Network Archaeology Limited (NAL) undertook a programme of archaeological investigation prior to and during the construction of a gas pipeline from Hatton to Silk Willoughby, Lincolnshire, between January 1997 and July 1998. This included a desk-based assessment, fieldwalking, geophysical survey, topographic surveys, evaluation trenches, a watching brief and ten excavations. This report summarises the results of just one of those excavations.

This site was situated to the east of the village of Kirkby la Thorpe. It lay on a slight ridge of Oxford Clay (c. ten metres OD) skirting the lower slope of Bargate Hill (Fig.1). The floor of the valley (five metres OD) and the surface geology of the ridge consist of free-draining Sleaford sands and gravels.

Archaeological Background.

The field containing this site was first fieldwalked in 1993 (Brookes 1994), when nine prehistoric flints and three sherds of medieval pottery were recovered. During the pre-construction phase of fieldwalking, in 1997, a total of five artefacts were collected, consisting of two sherds of Roman pottery, one sherd of Anglo-Saxon pottery, one sherd of medieval pottery and a single late Neolithic or early Bronze Age flint scraper (Network Archaeology Ltd 1997, appendix 2). The archaeological features and associated artefacts were identified and excavated during the construction watching brief in 1998 (Network Archaeology Ltd 1999, pp.113-29).

Site Summary.

The excavation revealed a multi-period site dating principally to the late Iron Age and Anglo-Saxon periods, but with additional remains from the late Mesolithic to early Neolithic and through to the medieval period. The earliest evidence consisted of a scatter of late Mesolithic to early Neolithic period worked flints. This was followed by a larger number of worked flints and pottery fragments dating from the late Neolithic to middle Bronze Age period, possibly indicating settlement activity. There was then an apparent lull until the middle or late Iron Age, when two possible round barrows were constructed. Three possible square barrows may also date to this period. These barrows may be associated with the remains of a late Iron Age settlement, also located during pipeline construction, situated less than 300m to the south (Network Archaeology Ltd 1999, pp.41-48). Several pieces of unstratified Romano-British pottery and metalwork dating to the fourth century AD were also recovered from the site and its immediate locale, indicating general activity in the area at this time. The discovery of nine inhumation burials, dated by grave goods, suggests the presence of a seventh-century AD ‘Final Phase’ Anglo-Saxon cemetery. Later medieval activity is demonstrated by pottery and the remains of furrows.

Excavation Methodology.

Topsoil was removed by back-acting excavators, fitted with smooth faced ditching buckets, over a stretch of easement approximately seventy-two metres long and twenty-five metres wide (Fig.1). This area was then hand-cleaned, using hoes and trowels, and all subsequent excavation was carried out by hand. Every feature was either partially or fully excavated. The entire fill of each grave was sieved using a five millimetre mesh, and half of the fill removed from each of the ring ditches was also sieved.

Within the text, all feature numbers are set in square brackets whilst fill numbers are set in round brackets.

Results.

Uncertainty as to the date of many of the features (excluding the inhumations) has prevented their definite allocation to a specific period. It has not, therefore, been possible to fully interpret the archaeology in terms of phases of activity. Instead the site has been broken down into five distinct feature types: ring ditches, square ditches, postholes, pits and inhumations. The description of each feature type is followed by a discussion regarding its function and date.

The Ring Ditches.

Two ring ditches [1990 and 1993] were partially exposed along the eastern easement edge of the northern end of the site (Fig.2).

Ring Ditch [1990].

Approximately half of ring ditch [1990] appeared to fall within the easement. It had an external diameter of 9.9m and a width of approximately 1.7m. Five, one metre wide sections were excavated, all producing similar results (Fig.3 (a) and (b)).

The ditch varied in width between 1.26m and 1.7m, with a maximum depth of between 0.50m and 0.62m. In profile it had a fairly symmetrical ‘V’ shape with a flatish base up to 0.6m wide. The majority of sections showed four natural silting phases with no evidence of deliberate backfilling.

The tertiary fill (2339/2380) contained noticeably more stone, producing a stony layer evident in plan around the full circumference of the ring ditch. This appeared to have entered the ditch from the interior, suggesting that it was material that had eroded from a central mound.

All four silting phases contained occasional charcoal flecks and some finds. The primary fills produced one possible Mesolithic to late Neolithic flint core, four prehistoric flint waste flakes, two undecorated middle Bronze Age pottery sherds, thirteen fragments of middle to late Iron Age pottery, three tiny pieces of unworked fired clay, two pieces of daub, and 115g of animal bone. One of the daub fragments has a 25-30mm diameter impression from a vertical rod. The other has three horizontal wattle impressions. The animal bone consists of ox, pig and sheep remains, some of which show evidence of burning.
Fig. 1. Location map.
The secondary fills produced six prehistoric flint waste flakes, one undecorated middle Bronze Age pottery sherd, twenty-six, probably late, Iron Age pottery sherds, two small pieces of fired clay and 485g of animal bone. The bone has been identified as belonging to sheep, ox and pig. Several of the fragments are burnt and two of the sheep bones exhibit butchery marks. Also present was a single bird bone, possibly a gull or wader. In addition, a small quantity of iron-working slag, consisting of a piece of heathron bottom slag and hammerscale, was detected during environmental sampling.

The third silting phase also contained a significant quantity of diverse artefacts. This included two prehistoric waste flakes, one late Neolithic or Bronze Age scraper, nineteen sherds of probably late Iron Age pottery, one piece of daub with traces of two horizontal impressions, one fragment of worked clay and 325g of animal bone. The bone again includes sheep, ox and pig, some fragments being burnt. Another possible bird bone was recovered along with either a sheep or a deer bone which displays butchery marks.

