universally of dark grey-brown ashy clay looms, which incorporated occasional fragments of oyster shell, charcoal and brick. The longest of these was exposed for some 5.80m, and undoubtedly continued beyond the edge of the excavation. They are interpreted as the very bottoms of plough furrows, most of which would have been in topsoil; continued ploughing in much the same place has resulted in the broadening of the original cut, with a consequent obfuscation of its profile.

In the southern arm of the perimeter ditch accumulated an 0.25m thick deposit of loose, crumbly, dark grey or black clayey loam (layer 37: Fig. 7, S2 and 3; Pl. 2). This incorporated occasional small fragments of chalk, brick and charcoal, together with cattle, sheep and pig bones. Pottery in its fill included fragments of post-medieval blackware and Late Humberware of probably 18th or even 19th century date. A comparable deposit was found in the top 0.30m of the northern arm of the moat ditch (Fig. 6, S1: Pl. 1). Here, the latest fragment of pottery recovered was a fragment of a stoneware bottle of 19th or even 20th century date. The character of these ditch fills is consistent with heavy humic soil layers settling into the hollows over the former ditches, once earlier ditch fills had compacted and begun to slump in the central sections of these features.

The latest activity on the site is represented by the insertion of ceramic field drains. At least two different types of drain were observed on the site. The earlier consists of semicircular sections of piping, 0.33m long, 0.10m wide, and 0.65m deep, in a buff-coloured earthenware (e.g. 44). These were laid from east to west, and were found in the base of both northern and southern arms of the moat, and at irregular intervals across the moat platform. They could be of later 19th or earlier 20th century date, but the trenches in which they were set were clearly dug by hand. Moreover, this type of field drain was superseded by round sections of pipe certainly by 1960. The second type of drain observed on the site was made up of sections of circular pipe in a dark red earthenware (e.g. 3 and 43). These were 0.31m long and 0.10m in diameter, and were set at the base of an 0.20m wide machine cut trench. They were observed only in the bases of the two ditch sections, and were installed by the farmer in 1972.

5. THE FINDS

THE POTTERY. QUANTIFICATION AND INTERIM ASSESSMENT by Peter Didsbury

1. Introduction

466 sherds of pottery, weighing 12966 grams, were recovered during the excavations, of which 43.4Z (by number) or 34.7Z (by weight) was unstratified. Table 1, below, presents a Level 2 quantification of this material, showing number and weight of sherds, as well as average sherd weight (ASW), by context.

The quantification is followed by descriptive accounts of the individual context assemblages, including spot-dating, and finally by recommendations for further work.

Notes:

1. No estimate of number of vessels present could be undertaken in the time available; as an aid to discussion, however, certain vessels have been allocated two-part identification numbers consisting of context number followed by decimal "part number". These vessels have been individually bagged.
2. Names of fabrics and wares follow the terminology of Watkins 1987 unless otherwise stated.

TABLE 1. LEVEL 2 QUANTIFICATION

Context	No.	Wt	ASW
U/s (marked 1)	11	827	75.2
U/s	192	3677	19.2
2	34	1148	33.8
4	195	4958	25.4
6	1	5	5.0
8	18	2003	111.3
10	1	3	3.0
18	3	27	9.0
37	7	106	15.1
41	4	212	53.0
Totals	466	12966	27.8

2. The context assemblages

Context 6

The single sherd (6.1) from this context is the earliest stratified pottery from the site, having been sealed beneath the moat platform. It is from a small, everted-rim cooking pot in shell-tempered ware, the rim slightly dished internally and apparently knife-trimmed on its leading edge. It has probably

been wheel-finished rather than wheel-thrown. Internally dished rims, knife trimming, and general fineness of technique are all regarded by Hayfield (1985, 333) as characteristics which distinguish Late Saxon from eleventh- and twelfth-century (shell-tempered) cooking pots in the region, and a pre-Conquest date for this sherd has been confirmed by Jane Young (pers. comm.), who has identified it as tenth-century "Lincoln Shelly" ware.

It is convenient to note at this point that a small group of shell-tempered wares among the unstratified material includes a rim sherd (u/s.1) which Young (pers. comm.) has identified as a product of the tenth-century Silver Street Kiln in Lincoln (Miles et al. 1989), as well as a small group of shell-tempered body sherds ranging in date from the tenth to the thirteenth century.

These wares, together with a rim-sherd from an early to mid twelfth-century Beverley IA jug (us.2, v. Didsbury and Watkins 1991), combine to suggest some level of activity on site for an appreciable time before its first mention in the Inquisition Post Mortem of 1308/9.

South Ditch. Contexts 41 and 37

All the sherds from 41, the primary silting of this part of the moat ditch, joined to make the rim and neck of a Frechen stoneware globular jug (41.1) with straight neck, shoulder cordon, and speckled yellowish-brown salt glaze. The example under discussion falls into the largest of the three size-ranges of this kind of vessel found at Norwich, i.e. 220-240mm tall (Jennings 1981, 119, and cf. Fig. 49, no. 807) . Such jugs were imported in quantity from c. 1550 onwards, and amount almost to a type-fossil of the second half of the sixteenth and earlier seventeenth centuries.

This vessel thus serves to establish a terminus post quem of 1550 for the overlying tile infill deposits. These in turn are overlain by context 37, representing the final silting of the now infilled ditch. Layer 37 contains sherds from four vessels, comprising a sherd from a late fifteenth- to sixteenth-century Cistercian Ware cup, a post-medieval Late Humberware sherd, and sherds from two vessels in post-medieval blackware; a bead-rimmed dish/bowl and the base of a large mug/tankard. The blackwares are not of seventeenth-century fabric or form (Brears 1971) and, like the sherd of Late Humberware, are probably best regarded as of eighteenth- or even nineteenth-century date.

North Ditch. Context 2

All the material was collected from machine-excavated infill. The latest sherd is from a nineteenth- or twentieth-century stoneware bottle, the bulk of the remainder of the assemblage comprising coarsewares of late medieval to early post-medieval appearance, including sherds of Humberware, Brown Glazed Coarseware, and, what is probably best regarded as, Old Bolingbroke Ware (Coppack 1976), an identification supported by Jane Young (pers. comm.). Three vessels deserve specific mention:

2.1 Several joining sherds forming a large portion of a two-handled grape in Low Countries Redware. A long-lived form, mid-fourteenth to seventeenth century (Janssen 1983, 159).

2.2 Rim and corrugated neck of a Raeren stoneware jug identical in form and dimensions to an example from Norwich bearing the date 1580 (Jennings 1981, Fig. 47, no. 773, and cf. Reineking von Bock 1971, no. 372, late sixteenth-century).

2.3 Sherd of light-grey, almost white, stoneware with speckled yellowish-brown salt glaze on exterior, bearing fragments of three letters of an inscription below a raised cordon. The curvature of the sherd would be compatible with its deriving from an Inscribed Band Frechen Bartmann jug of the second half of the sixteenth century, though the fabric is more reminiscent of sixteenth-century Siegburg production.

N.B. There would appear to be vessel links (notably the Victorian bottle) with material from "u/s marked 1", which comes from machine clearance of the area over the ditch. This assemblage also includes a large proportion of a Raeren stoneware globular drinking mug of the late fifteenth/early sixteenth century.

The tile-kiln. Contexts 10 and 25

The dating evidence for context 10 is most unsatisfactory, consisting of a small medieval jug sherd in a hard orange fabric, and a stem fragment of clay pipe, almost certainly of nineteenth-century date. (Context 25 contained only a single tile fragment.)

The Clay-pits. Contexts 8 and 4

The fill of the smaller claypit (context 8) contained an estimated minimum number of nine vessels, as follows:

8.1 Frilled base of a Raeren stoneware drinking mug of the late fifteenth or early sixteenth century.

8.2 Shallow dish with flanged rim, either Low Countries Redware (most probable), or a local copy thereof. A thumb impression near the base suggests that it had pinched (or lobed) feet, a feature that was standard on the Dutch form from the fourteenth to late sixteenth centuries. Imported vessels of this form occurred right through to the later sixteenth century at the Newcastle Castle Ditch (Harbottle and Ellison 1981, 137-8, cf. Fig. 24, no. 204). Local English production of vessels "copying" the Dutch repertoire was common from the late medieval to early post-medieval period onwards, that in Norwich dating to after 1507 (Jennings 1981, 134).

8.3-8.6 Sherds of at least four Martincamp flasks. Published descriptions of the three fabric groups from this source are vague and mutually contradictory (cf. Hurst 1977; Hurst et al., 1986; Moorhouse 1987; Harbottle and Ellison 1981; Jennings 1981). What seems certain, however, is that none of the flasks from the site can justifiably be classed as either the mainly seventeenth-century Type 3 (hard red earthenware, sometimes near stoneware), or the late fifteenth- to mid sixteenth-century Type 1 (off-white hard earthenware), though all could be safely regarded as Type 2 or Type 1/2. The latter, intermediate category, is adopted after the example of Harbottle

and Ellison 1981, where Fig. 19, no. 159, is described as of "hard cream/buff near stoneware with external brown bloom" and categorised as "Type 1 or underfired Type 2". Type 2 flasks are held to overlap chronologically with Type 3, and their presence on site therefore betokens little more than a 'sixteenth-to seventeenth-century' date.

