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LINDSEY ARCHAEOLOGICAL SERVICES

Dunston Nitrate Blending Scheme

Archaeological Monitoring and Excavations

during groundworks for a water pipeline through

Bracebridge Heath, Waddington and Dunston, Lincs.

NGR: SK 9762 6713 - TF 0630 6250

Site Code: BDM 98

LCNCC Museum Accn. No. 96.98

Report prepared for
Anglian Water Services Ltd

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EVENTS LI1313 LI1314
SOURCES LI6048|6050
PRNs 60371 LI80830 RB CEMETERY

60813 - Mareham Lane / Bloxholm Lane
60638 - Enquire St
63149 - Undated / Ro
63150 - Multiple ditch system
60962 - AS burial
61672 - Mere Hospital
63151 - Neo
63152 - RB
63153 - Undated
63155 - Mareham Lane / AIS
63156 - BA

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Summary

During topsoil stripping for a new water pipeline between Bracebridge Heath and Dunston, archaeological monitoring resulted in the identification of a Romano-British cremation burial from a known cemetery to the west of the Roman Ermine Street. Excavation of archaeological features produced further cremations and inhumations. The western edge of the Roman road was examined but the main carriageway area had been truncated by ploughing. A wall foundation between the cemetery features and the road edge may have been contemporary, perhaps separating the cemetery from road traffic. The eastern roadside ditch was located but not investigated. There was no evidence of activity on the eastern side of Ermine Street. A large depression beside the Roman road, outside the monitored easement, has been tentatively identified as a Roman stone quarry providing material for the road.

A slight ridge immediately west of the present Bracebridge Heath parish boundary was found to be associated with an entirely backfilled 1.6m deep ditch parallel with that boundary. Pottery from the base of the ditch suggests a Late Iron Age date and this may have been an estate boundary. The prehistoric boundary ditch appears to have survived as a landscape feature until establishment of the parish boundary, probably in the Saxon period. Ephemeral traces of Romano-British occupation were identified east of the ditch, extending to the Sleaford Road, and were examined by excavation. Sapling and bush throw-holes were identified in this area, suggesting a wooded or heath landscape, possibly being cleared during the second century.

A Roman road, probably King Street, was identified beneath the A15 Sleaford Road, with adjacent depressions which may have been borrow pits. Beside Mere Hall, parts of ditch features were observed including a possible moat.

The report also includes a record of a seventh century high status burial disturbed by the machine trench outside the monitored areas. This burial produced a sword, a spearhead, a copper alloy bowl and part of a shield boss.

Introduction

Lindsey Archaeological Services (LAS) was commissioned by Anglian Water Services in January 1998 to undertake archaeological investigations along part of the route of a 300mm diameter water main linking Bracebridge Heath Reservoir with Dunston Pumping Station (Fig. 1).

A watching brief during contractors' groundworks within fields for a distance of about 1.6km between the A607 Grantham Road and Bloxholm Lane, and also for about 400m in the roadside verge beside Mere Hall, had been requested by the Lincolnshire County Archaeological Officer. The watching brief was extended to include a pipe trench along Grantham Road after Romano-British cremations were revealed at the western edge of the adjacent field. Information from this trench has been noted in this report, but is of greater use in conjunction with observations made during the Bracebridge Heath to Canwick Mains Replacement Scheme (Tann 2000).

North Kesteven District Council (NKDC) initially imposed a Hedgerow Retention Order HRN7/97 under The Hedgerows Regulations (Countryside 1997 No. 1160) for the various hedges along the proposed route, after commissioning an Implications Study from Archaeological Project Services (Cope-Faulkner 1998). LAS conducted a rapid search of information available at Lincolnshire Archives Office and determined that a hedgerow forming part of the parish boundary between Waddington and Bracebridge Heath represented the only one with particular archaeological and historical significance although most of the others appeared to represent plantings as a result of Enclosure Awards of the late eighteenth century. NKDC was persuaded by Anglian Water Services that no practical alternative route was available, and the Retention Order was withdrawn, subject to destruction of the various affected hedges being minimized and accompanied by an archaeological watching brief in order to record any features revealed during removal of the hedges and hedgebanks.

Hedges either side of The Beck at Dunston, immediately north of the Pumping Station posed a different problem, and LAS continued its involvement in this aspect by arranging for an ecological survey to be conducted. The survey was undertaken by Lapwings Consultants and James Rackham. Its recommendations specified particular trees and shrubs which should be avoided and proposed working methods to reduce long-term damage (Appendix 10; Redshaw 1998). After a Removal Order had been provided for these hedges, LAS identified the species to be avoided. This exercise provided an opportunity for groundworks in the two pasture fields north of The Beck to be inspected for archaeological remains.

The first site visit by the author was made on February 24th 1998. Further visits were made until April 7th 1998 when monitoring was concluded; a total of 22 visits were made.