The final silting phase produced a single sherd of undecorated middle Bronze Age pottery, one late Neolithic or Bronze Age flint scraper, four prehistoric flint waste flakes, ten sherds of middle to late Iron Age pottery and 920g of animal bone. The bone includes sheep, ox, pig and horse remains, some of which are burnt. Also present were several small fragments of copper alloy from an unidentified object, and a human finger bone. The latter probably came from the Anglo-Saxon grave [1987], which cut this fill.

[1993] Environmental Results.

Environmental samples were taken from each fill within section (b) of the ditch. All produced similar results. Small quantities of hammerscale and fired clay were present in most of the samples, three produced a few fragments of pottery, and all produced some animal bone. The final phase of silting (2377) also included some burnt flints. Almost all the samples contained small quantities of fragmented charcoal.

Small pieces of hazelnut shell were recovered from (2380), whilst (2381) and (2377) produced a few charred cereal grains. A glume wheat base was identified in (2377), and a barley or wheat grain in (2381). Several seeds of wild plants, for example dock and medick/trefoil, were also identified. Little can be said of such a small quantity of material, although it is possible that the grains were charred during drying or cooking activities.

In addition to the botanical remains from these fills, the samples contained bones of sheep, lamb and pig. Other animal bones were identified as wood mouse, voles, snake, newt and frog/toad, but were present in small quantities. The small shells were limited in number but suggest an open country or calcareous grassland habitat.

Ring Ditch [1993].

Ring ditch [1993] was located immediately to the north of ring ditch [1990], with nearly two-thirds of the ditch apparently situated within the easement (Fig.2). The ditch had an external diameter of 6.3m, a width of 0.55m to 0.85m, and a depth of between 0.30m and 0.35m. In profile it was fairly symmetrical and ‘V’ shaped, with a flattish base up to 0.26m wide. Five, one metre wide sections were excavated through the ditch revealing two uniform fills throughout (Fig.3, c)-(e).

The primary fill (2336) yielded one Mesolithic or early Neolithic flint waste flake, one Mesolithic or early Neolithic flint core, six prehistoric flint waste flakes, five sherds of pottery (possibly late Iron Age), two tiny pieces of fired clay and 60g of animal bone. The bone included horse-sized, ox-sized and sheep-sized fragments, some of which had been burnt.

Secondary fill (1994) also produced a number of finds. These included ten Mesolithic or Early Neolithic flint waste flakes, seven late Neolithic or Bronze Age flint waste flakes, eight sherds of middle Bronze Age pottery, eleven early Iron Age pottery sherds, ten small fragments of fired clay and 45g of animal bone. The Bronze Age pottery included five plain body sherds, one base sherd and two decorated body sherds, the decoration consisting of fingernail impressions and incised lines. Amongst the fired clay, one piece appeared to have a flat face, whilst a second may be daub with a single wattle impression approximately 20mm in diameter. The animal bone included an ox tooth and ox-sized and sheep-sized bone fragments, several of which were burnt.

[1993] Environmental Results.

An environmental sample was taken from fill (1994). This produced only a few tiny fragments of burnt clay, hammerscale, flint and animal bone. Charcoal was found, as were two fragments of charred cereal grain and a couple of charred weed seeds. Despite its close proximity to ring ditch [1990], the limited small fauna in this sample, while still including shells of the open country, produced a greater number of shells associated with shaded or woodland habitats. This suggests that the immediate environment of ditch [1993] was more shaded.

Ring Ditches - Interpretation.

The association of abundant later Iron Age artefacts with substantial ring ditches is unusual. Because of the lack of known parallels in Lincolnshire, it is tempting to look to another period for their construction. It is clear from the quantity and dates of the finds present, however, that the Iron Age artefacts are unlikely to have been re-deposited. Although sixteen sherds of Roman pottery were recovered during surface cleaning of ring-ditch [1990] none was found within the fills of either feature suggesting that the ditches had completely silted-up by the Roman period.

The only obvious alternative date, particularly in the case of [1990], is the Bronze Age where ring ditches of these dimensions are usually the remains of barrow monuments. Although there was no visible surviving mound material associated with either feature, such material would not be expected to survive. The stonier layer within the third silting phase of ring ditch [1990] is certainly suggestive of the shelling of stony material from an internal mound.

Surveys of Bronze Age barrows in Cambridgeshire have recorded diameters of between ten and seventy metres, with the majority (forty-seven out of the eighty-four recorded) being between sixteen and thirty metres (Taylor 1981, p.110). By way of contrast, in later Bronze Age Wessex, barrows average only twelve metres in diameter (Grinsell 1979, p.27). Ring ditch [1990], with a diameter of 9.9m, would probably be accepted as the remains of a Bronze Age barrow in either of these areas. In terms of depth, excavations in East Anglia have found the majority of barrow ring ditches to be between one and two metres deep. Ring ditch [1990] has a maximum surviving depth of only 0.62m, although we cannot be sure to what extent truncation has occurred. Ring ditch [1993], with a slightly larger diameter of only 6.3m and a surviving maximum depth of 0.35m, is less convincing as a Bronze Age barrow.

The presence of forty-one sherds of middle Bronze Age pottery, ten of these from the ring ditches and some with very little evidence of abrasion, certainly seems to indicate that there was Bronze Age activity in this immediate area. Indeed, both the Bronze Age pottery and flint specialists suggest that
feature digging is likely to have occurred. It is the opinion of the Bronze Age pottery specialist that the Bronze Age pottery is more likely to represent the remains of settlement debris, probably over several generations, rather than the remains of cinerary urns or grave goods. This is supported by the presence of additional unstratified and stratified flint and Bronze Age pottery artefacts, most of which are clearly re-deposited, across the site.