8.7 A sherd of internally glazed Late Humberware.

8.8 and 8.9 Half profiles of two large slack-profiled vessels, probably cisterns, in Late Humberware and Brown Glazed Coarseware respectively. Close parallels have not been found in the late medieval assemblages in Hayfield 1985, and it may be assumed that these are relatively local post-medieval products. Jane Young (pers. comm.) has indicated that they do not appear in regional assemblages after the middle of the seventeenth century. Their kiln-source(s) remain unknown.

The fill of the larger clay-pit (context 4) contained several German stonewares and other imported vessels, in addition to a large coarseware component of generally late medieval to post-medieval appearance. The coarsewares have not been studied closely, given the time available, but the imports and other finewares will probably serve to indicate quite well the date-range of the whole deposit:

4.1 Rim-sherd from a green-glazed earthenware Beauvais medallion jug (Hurst et al., 1986, 106, and cf. Fig. 50.157). Late fifteenth century, and particularly first half of the sixteenth. Relatively well-known as an export to England.

4.2 Rim and lower body of a mottled blue tin-glazed Malling Jug from the Low Countries. Probably "the typical export jug of the second half of the 16th century" (Hurst et al. 1986, 126 and Fig. 57.174/175).

4.3 Rim and upper profile of small globular Raeren drinking mug, late fifteenth or sixteenth century (Jennings 1981, no. 749ff, cf. no. 750 for size).

4.4 Fragment of frilled base of Raeren vessel as 4.3.

4.5-4.10 Six examples of Frechen stoneware small jugs, 4.5 being almost identical in form and size to Jennings 1981, no. 805. Latter half of sixteenth, and seventeenth, centuries.

4.11 Light grey stoneware base decorated with tropfenfoermige Buckel outlined with raised dots. This appears to be a decorative device characteristic of Cologne production in the period c. 1525-1550, appearing on jugs of both "foliage" (as probably here) and Trichterhals types, cf. Reineking von Bock 1971, nos 291-293 and 280.

4.12 Rim of either a Frechen Hartmann (post-1550, into seventeenth century) or a Frechen/Cologne jug similar to Jennings 1981, no. 797 (c. 1525-1575).

4.13 Base and body sherds of a cobalt-glazed Westerwald vessel, probably a biconic jug, cf. Hurst et al., 1986, Fig. 107.337/338. Seventeenth century

(the absence of manganese colouring possibly suggesting a date before 1665).

4.14 Basal sherd from a Frechen small jug, as 8.5-8.10. 4.15-4.19
Unattributed German stoneware sherds.

4.20 Neck and shoulder of Martincamp flask. With dark brownish grey fabric, one flat side and one globular side, and random splashes of ash glaze, it conforms closely to Hurst's description of Type 2 flasks (Hurst et al., 1986, 102-104 and cf. Fig. 47.143). [Sherds of three other flasks are included under this reference number].

4.21 Two sherds of tin-glazed earthenware, one decorated in blue on white internally, with concentric bands and ?flowers. Possibly Anglo-Netherlands, possibly seventeenth-century.

4.22 Two sherds of yellow-glazed whiteware, possibly Midland Yellow (late sixteenth and seventeenth centuries). Forms difficult to decide, though one sherd is possibly from the footring of a chafing dish (cf. Woodfield 1966, Type B).

4.23 Sherds of four Cistercian Ware vessels, sixteenth-century.

4.24 Two sherds of post-medieval blackware, dating uncertain.

4.25 Six rim sherds of Dutch or Dutch-type redwares, including a possible grape, two flanged-rim dishes/bowls, and a jar.

Much of the imported pottery from both these groups is of types which can be ascribed to the sixteenth or sixteenth/ earlier seventeenth centuries, making a precise date for the infilling of the claypits difficult to establish. The latest pottery in context 8 consists of coarseware vessels (8.8, 8.9) which could go as late as c. 1650, while context 4 is taken securely into the seventeenth century by the Westerwald vessel (4.13) as well as by probable examples of Midland Yellow Ware and Anglo-Netherlands tin-glaze (4.22, 4.21). The presence of a coin-weight, dated to 1594, in this context also goes some way to supporting a seventeenth-century date for the deposit, given the fact that it is the kind of object likely to have enjoyed some years of careful use before its eventual loss or disposal. In conclusion, it seems safe to argue that the infilling of the clay pits was an event which took place some time in the first half of the seventeenth century, probably employing domestic rubbish which had been accumulating on site for a considerable part of the sixteenth century.

The Moat Platform: post-abandonment furrows. Contexts 16 and 18 Context 16 contained no pottery, and only 2 fragments of tile weighing 17 grams. Context 18 contained single small body sherds from a Martincamp flask, a Late Humberware vessel, and what is probably a medieval jug of unidentified fabric.

3. Recommendations

The pottery assemblage offers a valuable insight into the range of regional

and imported vessels in use in a wealthy household in the sixteenth and seventeenth centuries, as well as evidence of settlement activity in the locality from the tenth century onwards. Both these aspects of the material deserve more detailed study than has so far been possible. The work undertaken has already made worthwhile and somewhat unexpected additions to the ceramic record of (pre-1974) Lincolnshire, notably in the recognition of a Beauvais Green glazed medallion jug and a "Malling" jug, both of which are here recorded for the first time from the historic county (cf. Hurst 1991). The latter class of vessel, indeed, is extremely rare even in London (Alan Vince, pers. comm.) and should probably be considered as revealing of the family's wealth in the sixteenth century as the coin-weight from the same context. Finally, it is felt that a properly quantified study of the relationship between imports and local coarsewares (scarcely touched upon in this report) should be undertaken, a study which should complement other work on the household economy recommended in Chapter 6 (q.v.) and may prove valuable in extending our knowledge of the dating of these types of ware. For all the above reasons, full publication of the pottery is recommended.

THE COIN AND COIN WEIGHT by P.J. SEABY

1 Burgundian Netherlands, Philip the Handsome (Philippe le Beau), 1482-1506, archduke of Austria, duke of Burgundy, etc.

Silver patard (double groat) of Namur.

Obv. (PhS.DE.GRA.ARC]hID.AVST.DVX.BG.C.nA, crowned arms (Austria/Burgundy).

Rev. SIT.nO - (mE.DO - ml.BE] - nEDTV, floriate cross with Burgundian millrind-over-cross emblem at centre.

Weight 2.30g. The coin has been anciently gilded (possibly with the intention of passing off as a gold couronne d'or of the Low Countries).

Ref: H.E. Van Gelder & M. Hoc, Les monnaies des Pays-Bas bourguignons et espagnols 1434-1713 (Amsterdam 1964) no. 112-17; R. Chalon, Recherches sur les monnaies des comtes de Namur (Brussels 1860) no. 215.

2 Square brass coin weight for the English gold angel.

Obv. St Michael spearing dragon, within circle.

Rev. Open hand dividing H F, 9(reversed) 4 above, crown below, all within wreath.

Weight 4.63g. Made in Antwerp, 1594; maker's name uncertain.

Ref: B. Kisch, *Scales & Weights*, p.191, no. 24 [initials given as 'HE(?)'].

A weight with the initials HF, dated 1588, is in the Brussels cabinet.

ANIMAL BONE

(The following has been abstracted from a longer set of detailed notes made by Sally Scott following her initial assessment of the material from both Riby and Habrough).

Of the faunal assemblages from the two sites investigated in this section of the pipeline (Riby and Habrough), Habrough was of more interest. There were, in particular, some very interesting bird bones, together with the remains of some very large fish (probably gadidae). In both assemblages there was evidence of systematic butchery and skeletal selectivity, and one or two interesting pathological specimens. At this stage, no detailed study was made of the teeth, but there were a large number of complete mandibles (particularly sheep) which would merit further analysis for age distribution of the two populations. Likewise, because many of the bones are complete, there is potential for a biometrical study.

Both sites merit further study. In terms of cost, a rough estimate would be as follows:

1 week for the identification of the bone.

2-2 1/2 weeks to write the report (including the production of figures and tables, etc.).

Based on a 36hr. week and a fee of £9/hr., this would mean that the cost for the production of bone reports for these two sites would be between £972 and £1134.

6. RECOMMENDATIONS FOR FURTHER WORK

This report represents only an interim statement of the results of this excavation, and should in no way be taken as a final report. Whilst the excavation text is reasonably detailed, further illustration is clearly required; little detailed study has yet begun on many of the finds - in some cases, additional data are still awaited from the laboratories, in the form of X-rays or precise identification of materials; the environmental assessments have been made only on the hand-collected material, as the bulk soil samples have yet to be sieved; and lastly, and most importantly, no discussion is appended here of any of the findings, and no attempt has been made to correlate them with the documentary evidence, or to put any of the excavated structures and assemblages into a wider, regional context.