LAS was further commissioned by Anglian Water Services in April 1998 to undertake archaeological excavation of various archaeological features identified by the watching brief. The excavations had been requested by the County Archaeological Officer. Fieldwork was undertaken by a team of up to seven archaeologists between March 13th and April 3rd 1998.

Archaeological Background

The projected course of the Roman road Ermine Street, linking London with Lincoln and York, passed through Field 1, and it was hoped that its exact position could be determined when the easement was stripped. The pipe trench also represented an opportunity to examine its construction, which varies considerably. The alignment of known sections of the road to north and south suggested that it would be revealed about 25-35m east of the field boundary close to Grantham Road (Fig. 2). This position lay under the eastern side of the adjacent house or slightly behind it (Pl. 1).

The archaeological potential of the western side of this field was further enhanced by its proximity to a known extensive Iron Age and Romano-British site west of Grantham Road. Numerous finds and air photographs of cropmarks denoting an occupation site have been reported since the early 1960s from arable land north of The Grange. A coin hoard producing over 2,900 early fourth century items was reported in 1976, and a Roman tile kiln is suspected within the same complex. The full extent of this site is not known but it has been assumed that it extended to Ermine Street.

A Romano-British cemetery at the northern limit of Waddington parish has been known since the late 1970s, apparently positioned alongside the Roman road and serving the adjacent settlement (Ambrose 1981, 76-78). The first reported Roman burial was found during excavation of foundation trenches for a new garage alongside 173 Grantham Road, Waddington in 1978. A Roman greyware jar within a circular setting of stones, dated to the early/mid-second century, was found to contain a cremation. An inhumation of uncertain date was found in 1978 in the garden of 171 Grantham Road, about 10m north of the first cremation.

A second reported cremation was found in July 1980 during excavation of a pit for a new soak-away in the front garden of 173 Grantham Road, close to the findspot of the first cremation (SMR 60371; NGR SK 9792 6648). Part of the find extended beneath a concrete driveway. The cremation, within a pot, was positioned within a stone 'cist' or box 0.55m square and 0.48m deep, formed with seven limestone slabs. The slabs were in a matrix of brown clay loam, with a light brown clay silt layer 0.06m thick beneath the bottom slab. The cist lay within a 0.9m square pit, cut 0.55m into the limestone bedrock; a 0.45m thick layer of soil and stone pieces above the limestone had been disturbed by cultivation and the original depth of the grave had been lost through truncation.

The cremation vessel was lifted and taken to the Lincoln Archaeological Trust conservation laboratory for excavation and recording. The complete pot contained a layer, up to 0.2m thick, of fine light brown clay silt with limestone pieces, above cremated human bone; the excavators suggested that the stony soil had entered the pot during backfilling of the grave and before the covering slab had been laid. It is possible that the horizontal slab is coincidental and the result of plough damage to the higher part of the feature.

The hand-made pot is of an Iron Age form common in Lincoln from the earliest legionary occupation. Similar cooking pots continued in use until the end of the first century AD, and are frequently found in second century contexts. The cremation is likely to have been of Roman date.

The findspots of these previous burials lie about 10-15m west of the projected course of Ermine Street.

The Watching Brief

The specified sections of the pipeline route were visited on foot in advance of topsoil stripping and a photographic record was made of the affected lengths of hedgerow. At this stage two sherds of Romano-British pottery were recovered from the field surface immediately west of Sleaford Road, but crop growth in the fields was unsuitable for formal fieldwalking.

The monitoring archaeologist was present during all topsoil stripping along the easement, identifying artefacts and possible features of archaeological interest. Where the two coincided, features were marked for later investigation. Between the parish boundary and Sleaford Road, numerous soil-filled features in the limestone bedrock might have been artificially created but most were dismissed as being of geological or other natural formation. The subsequent archaeological excavations showed there to be many apparently natural disturbances, perhaps best interpreted as the root systems of heathland vegetation. Infrequent archaeological finds, mostly pottery fragments, probably represented a background level of rubbish imported with manure by Roman and later cultivators. Some sherds found in tree throw-holes might indicate site clearance.

The faces of the pipe trench through the fields were inspected intermittently in the vicinity of finds recovered during the topsoil stripping.

Trenching along Grantham Road, across Sleaford Road, and along the verge of Bloxholm Lane past Mere Hall was watched closely, revealing gravel and limestone road deposits and occasional undated backfilled ditches.

For recording purposes, each individual field crossed by the monitored route was allocated a number 1-5. Each discrete finds scatter or archaeological feature within the field was then assigned a letter (Fig. 3). The Project Code BDM 98 was used as a prefix. Pottery from the watching brief was identified by Dr David Knight, Dr Carol Allen, Maggi Darling and Jane Young (Appendices 3, 4 and 7).