The presence of a significant number of Iron Age artefacts alongside the Bronze Age material also makes an earlier construction date seem unlikely. If the ring ditches had been dug in the Bronze Age one would expect a substantial amount of silting to have occurred prior to the incorporation of the Iron Age material. It seems unlikely, given its size, that [1993] would even have remained open over this length of time. Although it is possible that one, or both, of these ditches was completely re-cut in the Iron Age, leading to the deposition of the Bronze Age artefacts alongside Iron Age artefacts, there is no convincing evidence for this sequence of events. Thus it is felt that an Iron Age construction date, especially for [1993], is more likely.

The relative dating of the ring ditches (to each other) is uncertain. Upon excavation, the outer circumferences of the two features lay immediately adjacent to one another. It is tentatively suggested that the construction of ring ditch [1990] preceded ring ditch [1993], as the clustering of smaller barrows around larger ones (if this is indeed what they were) was not uncommon. The pottery and environmental evidence cannot, unfortunately, be considered reliable tools for establishing the relative chronology of the two features.

The analysis of the mollusc fauna within both ring ditches suggests a slight variation in local habitat between the ditches while they were open. This may merely represent localised differences in vegetation cover, such as a greater number of scrub-like plants alongside [1993]. The limited presence of shade-loving snails is insufficient to justify claims for a wide-scale alteration of the local habitat over the period during which the ring ditches were open.

There is also the matter of ascribing a function to the ring ditches. The smaller dimensions of [1993] might suggest a roundhouse structure but ring ditch [1990] is too wide and too deep to have been either a drainage gully or foundation trench. Certainly, the amount of effort required to excavate [1990] and the small size of its interior, make it unlikely to have been designed as a domestic enclosure. There is no indication of a service or a closed circuit either. If any of either feature, although studies have shown that the majority of roundhouse enclosures face south-east or east which would place them outside the excavation area.

In eastern Yorkshire, where formal burial of the dead seems to have been more common in the Iron Age, such a site might be interpreted as a burial monument of the Arras culture. These date to between the fourth and first century BC. Here individuals were commonly interred under square mounds, or at least under mounds surrounded by square ditches (Stoertz 1997, p.34). The individual enclosures were usually small, up to ten metres wide (Taylor 1981, p.31) and usually contained crouched inhumations, although very occasionally extended inhumations and even cremations have been found. Small round barrows, however, also appear within Iron Age square barrow groups and seem to be contemporary with the latest square-barrow burials. Stead excavated several late Iron Age ring ditches at the Garten Station cemetery (Stoertz 1997, p.39).

Generally, Arras Culture burials were without elaborate grave-goods but some were provided with brooches and joints of pork (Cunliffe 1991, p.501). This tradition also included occasional examples of more elaborate grave goods and cart burials, although these are very much the exception.

It is possible that the three ‘square’ ditches to the south of [1990] (see below) may also represent Arras type features; this would add weight to the argument for the ring ditches themselves being the remains of ritual monuments.

Our lack of knowledge concerning the extent and nature of archaeological deposits to the immediate east of the site makes interpretation harder. It is known that barrows often take advantage of slight rises in the ground (such as is present at this location), although this is true also of settlements. In Lincolnshire, Bronze Age barrows usually occur singularly or in small groups of up to twelve or more (May 1976, pp.71-72), whilst Arras barrow cemeteries range from small clusters to larger groups, such as at Burton Fleming where over five hundred were recorded (Cunliffe 1991, p.499). It is possible that the pipeline clipped the very edge of a much larger and more complex site extending along the slight ridge to the east.

Perhaps the most confusing aspect of the Iron Age evidence is the nature and quantity of the finds recovered. It is clear that the material was finding its way into the ditches almost immediately after construction. The fact that the group who constructed these substantial ditches were likely to be the same people who produced the artefactual debris may cast some light on their attitude towards, and use of, these structures. If they did have a ritual significance one possible explanation could be the holding of feasts and ceremonies, with the remains from these activities being either deliberately placed in, or accidentally entering, the ditches. Such events have been suggested for a number of Bronze Age barrows (Allen, Morris & Clarke 1995, esp. pp.183-86; Allen & Applin 1996).

If, however, the refuse was of a more domestic nature, this might imply a less reverent attitude towards, as well as perhaps a more mundane function for, the ring ditches. There is nothing obviously unusual about the butchered animal bone or the pottery, which includes both hand-made and wheel-thrown wares with a number of sherds recognisable as fragments of hand-made jars. More puzzling is the presence of small quantities of hammerscale in the fills of both ring ditches and a fragment of hearth bottom slag from the primary fill of ring ditch [1990]. Whilst it is possible that the other finds could have been transported to this area, possibly from the late Iron Age settlement site approximately 250m to the south, the hammerscale must have been produced close by. In this case it seems likely that the activities producing the other finds were also occurring nearby.

Although there were a number of pits and postholes in the immediate area, many of which contained similar material and one of which contained a loom-weight fragment, they are insufficient by themselves to demonstrate the presence of structures. However, the two daub fragments from the primary fill of [1990], one with a vertical rod and the other with horizontal wattle marks, are certainly indicative of some type of structure, whether it be for ritual or domestic use. A further fragment of daub, weighing 25g and exhibiting traces of five horizontal wattle impressions, was recovered from the cleaning layer above [1990]. It is likely that this fragment had only recently been ploughed out of ring ditch [1990] as it is unabraded and of the same type as the stratified material from its earliest fill.