So little work had been done on the rural settlement of any period in this part of the county, that this project presented an ideal opportunity to examine a large slice of relict landscape, and in places to test various theories about its development. Moreover, this was the first moated site to be examined in South Humberside for 15 years, and hence there was a very real interest in establishing whether the moat had been founded on an earlier part of the actual settlement, or whether it represented an encroachment on part of the village field systems - and, if so, at what date did this encroachment take place: was the moated platform of more than one phase of occupation, what kind of buildings did it have on it, and what evidence (if any) could be gained for differential use of various parts of the enclosure? In the event, comparatively little evidence was gleaned about the medieval manor, and the real importance of the site was found to be in the industrial activity of the later 16th and early 17th centuries. The tile kiln complex was remarkable for the quality of its survival, and represents probably the finest example known from the whole of Humberside. Not only is this of intrinsic interest to this particular site, but it has far-reaching ramifications for the study of ceramic building materials throughout the north of historic Lincolnshire, and, by extension, to our understanding of the local vernacular architecture. Moreover, the finds and faunal assemblages from the infill of the associated clay pits shed some much needed light on the diet and economy of the wealthy household of one of the lesser known families of Lincolnshire gentry at the beginning of the Stuart era. There are some singular finds amongst this material (such as the brass coin weight used to test the value of gold coins coming into this household), whilst several of the imported pottery vessels are the only known examples of such wares from the whole of the historic county. The presence of numbers of fish and bird bones amongst the hand-collected assemblage suggests that a representative picture of the household diet and economy may be obtained, when this is augmented with the material from the bulk soil samples, and that it would certainly repay further detailed study.

It is recommended that this site should be fully published. Given that the post-medieval remains constitute the bulk of this report, a suitable outlet might be Post-Medieval Archaeology, rather than the local county journal (Lincolnshire History and Archaeology). It is also suggested that the results of excavation be augmented by a detailed documentary search of the manorial history by a trained documentary historian, and by a full earthwork survey of the moated remains (with the consent of the farmer).

7. ACKNOWLEDGEMENTS

We should like to thank the staff of Kinetics Ltd., Norwest Holst and the Trust for Wessex Archaeology for their help and co-operation throughout this project; we should particularly like to thank Mick Rawlings for many kindnesses which greatly assisted the smooth running of the excavation. The initial negotiations with the Trust for Wessex Archaeology were carried out by Ed Dennison; administrative support was provided by Zena Ahmed and Mike Endall. Last, but not least, the author would like to express his gratitude to his excavation staff: Tony German, John Watt, Irene McGrath, Phil Lings, Kathy Crooks, Dave Chapman, Carol Dickson and John Farrimond. The inked drawings are the work of Dave Chapman, the site photographs by the author.

8. BIBLIOGRAPHY

BERESFORD, G. 1987. *Goltho: the Development of an Early Medieval Manor c. 850-1150*, London: English Heritage Archaeol. Rep. No. 4.

BREAKS, P.C.D. 1971. *The English Country Pottery: its history and techniques*, Newton Abbott.

COPPACK, G. 1976. 'The Pottery', in DREWETT, P.L. et al., "The Excavation off the Great Hall at Bolingbroke Castle, Lincolnshire, 1973", *Post-Medieval Archaeology*. 10 (1976), 6-24.

DIDSBURY, P. & WATKINS, G. 1991 'The Pottery', in EVANS, D.H. & TOMLINSON, D.G., *Excavations at 33-35 Eastgate, Beverley, 1983-86*, Sheffield Excavation Report No. 3: Dept. of Archaeology & Prehistory, University of Sheffield (in press).

ELLIS, S. 1990. 'Soils', in ELLIS, S. & CROWTHER, D.R. (eds), *Humber Perspectives: a region through the ages*. Hull University Press 1991, 29-42.

GILMOUR, L.A. 1988 *Early Medieval Pottery from Flaxengate, Lincoln*, The Archaeology of Lincoln XVII/2, C.B.A., London.

HARBOTTLE, B. & ELLISON, M. 1981 'An excavation in the castle ditch, Newcastle upon Tyne, 1974-76', *Arch. Aeliana* Ser. 5, 9 (1981), 75-250.

HAYFIELD, C. 1985. *Humberside Medieval Pottery*, B.A.R. Brit. Ser. 140 (2 vols.), Oxford.

HURST, J.G. 1977. 'Martincamp flasks', in NEAL, D. S. , "Excavations at the Palace of King's Langley, Hertfordshire, 1974-1976", *Medieval Archaeology*. 21 (1977), 156-7.

HURST, J.G. 1991. 'Medieval and post-medieval pottery imported into Lincolnshire', in TYSZKA, D., MILLER, K., & BRYANT, G.F. (eds), *Land, People and Landscapes*, Lincoln: Lincolnshire Co. Council Recreation Services 1991, 49-65.

HURST, J.G., NEAL, D.S. & van BEUNINGEN, H.J.E. 1986. *Pottery Produced and Traded in North-West Europe 1350-1650*, Rotterdam Papers 6, Rotterdam.

JANSSEN, H.L. 1983 'Later Medieval Pottery Production in the Netherlands', in DAVEY, P.J. & HODGES, R. (eds), *Ceramics and Trade*, Sheffield: Dept. of Archaeology & Prehistory, University of Sheffield, 1983, 121-85.

JARVIS, R.A., BENDELOW, V.C., BRADLEY, R.I., CARROLL, D.M., FURNESS, R.R., KILGOUR, I.N.L. & KING, S.J. 1984. *Soils and their use in Northern England*, Soil Survey of England and Wales Bulletin No. 10.

JENNINGS, S. 1981. *Eighteen centuries of pottery in Norwich*, East Anglian Archaeology 13.

LE PATOUREL, H.E.J. 1973. *The Mooted Sites of Yorkshire*, Soc. Med. Archaeol. Monog. Ser. No. 5.

LOUGHLIN, N. & MILLER, K.R. 1979 *A Survey of Archaeological Sites in Humberside*, Humberside Joint Archaeological Committee, Hull.

MILES, P., YOUNG, J. & WACHER, J. 1989. *A Late Saxon Kiln Site at Silver Street, Lincoln. The Archaeology of Lincoln XVII/3*, C.B.A., London.

MOORHOUSE, S. & SLOWIKOWSKI, A.M. 1987. 'The Pottery', in MOORHOUSE, S., WRATHMELL, S., *Kirkstall Abbey Vol. I. The 1950-64 excavations: a reassessment*, Yorkshire Archaeol. 1, West Yorks. Archaeol. Service, Wakefield, 59-116.

REINEKING-VON BOCK, G. 1976 *Steinzeug*, Kataloge des Kunstgewerbemuseums, Köln, 4 (2nd edition) .

WATKINS, G. 1987 'The Pottery', in ARMSTRONG, P. & AYERS, B.S., "Excavations in High Street and Blackfriargate", *East Riding Archaeologist* 8 (1987), 53-181.

APPENDIX 1. LIST OF CONTEXTS FROM WHICH ANIMAL BONES WERE RECOVERED

Phase III c.1550-1650 AD

(2) c.60 frags - bos, sheep, horse, domestic fowl - butchery.

(4) c.1,050 frags - bos, sheep, rabbit, plover sp., goose, dog, brown hare, pig, water sp., domestic fowl, cod, fallow deer, cat, rat sp., duck sp., large gadid - butchery, complete bos crania, some selectivity of carcass components.

(8) c.400 frags. - bos, sheep, domestic fowl, dog/fox, brown hare, goose, fallow deer, cod, dog, fish sp., corvid, plover sp., owl sp.? - butchery, lots of rib.

(10) c.30 frags. - sheep only.

(25) c.10 frags. - bos, sheep.

(35) c.5 frags. - domestic fowl immature.

(40) c.15 frags. - bos, sheep pig.

(41) c.10 frags. - bos, sheep.

Phase IV c.1650 + AD

(14) 3 frags - bos, pig.

(16) c.15 frags. - bos, sheep, domestic fowl.

(18) c.15 frags. - bos, sheep, cat.

(37) c.15 frags - bos, sheep, pig.

Machine Clearance over ditch (1) 10 frags. bos, dog, sheep.

Total number of fragments c.1,638 fragments.

Well preserved - some heavy butchery and skeletal selectivity.

Cattle and sheep predominate.

Interesting looking birds and some fish - would require further study.

APPENDIX 2. ANIMAL BONE. LIST OF SPECIES PRESENT IN EACH CONTEXT

Context 2 Phase III

Bos c.60 frags. well preserved, some butchery

Sheep

Horse

Dom. Fowl

Context 40 Phase III

Large Mammal - 3 charred frags.

Context 25 Phase III

Charred fragments only.

Context 4 Phase III

Bos c.60 frags well preserved, butchery

Sheep

Rabbit

Plover sp.

Context 4 Phase III

Bos c.80 frags. well preserved including immature bos/sheep

Sheep

Goose

Dog

Brown Hare

Wader sp.

Context 4 Phase III

Bos c.40 frags. including some heavy butchery.

Pig

Sheep

Goose

Context 4 Phase III

Bos c.40 frags. some butchery. Sheep

Dom. Fowl

Context 4 Phase III

Bos c.60 frags. mainly sheep.

Sheep

Dom. Fowl

Plover sp.

Context 4 Phase III

Bos c.60 frags. some butchery.

Sheep

Pig

Dom. Fowl

Plover sp.

Context 4 Phase III

Bos c.80 frags. some butchery.

Sheep

Dom. Fowl

Goose

Pig

Large Cod

Context 4 Phase III

Bos c.40 frags. lots of rib. Sheep)

Context 4 Phase III

Bos c.40 ribs and scapula.

Sheep

Goose

Context 4 Phase III

Bos - 1 skull - almost complete cranium.

Context 4 Phase III

Bos - 1 cranium.

Context 4 Phase III

Bos c.50 frags. - heavy butchery.