Field 1

Removal of topsoil beside the house and garden failed to reveal any road metalling from the Roman road, although variations in subsoil and areas of limestone were noted (Pl. 2). A low ridge

1E visible on the field surface at the rear of the garden plot was initially dismissed as a levelled bank from a removed field boundary. Subsequent research has found that no field boundary appears to have been present there when the Waddington Inclosure Award was prepared in 1770, but it may coincide with the northern end of a later field division, marked on Ordnance Survey maps in the early twentieth century. A map reconstruction of the Inclosure Award suggests that even as early as 1770 the line of Ermine Street was not obvious as far north as the present site of Grange Farm (LAO MCD 1510 and LAO Kesteven Award 95/16). Margary recorded that the Roman road was represented by 'a broad ridge across the last field, rejoining the present Grantham Road at the first houses on the east side' (Margary 1973, 228-9).

During the supervised mechanical removal of thin layers of subsoil in an attempt to locate the Roman road position, fragments of pottery were found including the base of a pottery vessel, and some fragments of human cremated bone (**1A**, **1B**, labelled as **100**) (Pl. 3). Machining was stopped at this stage, a Home Office 'Licence for the Removal of Human Remains' obtained (No. 0932: 12/3/98). Further investigation was arranged as a result of discussions with Anglian Water Services and the County Archaeology Section (see accompanying excavation report).

Manual archaeological excavation located the western edge of the heavily truncated Roman road and its adjacent, relatively shallow, ditch. These were later exposed in the pipe trench, with the last vestigial traces of disturbed fine gravel from the metalled surface. About 4m east of the end of the garden, the brown loam fill of a ditch **1F** was seen in the pipe trench face, but investigation of this was not possible (Pls. 6 and 7). This is thought to represent the eastern ditch of the Roman road.

The excavation also revealed north-south aligned Roman graves along the pipe trench course, west of the Roman road, and the soil fill of these was evident on the stripped easement beyond the limits of the excavation. It is thought that these escaped further damage.

A collapsed stone wall foundation found towards the western edge of the field was suspected to be a post-medieval field boundary, replaced by the present hedge, but may have been medieval or earlier (Pl. 4). To the south of the easement, the field has a large depression which may represent a stone quarry either for Ermine Street or for post-medieval construction and upkeep of its successor (Pl. 5).

There was little evidence for any archaeological features immediately east of Ermine Street. Small patches of burnt soil were seen, but these appeared to be the result of past stubble burning or hedging bonfires. In the mixed stone and soil surface of the stripped easement it was difficult to distinguish natural features from those of archaeological interest.

The pipeline route was originally intended to run along the line of an existing hawthorn hedge between Fields 1 and 2 for a distance of about 30m. This arrangement was designed in anticipation of the future construction of the Lincoln Eastern Bypass, a proposed route of which would cross the

pipeline at this point. By placing the pipe in the hedgerow, it was hoped to reduce inconvenience caused the farmer by an air valve. The hedge forms part of the historic parish boundary between Waddington and Bracebridge Heath and was the subject of a Hedgerow Retention Order. The Order was lifted after Anglian Water Services revised their route to run alongside the hedgerow in Field 1 before crossing the hedgeline at a minimum width.

A visit by LAS to assess the hedgerow in advance of topsoil stripping found that the low hedge was not associated with a visible ditch or bank, but that the field surface 10m east of the field boundary was 0.45m lower than to the west. A broad ridge **1G** was observed about 10-25m west of and parallel to the hedgerow, and from ground level could be seen continuing across the field to the south. The profile produced by Randalls, as part of the preparatory survey commissioned by Anglian Water Services, indicates a rise of 0.64m at this point (AWS dwg. no. 9W/44055/104). To the north, the ridge was visible as far as a large depression in the field surface, but did not seem to resume to the north (Pl. 8). The northern end of the ridge appeared to coincide with a 90° turn of the parish boundary approaching Grantham Road (as marked on Ordnance Survey maps). The coincidence of the ridge and the parish boundary was noted in case it proved to be a Saxon landscape feature.

During topsoil stripping alongside the hedge, two sherds of Roman pottery (**1C**) and one early Roman sherd (**1D**) were recovered from the easement surface. Roof tile fragments from the vicinity were of uncertain date: two medieval fragments were identified but five others may have been Roman or medieval (Appendix 5). To the west of the field boundary, the topsoil had overlain a red/brown loam layer which survived to about 25m into the field before only limestone was exposed (Pl. 9). By arrangement with the contractors, a machine-bucket width slot was excavated by machine in order to determine whether an artificial linear mound was present. It was hoped to position the slot at 90° to the hedge and ridge, but space was at a premium on the easement bend and the preferred position was unavailable.

The machine slot revealed that topsoil build-up at the hedge base overlay a layer of red/brown loam, interpreted as a subsoil. There was no evidence of a bank containing upcast limestone in this position. 8m west of the hedge, a 6.2m wide backfilled ditch was exposed and subsequently excavated (context **201)**, producing two sherds of Late Iron Age/Early Roman pottery from fill **204** and late-first/early-second century pottery from the later fill **203**.