This evidence might suggest that these ring ditches have a domestic function and, given that this site is known to extend to the east, it is possible that there may be settlement remains immediately outside the excavation area. However, on balance, it seems more likely that these ring ditches are the remains of barrow monuments. It should be noted that there are examples of sites in Yorkshire where square barrows and adjacent settlements may be contemporary, for example at Arras, in Middleton and North Dalton parishes, and at Foxholes (Stoertz 1997, p.39).
Fig. 3. Section drawings (a) - (m) (N. J. L. Smith).
A POSSIBLE IRON AGE BARROW MONUMENT AND ANGLO-SAXON CEMETERY SITE AT KIRKBY LA THORPE

The 'Square' Ditches.

These three ditches were all located along the eastern easement edge, to the south of ring ditches [1993] and [1990] (Fig.2). All three ditches were only partially exposed, making interpretation of their true form and function difficult. They will be examined individually, beginning with the most northerly, and working south.

Ditch [2308].

Ditch [2308] was located approximately seventeen metres to the south of ring ditch [1990]. It measured 4.1m along its north-south axis, with approximately 2.6m of the two east-west lengths exposed within the easement. In profile it had steep, slightly concave sides and a slightly rounded base, with a width of between 0.35m to 0.45m, and a depth of between 0.1m and 0.15m. Three sections were excavated through the ditch, excluding the southernmost of the two east-west limbs which was extensively damaged by a modern land drain (Fig.3, (f)-(h)). The ditch was also truncated by undated pit [2363] and medieval furrow [2384].

The ditch contained a single fill, (2309). It contained one middle Bronze Age and one middle to late Iron Age pottery sherd. The Iron Age rim sherd is in a grey fabric with evidence of slashed decoration.

Ditch [2310].

Ditch [2310] was positioned eight metres south of ditch [2308]. The north-south axis of the ditch was six metres long, with 2.4m of the two east-west limbs extending into the easement. The width of the ditch varied between 0.4m and 0.5m, with a depth of approximately 0.3m. The ditch had steep, straight sides and a rounded base. Four sections were excavated through it (Fig.3, (i)-(k)) revealing two fairly consistent fills throughout.

Two sherds of middle Bronze Age pottery and a single fragment of animal bone were recovered from the primary fill. The pottery had incised decoration on a raised cordon. The secondary fill contained three sherds of late Iron Age pottery, a horse bone, ox-sized bone fragments, a piece of fine sandstone quern and a lump of unidentified fired clay which may be a sherd of abraded pot.

Ditch [2332].

Ditch [2332] was located only 3.5m south of ditch [2310]. The north-south axis of the ditch was approximately 7.9m long, with a break of approximately 0.25m, 3.5m north of the southern corner. The east-west limbs of the ditch extended 3.5m into the easement. The ditch, which was very shallow (0.03m-0.08m deep), had steep, straight sides and a flat base. The width varied between 0.25m and 0.5m. Five sections were excavated through the ditch and a single fill (2333) identified (Fig.3, (l) and (m)). This produced a single Mesolithic or early Neolithic flint waste flake and an ox humerus. The break in the north-south length of the ditch may be evidence of a west-facing entranceway, although the shallowness of the feature makes it equally likely that the ditch has not survived at this point.

Square Ditches - Environmental Results.

Environmental samples were taken from each of the 'square' ditches. All produced small quantities of fired clay, [2308] and [2310] produced undatable pottery fragments and bone fragments, and [2310] produced five flint waste flakes. They were all poor in environmental finds and produced limited charcoal, no sure evidence for charred cereal grains, one or two fragments of charred weed seed, a few snails and a vole bone. The terrestrial molluscan fauna was composed only of species of open country or intermediate habitat implying a calcareous grassland environment, although the sample was very small.

Square Ditch - Interpretation.

Whilst all three features have been grouped under the heading 'square ditches', it is not possible that they were square or oblong in plan. Therefore, two very different hypotheses are proposed. The first suggests that these are square ditches representing the remains of possible Arras-type Iron Age square barrows (see the discussion above on the interpretation of the ring ditches). The second suggests a more domestic interpretation as the remains of (late) rectangular construction slots. These two hypotheses will be discussed first on typological grounds and then according to artefactual evidence.

The Lincolnshire Sites and Monuments Record (LSMR) records several square barrow-type enclosures in Lincolnshire, none of which have been excavated. Aerial photographs show groups of small square enclosures which are possibly square barrows at Dowsby (Whimster 1981, p.342; LSMR No.32929), Greatford (Whimster 1981, pp.125, 342; LSMR No.32978) and Aunsby and Dentholby (Winton 1998, p.47; LSMR No.60449). There are also some other single, square enclosures at Nettleham (LSMR No.50436), Spridlington (LSMR No.50441), Tatlinton (LSMR No.34181) and Cherry Willingham (LSMR No.52850); it has tentatively been suggested that these too may be barrows. The majority of these possible square barrow groups are found in close proximity to round barrows, presumed to be Bronze Age in date. (If our dating for ring ditches [1990 and 1993] is correct, it is possible that many of these circular barrows may also date to the Iron Age.)