Sheep

Goose

Pig

Context 4 Phase III

Bos Remains of large pig

Sheep c.20 frags.

Pig

Cat

Rat sp.

Duck sp.

Context 4 Phase III

Sheep c.30 frags. - dog gnawing - sheep limbs.

Bos

Context 4 Phase III

Bos c.60 frags.

Sheep

Pig

Dom. Fowl

Duck sp.

Context 4 Phase III

Bos c.70 frags. including some heavy butchery.

Sheep

Cat

Dom. Fowl

Context 4 Phase III
Sheep c.30 frags. legs and horn cores.
Bos

Context 4 Phase III
Bos c.50 frags. some butchery.
Sheep
Goose

Context 4 Phase III
Bos c.30 mainly bos vertebrae.
Sheep
Pig

Context 4 Phase III
Bos c. 40 frags. some butchery.
Sheep
Dom. Fowl
Goose

Context 4 Phase III
Bos c.30 frags., lots of rib.
Sheep
Fallow Deer

Context 4 Phase III
Bos c.50 frags., including some foetal? calf.
Sheep
Dom. Fowl
Gadid

Context 40 Phase III
Bos c.15 frags.
Sheep
Pig

Context 25 Phase III
Bos c.10 frags.
Sheep.

Context 41 Phase III
Bos c.10 frags.
Sheep.

Context 35 Phase III
Dom. Fowl - c.5 frags. very immature.

Context 10 Phase III
Sheep - c.30 very immature.

Context 8 Phase III
Bos - c.50 frags., rib and limb butchery.
Sheep- c.50 frags., butchery.

Dom. Fowl - c.5 frags.
Dog/Fox - 1 arthritic.

Context 8 Phase III

Bos - c.20 frags. mainly rib.
Sheep- c.20 frags. mainly mandibles. Brown Hare - 1.

Context 8 Phase III

Bos - c.20 frags.
Sheep - c.20 mainly mandibles.
Goose - c.5 frags.
Fallow Deer - 1 frag.
Cod - 1 frag.
Dom. Fowl - 1.
Dog - 1.

Context 8 Phase III

Bos - c.20 frags.
Sheep - c.70 frags., lots of rib.
Fish sp - Brauchiostegals.
Dom. Fowl - c.5.
Goose- c.5.
Corvid- 1.
Plover sp. - 2.
Cod - 1.

Context 8 Phase III

Bos - c.15 mainly ribs.
Sheep - c.30 mainly ribs.
Duck sp. - 1. Dom. Fowl - 2.
Owl ?sp. - 1.

Context 8 Phase III

Bos - c.15 frags some butchery.
Sheep - c.20 frags

Context 37 Phase IV

Bos c.15 frags.
Sheep
Pig

Context - Machine Clearance over Ditch 1

Bos c.10 frags. including dog mandible.
Dog
Sheep

Context 16 Phase IV

Bos c.15 frags.
Sheep
Dom. Fowl

Context 14 Phase IV

Bos 3 frags. Pig)

Context 18 Phase IV

Bos c.15 frags.

Sheep

Cat

APPENDIX C. TOTAL QUANTITIES OF FINDS FROM THE SITE

FINDS TYPE	NO. OF MUSEUM BOXES	CONTEXTS	PHASES
Animal bone	6	1, 2, 4, 8, 10, 14, 16,	I-IV
Pottery	3	1, 2, 4, 6, 8, 10, 16, 18, 25, 37, 41, U/S	I-IV
Tile (peg tile, ridge tile and floor tile)	3	1, 2, 4, 8, 10, 14, 16,	III-IV
Brick	4	1, 2, 4, 8, 10, 16, 25,	III-IV
Shell	3	4, 8, 10, 14, 16, 37, 40, 41	III-IV
Miscellaneous (slag, coal, coke, mortar, stone, fossils, burnt daub, clay pipe, field drain)	1	4, 14, 16, 18, 25, 35, 41, U/S	III-IV

APPENDIX D. TOTAL NUMBERS OF SMALL FINDS BY CATEGORY

Category of material	Detailed breakdown of class of object	Total no.
Iron	2 knives; 1 blade; 2 dogs; 7 staples; 1 bolt; 1 stud; 2 swivel loops; 2 hinges; 2 hinge pins; 3 horseshoes; 1 patten; 1 handle; 1 buckle; 1 gridiron; 65 objects (awaiting results of X-rays)	15 9
Copper alloy	1 button; 3 pins; 2 brooches; 3 lace tags; 1 buckle; 1 coin weight; 3 vessel fragments; 1 ferrule; 1 syringe; 3 strips; 1 sheet frag.; 1 object; 1 piece of melt	2 2
Lead and lead alloy	7 window came; 1 disc; 1 sheet frag.; 2 offcuts; 3 pieces of melt	1 4
Silver	1 coin	1
Glass	4 vessel frags.; 3 wine bottle frags.; 4 window frags.	1 1
Textile	1 piece of cord	1
		<hr/> 20
		8

APPENDIX E. CONSERVATION ESTIMATES

ESTIMATE FOR EXAMINATION AND CONSERVATION OF HABROUGH MATERIAL

Radiography of 103 iron small finds	2 hours plus materials
Examination and conservation of copper alloy/iron vessel in 53 main fragments	150 hours plus materials
Examination and conservation of 34 copper alloy and lead small finds	40 hours plus materials
Examination and conservation of 12 non-metal small finds	10 hours plus materials
Total time	202 hours plus materials

Cost = 202 hours at £13.85/hour - £2,797.70 plus materials

All the material is being stored in stable environmental conditions and should be safe in the short term. Recommended conservation priorities are the copper alloy/iron vessel, which is very fragile, and one copper alloy item from Habrough (SF no. 74) which is displaying signs of bronze disease. It is suggested that all the non-ferrous metal be cleaned and stabilised, and that selections for ironwork for full conservation are made on the basis of the X-rays.

Clients are reminded that the Conservation Laboratory does not carry insurance for individual objects, and are advised to make their own arrangements where necessary.

Helen Cox, Conservator
14th August 1991

Conservation Laboratory 2A Beckett Road
Doncaster
DN2 4AA

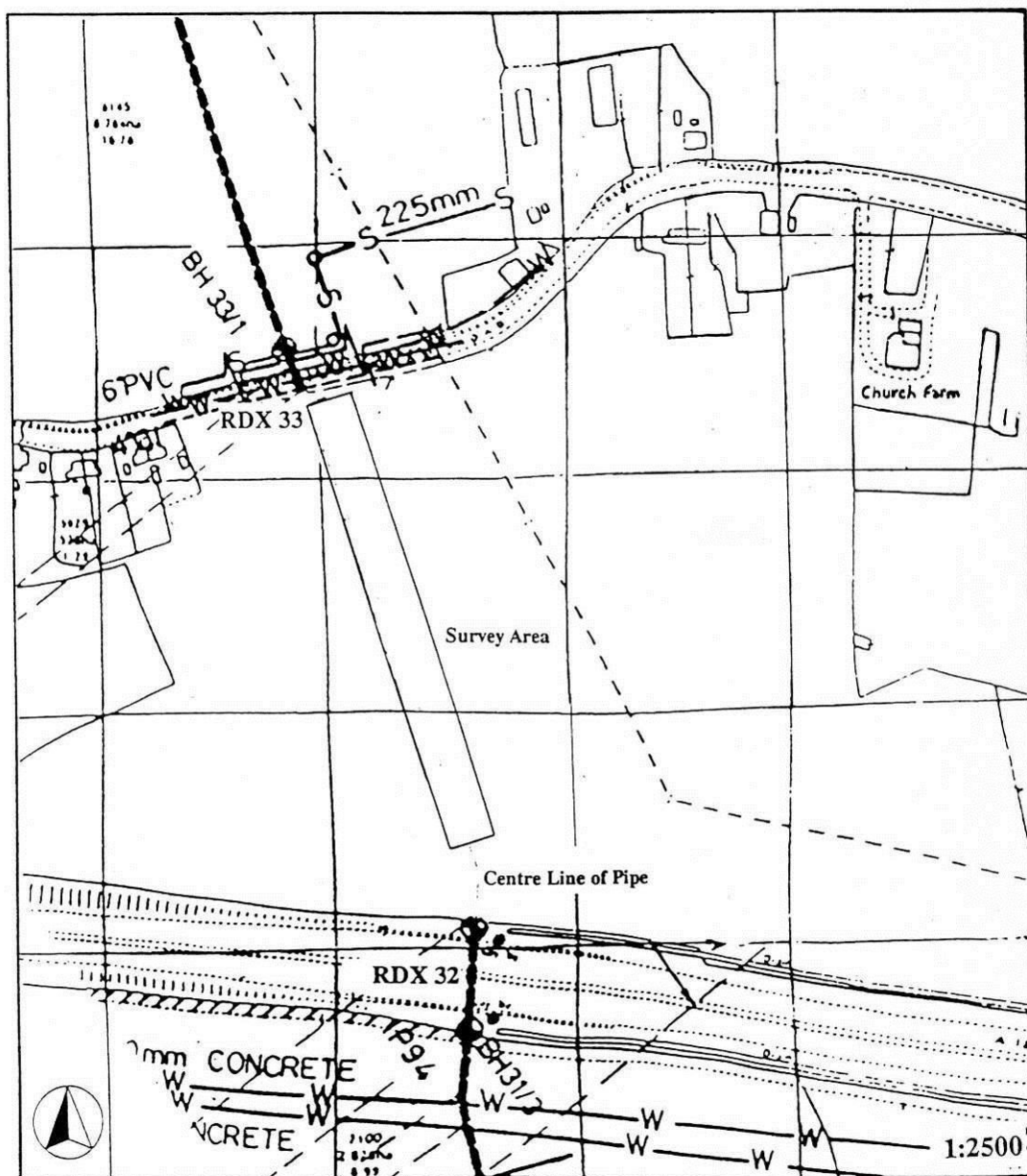
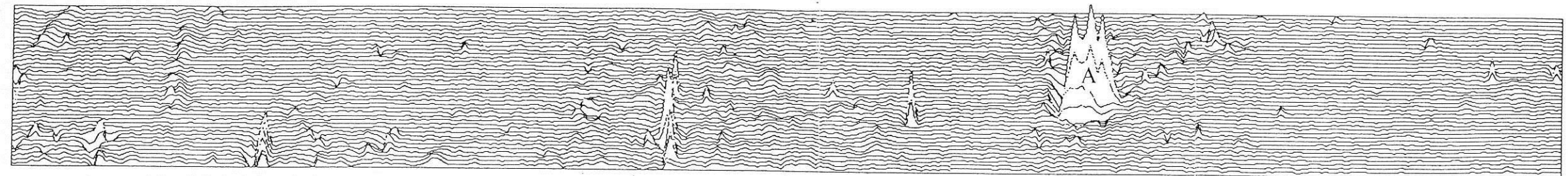