It was not possible to extend the trial slot more than 2m west of the ditch, and the adjacent ridge was not examined. The ridge would seem to represent the last remains of a plough-flattened substantial bank, created from upast from excavation of the ditch. The possibility of other adjacent parallel ditches (as in the multiple linear ditch boundaries of Iron Age date recorded at Brauncewell and Greetwell) cannot be discounted in the absence of available air photographic information.

The easement was topsoil stripped along the western side of the parish boundary hedgerow for 30m, before turning and passing through the boundary. Machine excavation of the pipe trench alongside the hedge showed that other archaeological features were probably present, but no useful information could be gleaned from the trench sides. At ch. 1659, **1H**, a ditch-like feature was exposed for about 3.5m, cut about 0.65m into the limestone bedrock and backfilled with red/brown loam (Pl. 10). It was not possible to identify the shape or alignment of this feature, and no finds were present.

Fill of a deeper but narrower possible feature **1J** was seen 1m west of the hedge where the pipe trench crossed the field boundary (Pl. 11). This could represent a relatively recent disturbance close to the hedge boundary, or an ancient feature associated with the finds recovered at **1C** and **1D**. Where the trench cut through the hedgeline, limestone bedrock was encountered 1.1m below the ground surface. On the eastern side of the hedge, in Field 2, bedrock was only covered by 0.35m topsoil and a thin skim of loam subsoil (Pl. 12).

There is apparently a late prehistoric site associated with this stretch of parish boundary which would repay investigation if the Lincoln eastern bypass is constructed. The implication of the archaeological feature is that the modern parish boundary follows a prehistoric estate or territory boundary, which remained as a visible landscape feature or traditional boundary, and was adopted as the parish boundary in the late Saxon period. A boundary proven to be in continuous use since the Iron Age is of exceptional rarity.

Field 2

Five prehistoric worked flints and sixteen fragments of Romano-British pottery were found in a thin scatter extending the length of the pipeline easement in Field 2 during the watching brief. No definitely Roman tile fragments were collected. The finds were made from the ploughsoil and from the surface of the subsoil after topsoil stripping had been completed. This was the only field where flint artefacts were recovered.

At **2C** a patinated broken flake with some remaining cortex was found, and a heavily patinated flake with no retouch was collected at **2E**. The patinated flake from **2G** had possible traces of retouch, and a possible blade fragment from **2J** was badly damaged. The patinated broken tip of a blade from **2L** displayed no retouch.

The background level of artefacts suggests that the field is close to Neolithic and second century Roman occupation sites, although no domestic features were found during this project. The nearest known Iron Age and Romano-British occupation sites are 800m west of Grantham Road and 500m NE of Bracebridge Heath Manor House. As virtually no Roman material was found immediately east of Ermine Street in Field 1, it seems likely that the finds in Field 2 are at the western periphery of the Manor House site or one of its satellites. It is conceivable that the large ditch **201** at **1G** remained or was a contemporary land boundary between the two estates.

Investigation of the findspots produced little further information. Features were visible in the stripped easement, but proved either to be natural, modern or undateable. The incidence of irregular features (believed to be tree throw-holes or root systems of shallow shrubs) indicates a rough scrub heathland, perhaps being cleared during the Roman period.

Field 3

A single sherd of Roman pottery was found on the field surface before topsoil was removed. Four archaeological features were revealed after topsoil stripping.

3A was a 1m wide backfilled ditch at ch. 2012, parallel to and about 1.5m in from the northern hedge boundary. It was suspected to be a post-medieval drainage or field boundary feature and was not investigated.

15m further to the SE, **3C** was an apparently linear ditch crossing the easement NE-SW at about ch. 2025. Its fill of mid/light brown loam contrasted with the limestone brash through which it was cut. Ten sherds of pottery, including two freshly broken Beaker sherds and four second-century Roman sherds, were found on the stripped surface in the close proximity of this feature, and two later sherds were recovered from **3B**, within 10m (Appendices 3, 4 and 7). The immediate vicinity was rapidly cleaned and a section was excavated by hand across the line of the two visible NE-SW aligned narrow linear features **701** and **703**. This excavation (Area 7) found the 'ditch' features to be irregular; they were interpreted as of natural origin and investigation ceased. There is some doubt about the interpretation.

Another possible ditch feature, **3F**, was seen on the western side of the stripped area opposite **3B**, apparently aligned NW-SE. This lay in the path used by machines to cross into Field 2 and was not available for investigation.

A spread of red/brown loam **3E** extended 11m west of the road hedge to ch. 2089, within a dip in the field (Pl. 13). No finds were collected from this area but two possibly second-century sherds of pottery from ch. 2085 (**3D**) may have been derived from it. The loam is believed to have filled a feature interpreted as a Roman borrowpit for limestone used to construct King Street along the course of the modern road. A similar loam-filled depression was seen at the western side of Field 4.