As 'square barrows' these three examples from Kirkby la Thorpe would have measured 4.1m, 6m and 7.9m in width. The lack of a visible mound or grave pit does not rule out the hypothesis that these are the remains of square barrows. The absence of grave pits within the earliest square barrows may indicate the amalgamation of a new imported monument form with indigenous rite involving surface or shallow grave burial (Whimster 1981, pp.194-95). Alternatively, the small size of the mounds and the loose nature of the sands and gravels upon which they are constructed would have made them liable to rapid erosion and truncation through agriculture may have removed internal features. It is also possible that any surviving central pits may lie outside the easement area. If these are square barrows, then approximately a third of [2310] and just under a half of [2332] were exposed within the easement. Although just over half of [2308]’s potential ditch was exposed, a medieval furrow [2384] may have removed any evidence of a central pit.

The second theory is that these ditches may have been the foundation trenches or banks of timber-walled structures, possibly contemporary with the Anglo-Saxon cemetery immediately to the north. Excavations of an Anglo-Saxon settlement at Chalton in Hampshire have revealed a complex series of buildings, nearly all of which are post-built. This is especially relevant as Chalton is also thought to have dated to the seventh and eighth centuries. There appears to have been two methods of construction there. The most popular involved setting posts in individual holes as the basis of a framework. Alternatively, they were indicated by shallow trenches outlining the walls. Either the posts were set individually in the trenches, or perhaps a wooden sill-beam sat in the trench and the posts were set into this. The houses were all rectangular and varied from 3m by 5.5m to 4m by 10m. Assuming our three examples were laid out with their
long axes parallel to the easement, they would not (with lengths of 4.1m, 6m and 7.9m) be too dissimilar to the Chalton examples. On the other hand, most of the Chalton examples had two doors opposite each other in the middle of their long sides, something which is not apparent here. Nor is there any surviving evidence of internal partitioning which was another characteristic of many of the Chalton houses (Brown, 1978).

If these features were houses, then the two postholes, [2328] and [2330], located approximately 0.4m south of ditch [2332], could have been associated with the proposed building, possibly providing additional support to the fabric of the roof (for full details see posthole section below). No evidence was found for other postholes associated with the ‘square’ ditches, though, once again, less substantial features may have been destroyed.

No definitive answers are provided by the artefacts. The latest datable evidence within the ‘square’ ditches points to the Iron Age, with a few middle Bronze Age pottery sherds and prehistoric flints present. No datable Anglo-Saxon finds were recovered although a fragment of fine sandstone quern from the upper fill of [2310] could be either Iron Age or Anglo-Saxon in date. It is possible that the Iron Age material was re-deposited but this is difficult to prove in the absence of later material.

The presence of the quernstone fragment and several pieces of animal bone (including sheep, ox and horse) might suggest domestic type activity but given the small amounts involved this is not convincing. It is unlikely that the bone fragments would have survived from the Bronze Age and so it seems most likely that they are contemporary with the Iron Age pottery. It is, therefore, possible that they represent offerings or feasting debris associated with the proposed square barrows or, alternatively, general debris arising from the later Iron Age settlement excavated to the south or occupation outside the easement.

The Postholes.

Twenty-three convincing postholes were recorded within the excavated area: [1915], [1917], [1919], [1923], [1925], [1927], [1931], [1933], [1935], [1937], [1939], [1941], [1943], [1945], [1947], [1949], [1951], [1955], [2306], [2328], [2330], [2357] and [2378] (Fig. 2).

Fifteen of the postholes were circular in plan, the remainder being sub-circular. In profile all had steep sides, many almost vertical, whilst just over half had flatish bases and the remainder rounded. Diameters varied between 0.17m and 0.38m and depths between 0.07m and 0.28m. The average diameter was 0.26m and the average depth 0.16m. All contained a single fill, the majority being either mid-brown or mid grey-brown sandy silt or silty sand. Nearly all contained occasional small sub-rounded and/or sub-angular stones, whilst eleven contained occasional charcoal flecks.

Varying numbers and types of artefacts were recovered from ten of the postholes. A small lump of chaff-rich fired clay was recovered from [1939] whilst two sherds of Iron Age pottery were found within [1945], one within [1955] and one within [1915]. Posthole [1915] also produced a single prehistoric flint waste flake whilst [2306] contained four waste flakes and one undecorated middle Bronze Age pottery sherd. Another sherd of undecorated middle Bronze Age pottery was recovered from posthole [1919].

A number of animal bones were also recovered, some of which may have been deliberately incorporated within the postholes as packing material. Posthole [1947] contained a small burnt fragment of cow-sized cranium (5g), whilst [1943] contained a partial ox mandible fragment (60g). This bone showed evidence of gnaw marks, probably from a scavenging animal, which suggests that it may have been lying around for some time before being picked up and used as packing for a post. Posthole [1925] contained a single ox talus (35g) and posthole [1941] contained an ox scapula (110g) and a sherd of possibly Roman pottery. No other form of packing material was discovered from the site.

Postholes [2328] and [2330] are the only two postholes for which an association with a possible structure, in this case ‘square’ ditch [2332], has been suggested (see [2322]). Posthole [2328] was oval in plan, with a diameter of approximately 0.28m and a depth of 0.18m. It was steep-sided with a rounded base and contained a single grey-brown silty sand with occasional small rounded pebbles. Posthole [2330] was circular in plan, with a diameter of 0.28m and a depth of 0.12m. It had moderately steep sides with a rounded base and contained a single orange-grey/brown sandy silt with occasional small rounded pebbles. Neither fill contained either artefacts or charcoal.

Posthole Interpretation.

The postholes will be discussed alongside the pits below.

The Pits.

Six small pits were recorded: [1912], [1929], [1964], [2304], [2363] and [2341] (Fig. 2).

Pit [1912].

This was sub-circular in plan, measuring approximately 0.61m in diameter and 0.28m deep, and was situated on the western edge of the easement. It had moderately steep sides and a flatish base. Two fills were recorded. No artefactual or environmental evidence was recovered.