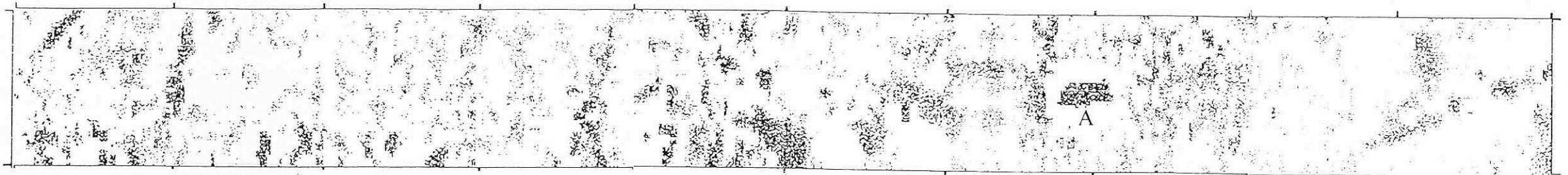
Fig. 1 Site location map.

(note – scale may have been distorted by the digitization process, please see original for accurate measurements)

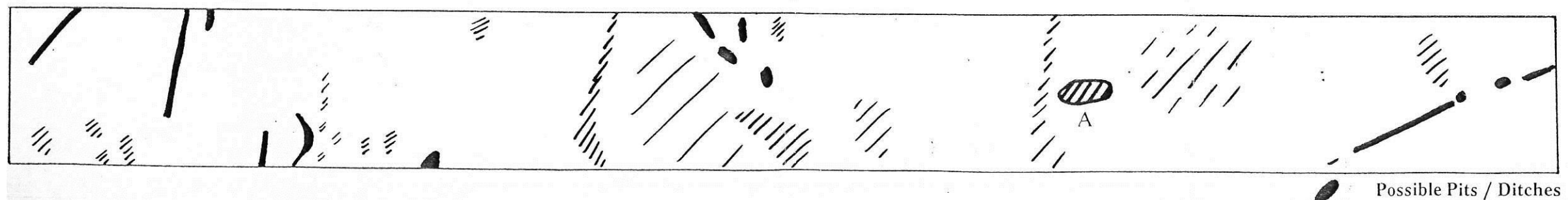
Haborough, South Humberside



Vertical Scale: 15nT / cm



Range: 0.2 - 2nT



Possible Pits / Ditches



1:500

Fig. 2 The Geophysical survey: dot density plot, X-Y profile, and simplified interpretation
(note – scale may have been distorted by the digitization process, please see original for accurate measurements)

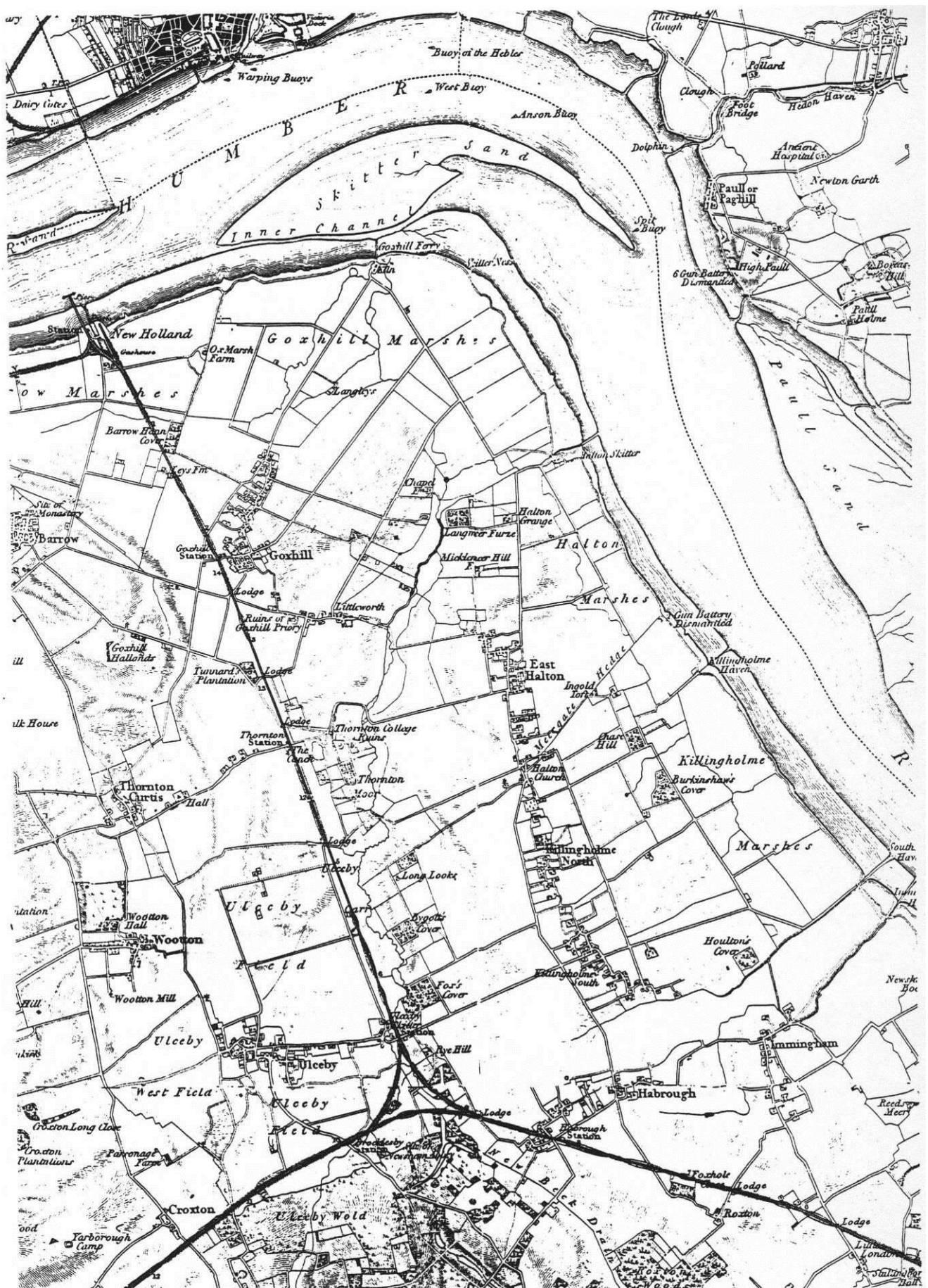


Fig. 3 The 1824 1st edition Ordnance Survey map of the area.