Sleaford Road (A15) (Fig. 4)

The modern trunk road is flanked by broad verges which slope down to hedges on either side. On the road side of each hedge is the remains of a relatively modern drainage ditch; the hedges and adjacent ditches are unlikely to be older than the eighteenth century and could well be the product of twentieth century road improvements (Pl. 14).

The pipe trench across the road was excavated in two separate operations in order to reduce traffic delays. Recording was limited to photographs and measurements from the road surface between machine movements and in poor weather conditions.

The western side of the road was the last to be trenched, but is more conveniently described first (Pl. 15). The crest of the modern road is at about 64m O.D. Here multiple tarmac layers, 0.3m thick in total, sealed a 0.05m thick layer of coarse gravel above a thin band of grey dusty material (Pl. 16). The coarse gravel may have been a post-medieval surface or localised repair; Sleaford Road formed a Turnpike route dating from 1756.

Beneath the grey material was a 0.3m thick band of small to medium sized rounded gravel, very compacted within a light brown sandy matrix. This is likely to have been the upper surface of one branch of the Roman road King Street. The unexposed core of the road was a 0.3m thick layer of limestone, which appeared crushed in section.

The limestone road foundation had been laid on a red/brown soil layer, 0.95m thick, with limestone and soil below. The thickness of the soil layer probably represents spoil from roadside ditches thrown onto the original topsoil, but no turf line or other distinction was visible in the recording conditions. Assuming about 0.5m of natural soil formation above undisturbed limestone, a mound of about 0.45m (after compaction) had been raised along the road line as the *agger*.

The gravel road metalling extended westwards as far as a thick slab of poured concrete (Pl. 17). The concrete had apparently been used at the edge of the raised Roman road line, to remove the camber and enable the tarmac road to be widened. There was no evidence that the concrete had replaced any of the metalled surface, and the Roman foundation layer of limestone continued beneath it, extending about 1.2m west of the modern road edge (Pl. 18). The soil layer was visible here but it was not possible to distinguish between this redeposited layer and the fill of any Roman roadside ditch. Trenching on this verge was not monitored because of insufficient room to observe machining in safety in the particularly wet conditions close to the hedge.

The eastern side of the carriageway revealed similar construction details, except that the post-medieval gravel surface and the modern road extend about 1m and 2m further east respectively than the Roman gravel metalling. On this side the crushed limestone foundation layer also extended beyond the modern road.

Beneath the roadside hedge, a feature had been cut in antiquity into the limestone bedrock to 63.0m O.D., a depth of about 1.6m below present ground surface (Pl. 19). It had the profile of a ditch, but was not evident on the south face of the trench and might possibly have been a post-hole **4A**. It was about 2m wide and backfilled with red/brown silty loam, and was interpreted as the Roman ditch flanking this side of King Street. No dating evidence was recovered from any part of the road crossing.

Field 4

This field lay to the east of the A15 Sleaford Road. At its western side, the field dips markedly beside the hedgeline, about 1.3m lower than the crest of the main road (Pl. 20). Surface run-off drainage from this change in level is partly responsible for the very wet conditions experienced close to the hedge, but a spread of red/brown silty soil **4B** was noticed extending 10m east of the hedgeline. Investigation of this material was inconclusive; the trench face showed it to interleave around apparently undisturbed limestone in places, but elsewhere to have the characteristics of a channel cut into limestone (Pls. 21 and 22). Despite its coincidence with the edge of a presumed Roman road, the deposit was interpreted as a natural formation rather than a roadside ditch. It could possibly represent a backfilled informal borrow pit for the Roman road.

No other finds or observations were made in this field.

Field 5

This field extended east to Bloxholm Lane, and west as far as a farm track leading off Sleaford Road to a demolished farm building.

Bloxholm Lane (Fig. 5)

Bloxholm Lane is a minor road which crosses Metheringham Heath and Nocton Heath, joining Sleaford Road close to the Bracebridge Heath Manor House. The SMR does not mark this lane as of particular antiquity but the North Kesteven Heritage Officer suggested that it overlay the Roman road King Street. No trench was excavated across the lane while monitoring was in progress, and a section across its construction deposits might have resolved the confusion. The contractors reported only rock beneath the modern road, unlike the Sleaford Road and Ermine Street where gravel metalling was recorded. A Roman origin for this part of Bloxholm Lane is unlikely.

Monitoring of the pipe trench in the roadside verge was restricted to the vicinity of Mere Hall. The broad roadside verges are restricted to the east by the boundary hedge and wall of the Hall, while to the west is Mere Hall Farm with stone outbuildings and farm cottages to the south.

The grounds of Mere Hall occupy the site of a thirteenth century Hospital of St. John, lying beside the earthwork remains of a shrunken medieval village (Pl. 23). It was thought that remains might extend into the eastern roadside verge and would be affected by the trenching operation.