Pit [1929].

This was also located on the western side of the easement, approximately eighteen metres south of pit [1912]. It was circular in plan and measured 0.9m wide and 0.16m deep, with moderately steep sides and a flat base. It contained a single fill producing one sherd of middle Bronze Age pottery, a number of cow-sized skull fragments, two fragments of fired clay, two prehistoric flints, and a fragment of oyster shell. The fired clay has been interpreted as being part of the base of a triangular loom weight.

Pit [1984].

Pit [1984] was located immediately alongside ring ditch [1990]. It was sub-oval in shape, with fairly steep, slightly concave sides, and a flatish base, measuring approximately 0.5m wide and 0.2m deep. The single fill contained a large amount of charcoal flecking but no finds.

Pit [2304].

Pit [2304] was situated approximately six metres north of ‘square’ ditch [2308], on the eastern side of the easement. It was oval in plan, measuring 0.67m long by 0.55m wide and only 0.03m deep. It had gently sloping edges and a flat base. Its single fill, (2305), was a red-brown silty sand with a marked concentration of large rounded pebbles, over 0.1m in width, lying on the surface. A single unworked flint fragment, again over 0.1m wide, was also present. The fill produced one flint flake, probably Mesolithic, and two sherds of pottery, possibly Iron Age.
This was positioned at the north end of the site, towards the western side of the easement. The cut was sub-circular with steep, concave sides, and a flattish base, measuring 0.45m long, 0.4m wide, and 0.16m deep. The fill contained a fragment of Iron Age pottery and a prehistoric flint core.

This pit cut the rectilinear ditch [2308], thus post-dating it. It was oval in shape, with a length of 1.2m, a width of 0.4m, and depth of 0.1m. In profile it had steep concave sides and a wide flat base. The fill contained no finds.

Postholes and Pits Interpretation.

The postholes and pits do not form any clear patterns which might aid their interpretation. There does appear to be a trend for short, north-south posthole alignments, but these are neither extensive enough nor distinctive enough to confidently treat as related groups.

The wide variety of dates and types of artefacts within the postholes complicates interpretation. However, a number of assumptions have been made in an attempt to give a probable overall date to these features. Due to a complete lack of later Anglo-Saxon or medieval finds within any of these features, it is presumed that the Iron Age pottery is not re-deposited. It is also presumed that, as it is highly unlikely that animal bone could have survived from the Bronze Age, this too is likely to be Iron Age in date. This is supported by the recovery of animal bone from pit [1929] alongside fragments of a triangular loom weight of probable Iron Age date, as well as its close association with Iron Age pottery within both the ring ditches and the ‘square’ ditches. If this were correct it would make ten out of the thirteen artefact-containing pits and postholes Iron Age in date. Of the remaining three artefact-containing features, two contained only middle Bronze Age material, postholes [1919] and [2306], whilst one contained a piece of fired clay, posthole [1939]. Although it is not impossible that [1919] and [2306] are Bronze Age in date, it seems more likely that this material is also re-deposited. With the datable Iron Age material spread right across the site, it seems highly likely that the remaining undated features are of a similar date.

The question of function is problematic. Whilst there are insufficient postholes and pits to suggest structures or enclosures it is quite possible that some may have been destroyed by agriculture. Whilst no features relating to dwellings were found within the easement, the presence of such items as the loom weight fragments in pit [1929], and possibly even the quernstone fragment in ‘square’ ditch [2310], indicate domestic activity somewhere. It is possible that this refuse originates from the more obvious Iron Age settlement excavated to the south, or from activity immediately to the east or west.

The Inhumations.

The nine inhumations were all orientated WNW-ESE (head at the western end) and arranged in approximately north-south rows. These lay at the north-eastern end of the site, overlying ring ditches [1990] and [1993] (Fig. 2). Each inhumation will be described in turn, starting with the most northerly grave.

Grave [2325]

Grave [2325] was the largest grave in the cemetery, being 1.10m wide, 0.17m deep and at least 2.30m long (Fig. 4). The eastern edge of the grave lay outside the easement but by removing a section of the bank it was possible to confirm that it post-dated ring ditch [1993].

The grave fill produced fourteen flint waste flakes, two cores, five late Iron Age pottery fragments, a tiny amount of fired clay and 120g of animal bone. The Iron Age pottery includes a sherd decorated with a square-toothed roulette. The animal bone includes two pieces of dog mandible, sheep-sized bone fragments and several pieces of horse vertebrae that appear to have been placed behind the body, running parallel with the back. It is likely that the two dog mandible fragments (probably from the same animal) and the horse vertebrae were contemporary with the burial. The other finds within the fill are probably residual, having been deposited during the back-filling of the grave.

Although the human bone (2327) is poorly-preserved, the remains are identifiable as a female, twenty-five to thirty-five years old and approximately 1.65m tall. It is impossible to tell from the state of the bones whether the woman had suffered from any trauma or disease, although the majority of her teeth are present and show a fairly high degree of decay. The body was laid on its left side and had a decorated bone object placed behind the head. The object’s decoration consists of two circumferential lines between which are two ringed-dots (Fig. 5.2). The object was burnt before burial, which has left the piece distorted and incomplete.

Grave [1981]

Grave cut [1981] was dug immediately alongside grave [2325] and, therefore, probably also post-dates ring ditch [1993] (although this was not proven by excavation). The grave cut was 0.6m wide, approximately 0.18m deep and over 1.6m long, again with the eastern edge lying just outside the easement (Fig. 4).