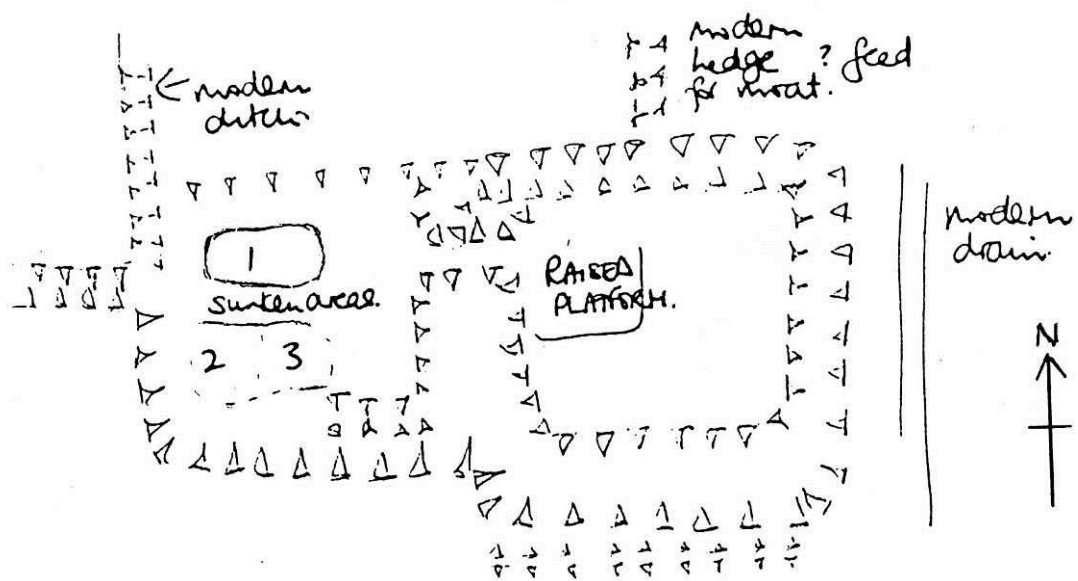


Fig.4 Simplified plan of the moat earthworks, as recorded by Bryant in 1972 (not to scale)

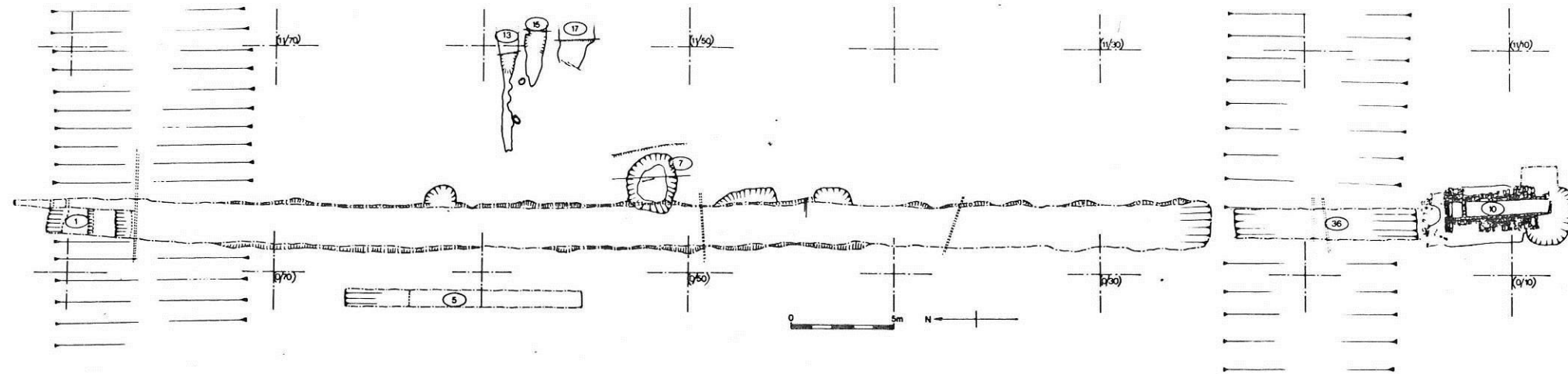


Fig. 5 The excavated features
(note – scale may have been distorted by the digitization process, please see original for accurate measurements)

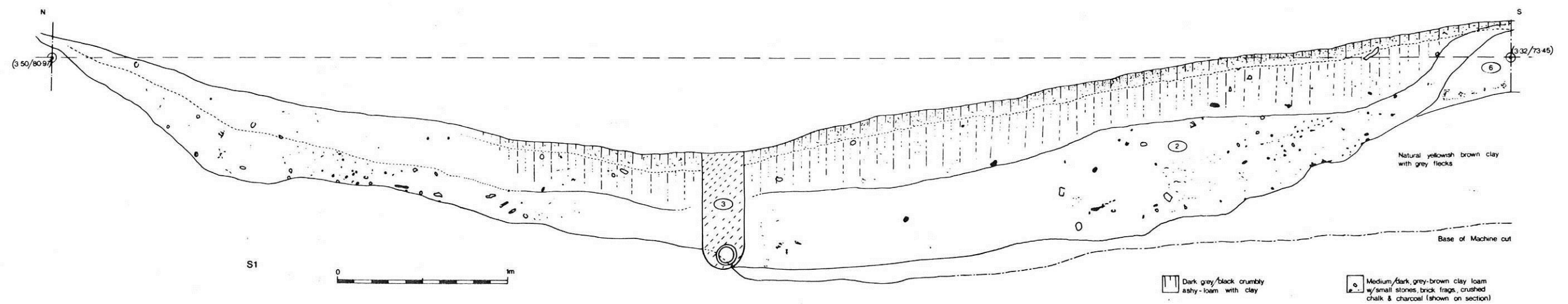


Fig. 6 North-south section across the northern arm of the moat ditch (S1)
(note – scale may have been distorted by the digitization process, please see original for accurate measurements)

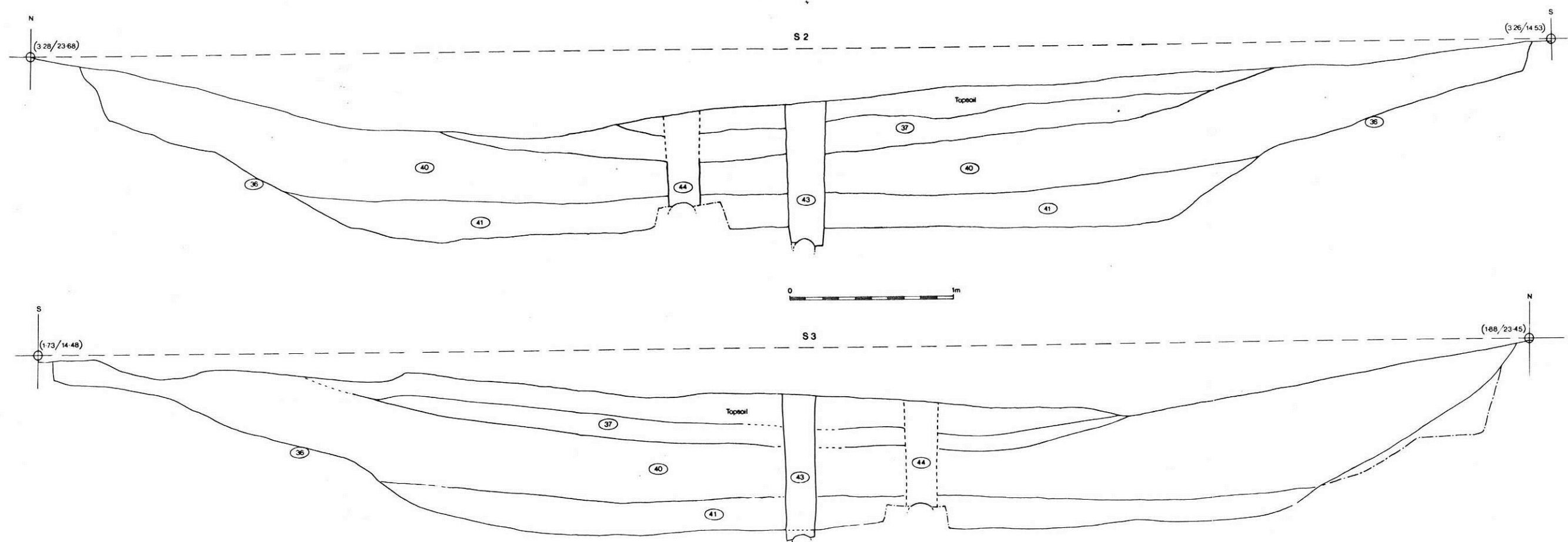


Fig. 7 West facing and east facing sections across the southern arm of the moat ditch (S2 and 3)
 (note – scale may have been distorted by the digitization process, please see original for accurate measurements)

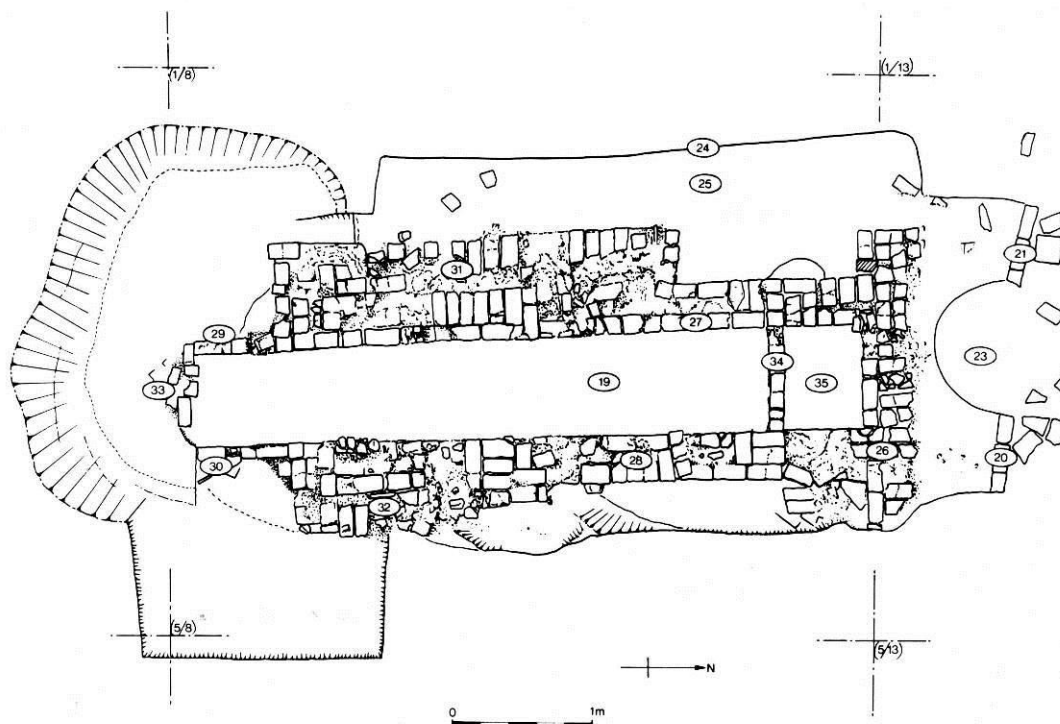


Fig. 8 Plan of the successive tile kilns.
 (note – scale may have been distorted by the digitization process, please see original for accurate measurements)