In practice, the soil fills of five ditches were identified in the trench faces but definition of their edges was very poor: it was only the contrast between mostly rock and mostly soil which allowed their identification. The widths of all these features may be misleading, as their alignment was not established. No dating evidence was obtained and interpretation of these ditches remains uncertain.

The most northerly feature observed was a ditch **6A** at ch. 4314-6. This was no greater than 2m wide, with its base 0.9m below the ground surface. It had a 'U' shaped profile, cut into the limestone bedrock. The fill was an orange/brown clay loam, incorporating about 60% limestone pieces. A 0.4mm thick topsoil layer covered this ditch. This ditch may represent a field boundary ditch, either pre-dating the road and extending west of it (where a field boundary hedge survives) or respecting the road but with a narrow verge.

An adjacent ditch **6B** at ch. 4317-22 may have been about 8m wide, with its base below the 1.4m deep pipe trench. This feature was also filled with orange/brown clay loam (Pl. 24). This again seems to indicate either that the road is later or that properties extended considerably further west towards the road. A ditch of this size is difficult to explain, unless it formed part of a medieval or later moat around either the hall or the hospital complex.

Another narrow ditch **6C** was found 9m north of the main gateway to Mere Hall. This was about 1.7m wide and its base was 0.65m below the surface. Its fill was a red/brown clay loam, overlain by 0.3m of topsoil.

To the south of the gateway and drive was a possible ditch **6D**, 3m wide and 0.8m deep. Various services had been laid along it and it was unclear if it had been of any antiquity. The limestone in this area seemed dirty and it was difficult to be certain of the extent of undisturbed bedrock. There could possibly have been a feature up to 9m wide here, backfilled with upcast material. This could be a return of the possible moat ditch **6B**.

20m further south, at ch. 4438-43, a 5m wide possible ditch **6E** was seen. This cut into limestone and had a brown loam fill.

In front of the pasture field entrance south of the hall grounds, undisturbed bedrock rose to the base of the topsoil layer, although there was a modern service duct laid in the verge. There was no evidence for any building foundations or features associated with the medieval settlement earthworks visible in that field.

Grey soil was present in the pipe trench from between an open drain north of ch. 4550 to ch. 4580 **6F**. This coincided with a small stream beside the road and represented a watercourse, although it may have been either natural or artificial (Pl. 25).

Mere Hall to Dunston

This part of the pipeline route was located within roadside verges and did not pass through known areas of archaeological interest. No archaeological monitoring was conducted in this section.

Dunston

After crossing Lincoln Road, the pipeline ran to the west of the railway embankment across two fields as far as the Beck, before reaching the pumping station on the far side of the stream (Pl. 26). An easement was stripped across the two pasture fields, revealing very sandy material beneath the topsoil. Ground conditions were especially wet across these fields.

Vegetation growing along each side of the Beck was examined for ecological reasons in advance of groundworks (Appendix 10; Redshaw 1998). The study noted that the stream has no true hedges and the parish boundary runs along the centre of its bed. The stream flows over patches of limestone brash and areas of silty grit.

It seems that the present stream course is not an ancient one, and that a watercourse has flowed over the two intervening fields on several natural channels. The angular and abrupt changes in the course of the stream suggest that the present channel is the result of post-medieval management, possibly as late as construction of the railway (opened 1882).

The Archaeological Excavations

Method

Seven separate areas west of the A15 Sleaford Road were investigated by excavation after topsoil stripping had been completed. Each modern field through which the pipeline passed had been assigned a number (1-3) for recording purposes by LAS during early stages of the watching brief. Each of the separate areas was assigned a letter (A-G) and allocated a block of context numbers for detailed recording (Fig. 6; Appendix 2).

Each area was cleaned by hand to permit definition of soil differences which might indicate archaeological features. In some areas further supervised mechanical scraping was undertaken where remaining topsoil or a subsoil layer obscured features. It was noticeable in Field 2 that even modern land drain trenches were not visible after the first topsoil removal. Following definition, each area was planned at 1:50 scale and potential archaeological features were part-excavated. This provided evidence of their shape, extent, depth and the nature of the backfill material. Some dateable artefacts were also recovered.

Within all areas, access for plant and equipment was needed around the excavation, and this restricted the extent available for investigation. In all instances the features with the greatest apparent potential were targeted. Initial investigation at Area A was by Mark Williams, with subsequent work there and in other areas under the site direction of Rob Armour-Chelu. A team of six experienced archaeologists was used. Finds were passed to specialists; reports and archive lists are appended (Appendices 2-9).

The Areas Investigated (Fig. 6)

Field 1: Area A was a strip of land 56m x 5m along the northern half of the pipeline easement. Area B was 36m x 4.5m, located at the eastern side of Field 1.