The bones (2322) are very poorly-preserved, with only fragments of the legs remaining. Little can therefore be said of the remains except that they belong to an adult that had been placed on its back with the right leg crossed over the left. Two iron knife blades were uncovered along with the burial. The largest knife, possibly a seax, would have been positioned across the torse. This ‘seax’ is 285mm long with a blade width of 27mm. It has a single cutting edge with a 4mm-wide groove running down the back edge of the blade (Fig. 6.1). The other, smaller blade, has a curving back and a straight cutting edge with a blade width of 15mm and a surviving length of 165mm (Fig. 6.2). No other finds were recovered.

Grave [1975].

Grave cut [1975] lay south-west of grave cut [1981] and contained skeleton (1977). The south-eastern edge of the grave cut through ring ditch [1990], thereby post-dating it. The grave measured 1.65m long, 0.65m wide, and 0.15m deep (Fig. 4). No finds were recovered.

The human remains are in relatively good condition and were identified as belonging to a male, twenty-seven to thirty-five years old and approximately 1.7m tall. There is some slight evidence of stress on the vertebrae, although this would not have caused his death.

An environmental sample taken from (1976) produced several snail shells indicative of open country.

Grave [1996].

Grave cut [1996] lay slightly south-east of grave cut [1975]. The grave itself measured approximately two metres long by 0.5m wide and 0.15m deep (Fig. 4). It cut the uppermost fill of ring ditch [1990], thus post-dating it. The grave fill contained a flint disc scraper tool, a flint core, fifteen waste flakes, thirteen sherds of Iron Age or Romano-British pottery.
and 120g of animal bone. The bone includes sheep, pig, ox, a possible frog bone and several burnt bone fragments. Also within the grave fill was a small bun-shaped bone object of unknown function. This object is 12.3mm in diameter, 7.1mm in height and hollow-based with a possible central perforation (Fig.5.1). All the finds from fill (1997) are probably residual with the exception of the bone object.

The human remains (1998), are poorly preserved with all the bones showing at least some post-depositional damage, including the loss of the facial bones, feet and the spine. The limited evidence does suggest, however, that the remains are probably those of a female aged twenty-five to thirty-five years old. Almost all of the teeth were retrieved and show advanced stages of decay. It has not been possible to determine the cause of death.

**Grave [1987].**

Grave cut [1987] was located to the south-west of grave [1996], and contained the most complete human skeleton (Fig.4). The grave measured 1.9m long by 0.65m wide and 0.18m deep. It too appeared to cut the edge of ring ditch [1990]. There were a number of finds within the grave fill, including sherd of Romano-British pottery, four prehistoric flint flakes, oyster shell and 40g of animal bone including ox, sheep and pig bone fragments. All of the finds are thought to be residual.

This skeleton (1989) was the tallest within the cemetery assemblage, standing at 1.8m tall. The remains are of a male aged between thirty-five and forty years, making him the oldest individual, at least amongst the bodies where age at death could be determined. The teeth of the subject were well preserved, with only the lower third molars being lost during the man’s lifetime. All of the teeth exhibited some form of wear, with three of the molars having completely lost their crowns, leaving only the roots. The skeleton also displayed evidence of a severe scalp infection, which appeared to have almost completely healed before death. The advanced state of healing suggests that this infection would not have led to the death of the individual, the cause of which remains unknown.

A sample taken for environmental analysis provided some small shells of open country habitats.

**Grave [2315].**

Grave cut [2315] was located immediately to the south of grave [1987] and had been partially damaged by a later medieval furrow [2384]. The grave cut measured 1.9m long by 0.7m wide and only 0.05m deep (Fig.4). There were a small number of re-deposited finds including a possible sheep tooth, a cow-sized bone fragment, and a featureless lump of fired clay weighing 25g.

It has been possible to age the skeleton to between twenty-five to thirty-five years. The eleven teeth recovered show an extreme amount of decay for the age of the individual, with only two crowns present.

**Grave [1978].**

Grave [1978] was located south-east of grave [2315], against the eastern baulk of the cemetery. The grave itself was over 1.5m long (the eastern edge was not within the baulk), 0.65m wide and 0.1m deep (Fig.4). The fill, (1979), was a mid-brown clayey silt with some small and medium-sized rounded stones and occasional flecks of charcoal. The finds include three flint waste flakes, a core and 20g of animal bone consisting of sheep, pig and horse bone fragments, as well as a small dog-sized mammal bone.

Although the remains of this individual (1980) are fragmentary, it is possible to say that they were of a male aged approximately thirty-five years old. This male suffered from a condition called *osteochondritis dissecans*. This condition is caused by the death of bone tissue from significant obliteration of the affected areas blood supply. Osteophytes lipping seen on nearly all of the eight faces of the affected vertebrae supports this theory. It also appears that the individual’s spine bent slightly to the left, which may have been part of an inherited disorder. The teeth are in a fairly poor state of health and there was evidence of gum disease. Although this adult male had a number of infections and pathological conditions, the cause of death is unknown.

**Grave [2323].**

Grave cut [2323] was located to the south-west of grave [1978], and was partially truncated by a later medieval furrow [2384]. The grave measured 1.7m long by 0.55m wide, and was only 0.1m deep (Fig.4). No finds were recovered.

The human remains, (2317), are poorly preserved, with only fragments of the legs and right arm remaining. All that can be discerned from the remains was that it is an adult.