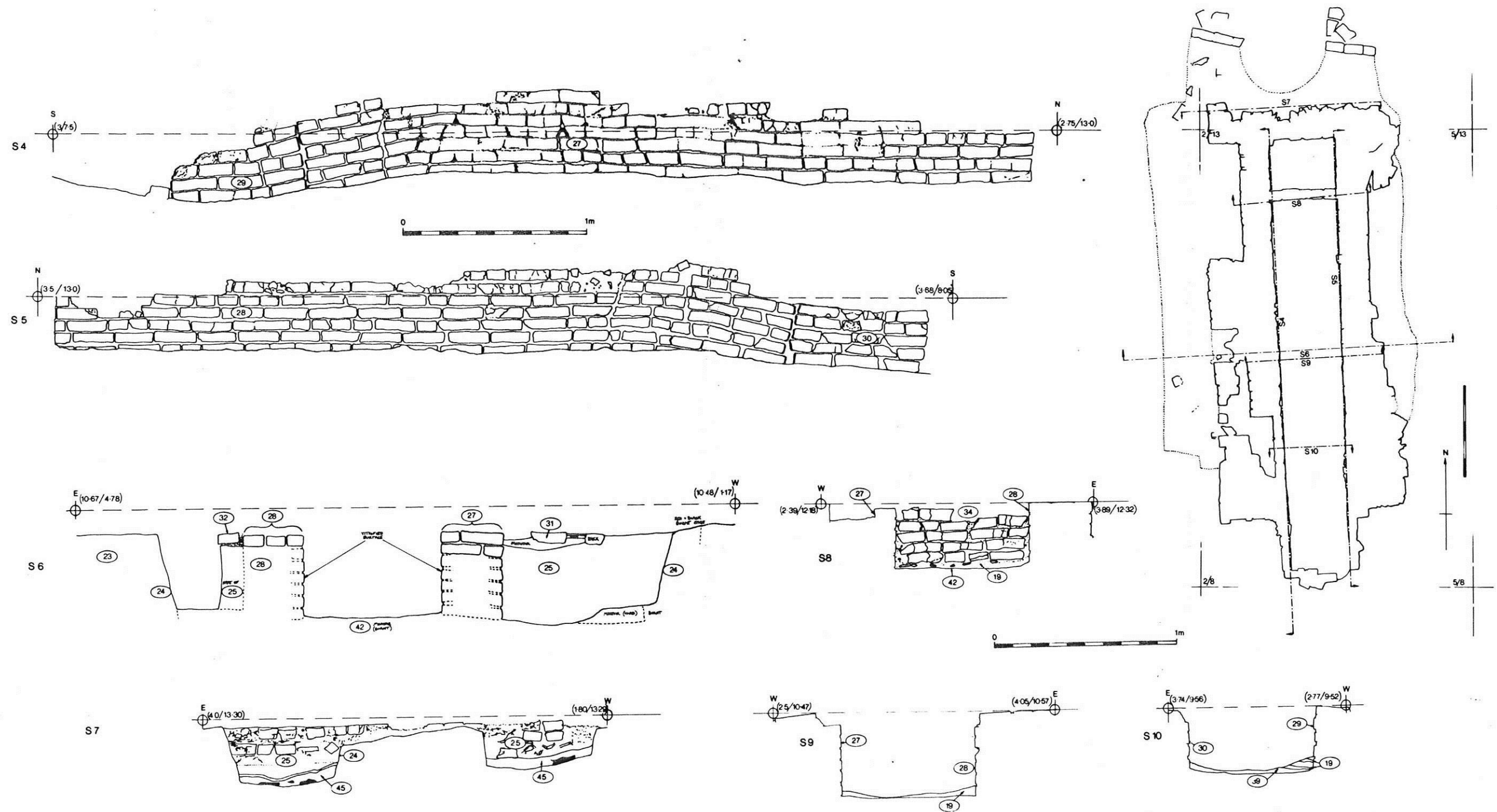


Fig. 9 Elevations and sections through the kilns (S4-7).
 (note – scale may have been distorted by the digitization process, please see original for accurate measurements)

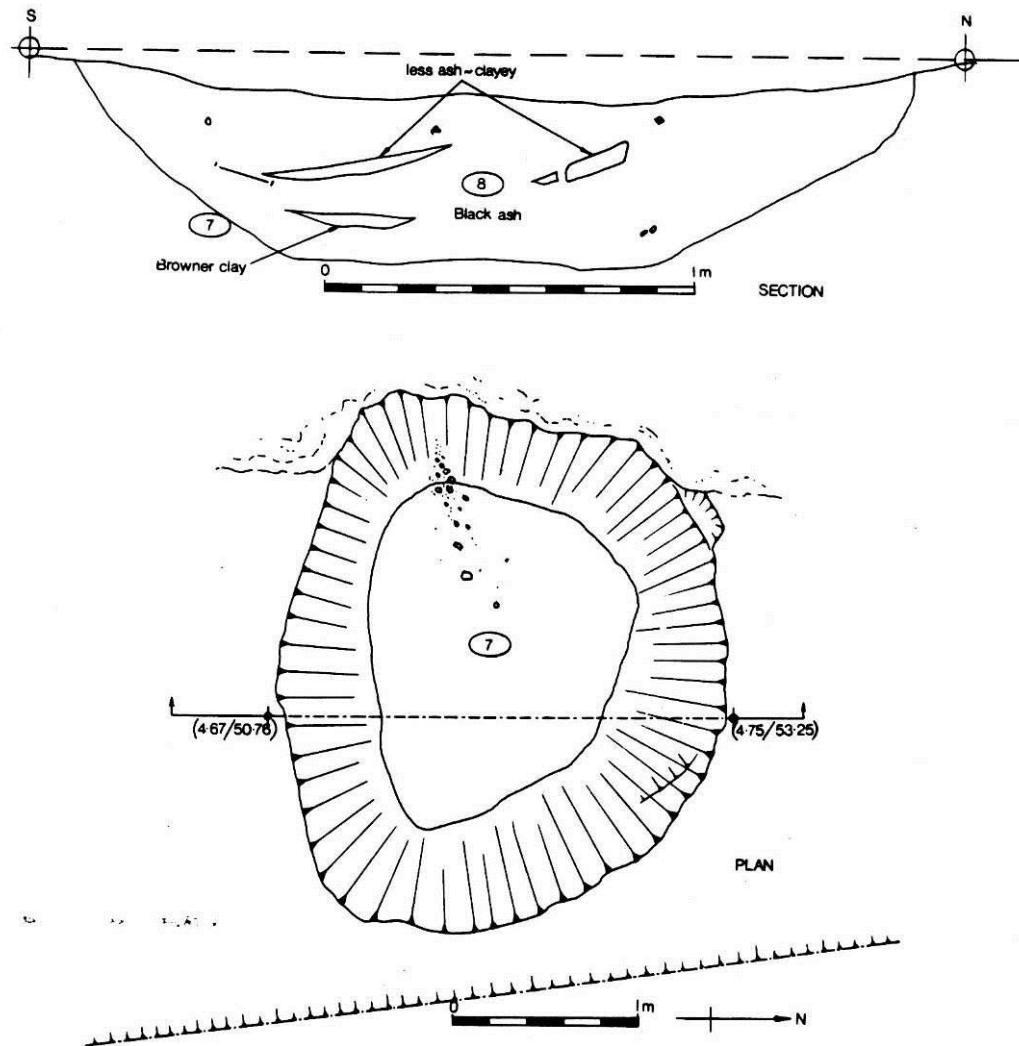


Fig. 10 Plan and section through pit 7.
 (note – scale may have been distorted by the digitization process, please see original for accurate measurements)