Field 2: Areas C-F were all in Field 2. C, 50m east of Area B, was 10m x 4.5m. Area D was located 35m to the north of Area C and was 11m x 4.5m. Area E was 25m x 4m. Area F, 12m west of the hedge in Field 2/Field 3 hedgeline, was 8.5m x 4.5m.

Field 3: Area G was located 17-23m east of the Field 2/Field 3 hedgeline.

The Excavations

Area A (Fig. 7-12, Pl. 2)

Topsoil **100** was 0.25m - 0.35m deep. Across most of the area, it directly overlay the broken limestone bedrock **167**, although orange/brown clay **168** survived in depressions. As some of these depressions proved to be archaeological features such as ditches, graves and pits, it was unclear whether the deposit was the last remnants of an extensive subsoil layer or a similar upper fill.

The Burials

A Romano-British cremation was the first archaeological feature identified within Area A (Pls. 2, 3, 27 and 28). The disturbed remains of cremation **102** were found 10m east of the field boundary hedge beside Grantham Road, within the red/brown silty clay fill of a feature heavily truncated by ploughing. The sub-circular pit **101** survived to a depth of only 0.1m, and was 0.15m diameter. The remains consisted of the broken base and fifteen other sherds of an early/mid-second century vessel. The survival of the base indicates that the pot had been upright within the pit, as found.

A more intact cremation **134** was found 1.5m SE of **101** (Pl. 29). A virtually complete early/mid-second century pot containing cremated human remains was recovered from within **133,** a sub-circular cut with a diameter of 0.39m and a depth of 0.17m. The pot was surrounded within the pit by an orange/brown clay. The human remains from this feature weighed 55g but the bone was too degraded for identification. This pot was also buried upright.

A Romano-British inhumation was found in grave **122**, 5m north-east of **133** (Pl. 30). This north-south aligned feature was 0.8m wide, 0.45m deep and at least 1.8m long, its northern end continuing beyond the easement and possibly into the adjoining garden. The grave contained burial **138** within a grey/brown sandy silt fill **123**, which incorporated four pieces of Roman tile including a piece of Roman *tegula*. Analysis of the bones indicates that the individual was probably female, between the ages of eighteen and 25, although the skeleton was very fragmented. 48 iron nails, probably indicating that the corpse had been within a nailed wooden coffin, were found. Other finds, probably accidentally incorporated into the grave fill, were three sherds of second century pottery, and a sheep's tooth.

A second grave cut **155** was located 10m to the east. It was 2.6m long, 1.5m wide and 0.45m deep. It contained the north-south aligned remains **162** of an adult of indeterminate sex, probably aged eighteen to 25 (Pl. 31). The grey/brown sandy silt fill **156** produced 15 iron nails, the remains of a wooden coffin, and a quantity of hobnails (from a shoe) were recovered.

A third inhumation was found 3m to the east within an east-west aligned grave cut **120** containing the partial remains, in very poor condition, of a young adult **154** (Pl. 32). The skeleton lay within a grey silty clay fill **121**, together with fourteen iron nails, fifteen sherds of early/mid-second century pottery, and a small unidentified fragment of animal bone.

A fourth inhumation was found 1.8m SE of **120** in east-west aligned grave cut **143**. The grave was 2.1m long, 1m wide and 0.75m deep, containing burial **159**, a female aged between eighteen and 25 (Pl. 33). The main backfill of this grave was **145**, a grey/brown silty clay from which fifteen iron nails and 23 sherds of early/mid-second century pottery were recovered. The upper part of this fill had slumped and was covered with **144**, a dark grey silty clay which contained charcoal and two sherds of early/mid-second century pottery.

1.70m north of this was a fifth burial **158**, again east-west aligned, within grave cut **157** (Pl. 34). The deceased was probably a male aged between eighteen and 25. The grave was filled by **105**, a brown sandy clay containing occasional limestone fragments. Three sherds of second-century pottery and 30 fragments of mortar were recovered from the fill; the mortar suggests a building in the vicinity, prior to the grave being dug.

The two cremations and five inhumations found at this northern limit of Waddington parish form part of a group which includes the two cremations and one inhumation found in the 1970s and 1980s immediately to the north. The cemetery apparently serves a known Romano-British settlement which lies to the west of Grantham Road; there is growing evidence that the settlement may have been bounded to the east by Ermine Street although its territory may have extended eastwards to the large boundary ditch coinciding with the modern parish boundary.

The size of the cemetery is still impossible to determine; the cremations and inhumation found in the gardens 10-15m to the north show that the cemetery extended at least this far, although as yet none have been reported from allotment land to the north. None are known from beneath Grantham Road itself or gardens to the west, despite careful monitoring of recent pipe trenches and a house extension. No other burials were seen in the stripped easement on the south side of the investigated area, but this was partly protected and obscured by the contractors' spoil heap and remains unconfirmed.