**Grave [2319].**

Grave cut [2319], the most southerly burial discovered within the casement, was located immediately to the south of grave [2323]. The grave was approximately 1.7m long (the eastern end of the cut had been removed by later medieval furrow[2384]) by 0.55m wide and 0.1m deep (Fig.4). The fill of the grave contained less than 5g of animal bone including a possible sheep’s tooth and an ox-sized bone fragment. These finds are likely to be either residual or associated with the furrow [2384].

The human remains, (2320), are badly preserved with only fragments of the leg and arm bones remaining. This means that the body could only be identified as an adult and that cause of death is unknown.

**Inhumations discussion.**

The analysis of a cemetery can sometimes give an important insight into its population, providing evidence about the size of the community and its social structure. This has not been possible here for a number of reasons. Firstly, the excavation at the Kirkby la Thorpe cemetery provided only a sample of the inhumation assemblage, further burials probably existing to the east. The burials themselves are also of varying preservation, from almost complete preservation to the survival of only portions of the leg and arm bones. From the skeletal remains it has been possible to identify three adult males and two adult females, the other four burials are only identifiable as adults. Secondly, the paucity of grave goods means that it has been difficult to assign social status to any or the individuals present.

**Interpretation by Kevin Leahy.**

The fact that the excavations produced little in the way of finds is significant as it appears that Kirkby la Thorpe is an example of a ‘Final Phase’ cemetery. These cemeteries date from the seventh century and show the influence of Christianity. A number of points have been defined that allows Final Phase cemeteries to be recognised (Boddington 1990, p.181). These are:
Fig. 4. Plans of inhumations (N. J. L. Smith).
Fig. 5. Anglo-Saxon worked bone (N. J. L. Smith).

1. New cemeteries established under Christian influence.
2. They are close to settlements as opposed to their pagan predecessors, which tended to be away from settlement sites.
3. The burials are all by inhumation, cremation is not present.
4. The graves are orientated west-east.
5. Some graves are in, or under, barrows.
6. A high proportion of graves contain no grave goods, or just a knife.
7. Finds from the graves are predominantly utilitarian costume fittings or small personal tokens. Weapons are rare.
8. Some grave goods have Christian significance, most notably the presence of the cross.

To these may be added a further point observed by Hyslop (1963, p.193); the graves are often in regular groups or rows.

The evidence from Kirkby la Thorpe does seem to fit in with this model:

1. There does not appear to have been any earlier Anglo-Saxon burials on the site, the cemetery started anew.
2. The structures found near to the cemetery could be interpreted as the ends of Anglo-Saxon buildings (see 'square' ditches above).
3. All burials were by inhumation and, although the bone object in context 2325 had been burnt it was found with an inhumation.
4. The graves were all aligned roughly west-east.
5. While the Kirkby la Thorpe burials were associated with barrows, it appears that they post-dated them and so we are looking, not at Anglo-Saxon barrows but of the re-use of existing monuments, a practice which has been recognised as being systematic and widespread (Williams 1998, pp.90-108).
6. Of the nine graves from Kirkby la Thorpe, only three definitely contained grave goods.
7. With the exception of the seax none of the finds could be seen as being significant, they are 'small personal tokens'. The seax is seen as being a weapon characteristic of these late graves.
8. There is, however, nothing that appears Christian from the Kirkby la Thorpe cemetery.

The graves appear to be well ordered compared to the chaos of fifth and sixth century cemeteries. Where datable, the finds can be assigned to the seventh century. The common and highly characteristic finds of the sixth century are absent.

Another iron knife blade fragment (2301) was found during the initial surface cleaning of the northern arc of ring ditch [1990] (Fig.6.3). This had a surviving length of 81mm, a blade width of 10mm and a straight cutting edge with a curving back. It has been dated on typological grounds to the seventh century. Unfortunately, this blade was unstratified, pulled from its original context either during topsoil stripping or earlier agricultural activity. It has not, therefore, been possible to assign it to a specific grave, although it seems likely to have come from either grave cut [1987] or [1975], both of which contained probable male inhumations.

The burnt object within grave [2325] may have been a knife or comb handle but neither identification is convincing. Bone knife handles are rare in the early Anglo-Saxon period, the most common material used being horn. Comparable bone objects have been found with cremations at Spong Hill, Norfolk, interpreted as a 'possible knife handles' (Hills et al. 1987, p.76 Fig.118), and at Cleatham, Lincolnshire where rust staining confirmed the identification. The burnt condition of this object is, however, unusual, suggesting that it was something out of the ordinary. The presence of animal bones in [2325] is also of interest. Animal and bird bones are frequently found with Anglo-Saxon burials. The remains are usually those of domestic animals and birds, some deposits probably representing food offerings. The horse vertebrae and dog jaws found within this grave probably have a ritual origin, both animals figuring in Anglo-Saxon ritual and symbolism.

This small group of graves has an importance far greater than might be inferred from the poor grave goods. Indeed, the lack of grave goods is a significant feature of the site. Until the excavation of the Roxy 2 cemetery 'Final Phase' cemeteries were not known in Lincolnshire and this group of burials is, therefore, an important addition to our knowledge. It is made all the more significant by the presence, only three kilometres to the west, of the great Sleaford cemetery which appears to have passed out of use at the end of the sixth century (Thomas 1887) to be replaced by small cemeteries like Kirkby la Thorpe.
Fig. 6. Anglo-Saxon knives (N. J. L. Smith).
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Dr Richard Moore produced the location map. Nicola Smith produced the plans and section drawings whilst Dave Hopkins produced the artefact illustrations.

Personnel in the field were: Mark Allen, James Belcher, Linda Bonnor, Wendy Booth, Aidan Burford and Jon Sygrave.

Specialist Contributors.

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Bibliography.