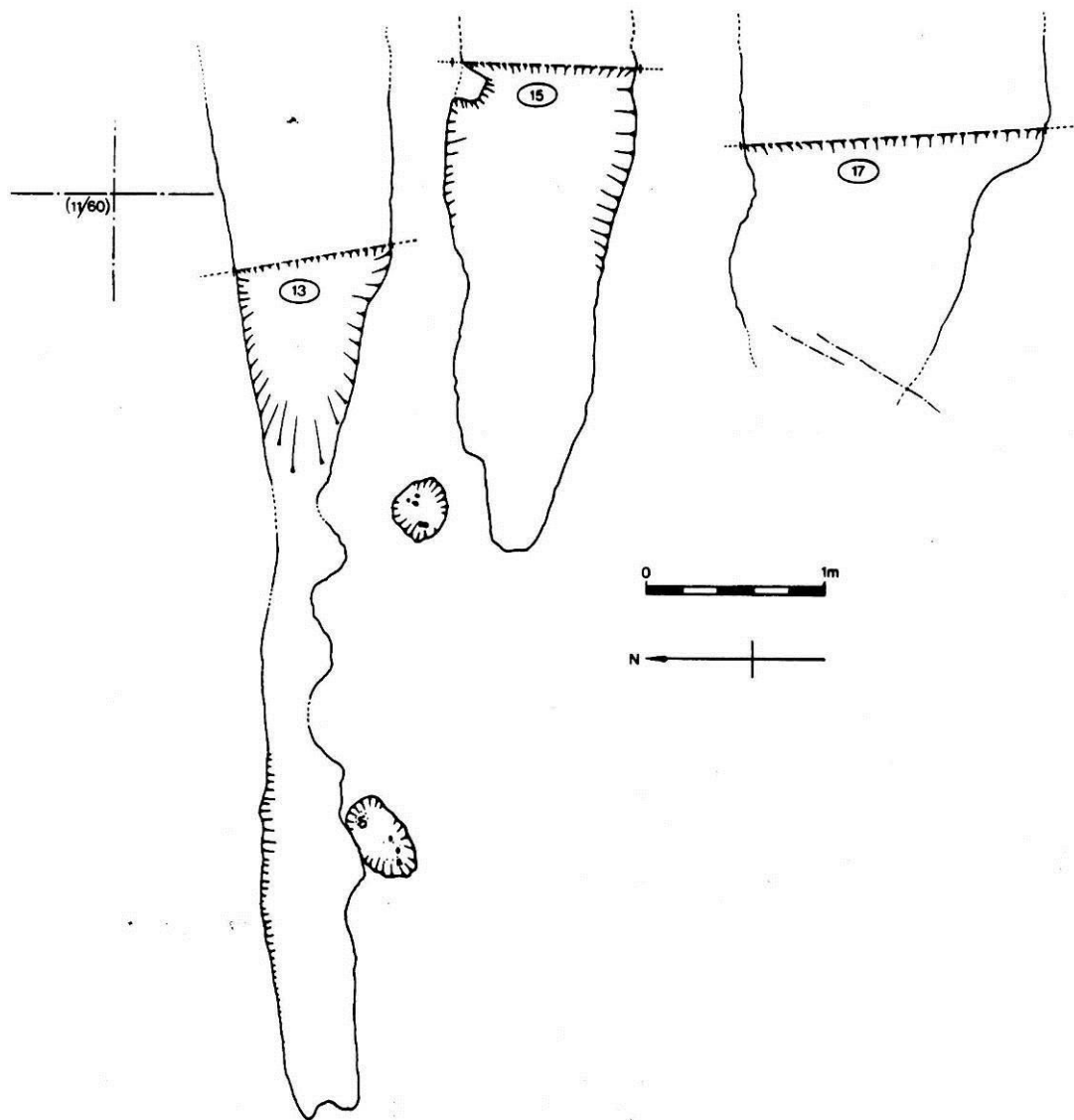
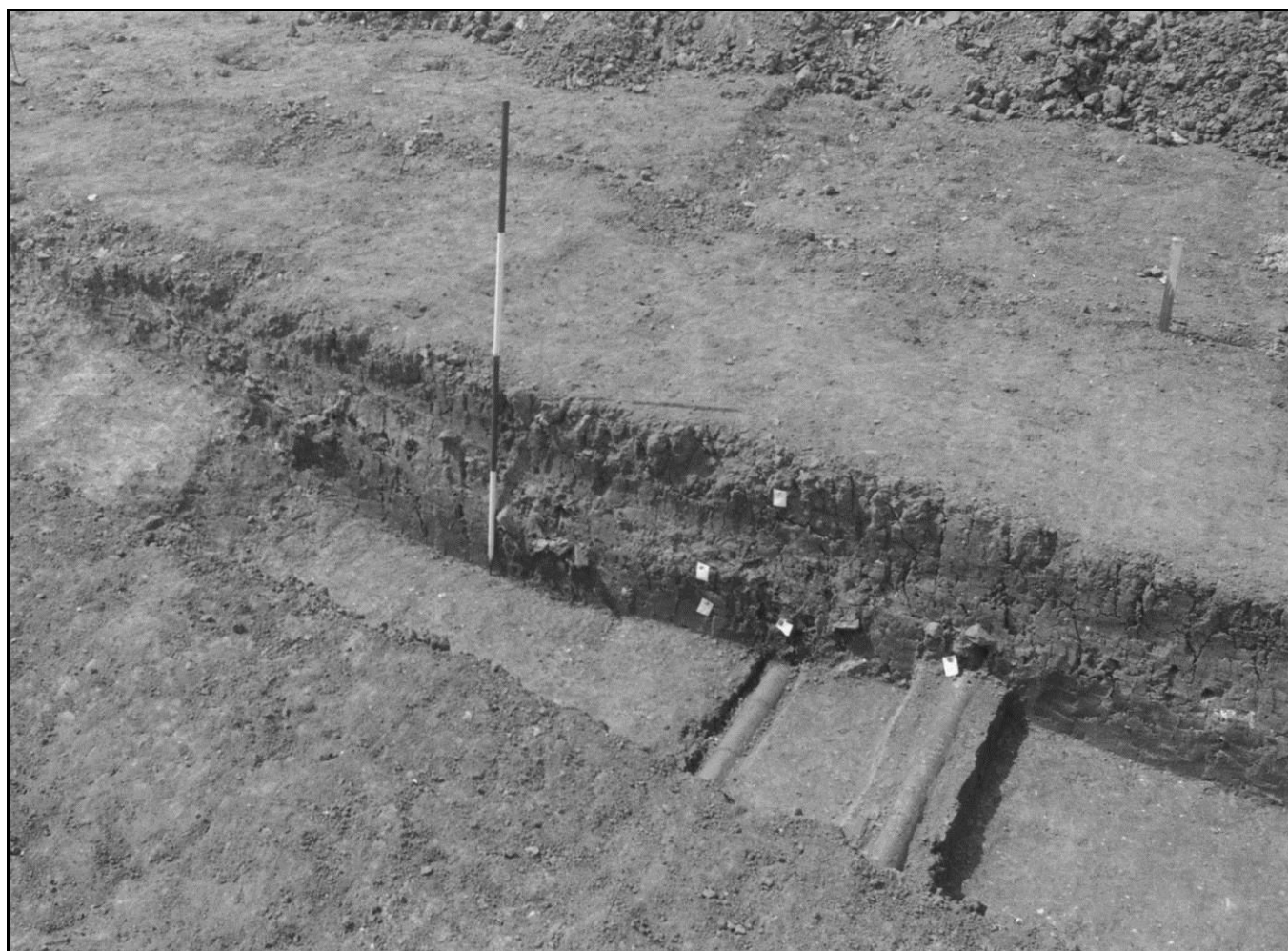


Fig. 11 Plan of Phase IV plough furrows.
(note – scale may have been distorted by the digitization process, please see original for accurate measurements)



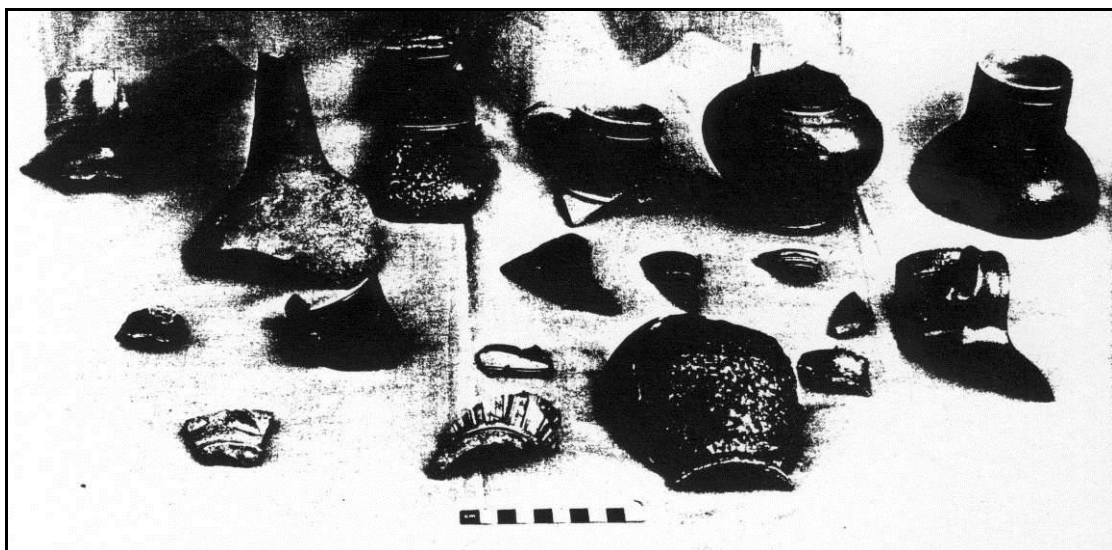
Pl. 1 Ditch 1 viewed from the west.



Pl. 2 Ditch 36 viewed from the east.



Pl.3 The tile kiln complex (feature 10) viewed from the south, during excavation



Pl.4 A selection of the more complete vessels discarded in clay pit 7 at the end of Phase III.