The nature of the cemetery population cannot be determined as the numbers of burials are too small to be statistically valid. It was interesting to observe only one north-south aligned grave (skull

* correction → 2 north-south aligned
3 east-west aligned

to north), and four east-west graves (skull to west). There may be grounds for suspecting that the cemetery represents two phases of pre-Christian burial practices, and this is supported by the pottery date range of late first to mid-second century (with some undateable sherds which might be prehistoric).

* Please note all 1st c. pottery came from the Ermine Street excavation. All pottery from cemetery contexts is 2nd century.

There was little information derived from the inhumations, due to the very fragmented nature of the skeletal remains. The burials seem to have been in wooden coffins, probably constructed with numerous nails. This is unlike the stone cist arrangement found to the north in the adjacent garden. The cremations were too degraded to allow any useful information to be derived from them, but the pottery vessels indicate an early to mid-second century date.

The Roman Road (Ermine Street)

The projected alignment of Ermine Street, the long-distance military road constructed by the Romans between London and York, was known to lie beneath the field surface in the vicinity of 173 Grantham Road. Despite attentive monitoring, no sign of the expected raised road carriageway or flanking ditches was evident. The only trace of the road was a thin spread of gravel and small pebbles, clearly alien to the local limestone bedrock, lining a north-south aligned depression (Fig. 11a). Similar gravel was seen in the water main replacement trench along Grantham Road, both where the road appears to be of Roman origin and where the road is probably on a medieval or post-medieval course.

Approximately 10m west of grave **157** was **110**, initially thought to be part of the road but since reinterpreted as the drainage ditch at its western edge (Pl. 35). Within this north-south depression was a 0.05m thick compacted covering layer of small rounded pebbles, set into a clay and crushed limestone matrix **139** (Pl. 36). This layer probably represents road metalling washed into the roadside ditch; there is a possibility that it is a widening of the road over a backfilled roadside ditch which later settled. Sealing this layer was **141**, a 0.39m deep deposit of brown silty clay containing gravel, limestone fragments and charcoal flecks. The deposit contained a single fragment of Roman tile, a piece of Roman brick, 27 sherds of very friable handmade pottery from a shell-gritted jar or bowl which could not be assigned an accurate date (but which may have been Late Bronze Age, Early Iron Age or Romano-British), and an iron object. Above this was a small patch of gravelly material, **140**, which may represent the remnant of a later metalled surface, the bulk of which has been ploughed away. Sealing **140** and **141** was **111**, a 0.11m thick layer of mixed grey and orange brown clay. This contained one piece of Roman brick, charcoal, gravel and small limestone fragments, possibly representing elements of **140** and **141** mixed by ploughing. A horse tooth was collected from this context. Beneath **139** and probably truncated by **110** was a small north-south aligned gully, **164**. This 0.67m wide, 0.15m deep feature contained one fill, **163**, an orange brown clay containing occasional charcoal flecks and limestone fragments.

The western edge of the road itself is thought to have been slightly further east, where modern ploughsoil cuts directly onto limestone. The only surviving evidence for gravel from a metalled

surface this far east was in the fill **115** of small sub-circular post-hole **114** (Pl. 37). This was 2m east of **110**, and had apparently been excavated through the road surface before truncation occurred. **114** had a diameter of 0.23m and a surviving depth of 0.32m.

Investigation of this area was limited by the eastern end of the excavation extent agreed with the contractors. The rear boundary of the garden was used as the eastern limit because the contractors needed the adjacent extra width of the easement to store equipment and materials. The limit, marked by a temporary fence, was 10m east of **110**; at the eastern edge only natural anomalies in the bedrock were observed. Only after post-excavation analysis was it appreciated that the road had been sited where plough truncation was most effective; it is almost certainly not a coincidence that the rear garden hedge boundary and a low ridge **1E** coincides with the eastern edge of the Roman road although no physical remains were apparent there (Pl. 1). The watching brief during excavation of the pipe trench revealed a small part of a ditch or pit **1F** in the pipe trench face about 4m east of the end of the garden, but investigation of this was not possible (Pls. 6 and 7). This feature, about 14m east of **110**, may have been the eastern roadside ditch, producing a road width of under 14m.

This course of the road would skirt the edge of a pronounced large depression in the field south of the easement (Pl. 5). This is probably a limestone quarry and its position may indicate that it served as a borrow pit for construction or maintenance of Ermine Street. Possible borrow pits were seen beside the Roman King Street during the watching brief for this project, and others have been recorded beside Ermine Street near Castor, Peterborough (NAL 1999).

West of, and adjacent to **110** was a linear depression, **165**, which was 1.8m wide and 0.24m deep. It contained **166**, an apparently deliberately deposited layer of limestone within a clay matrix (Pl. 38). Initially this was interpreted as ground levelling or a widening of the road itself, but it has been reinterpreted as a north-south aligned stone wall foundation. This could be a wall separating the cemetery from the Roman road.

Cutting the western edge of **165** was ditch **108** (Pl. 39). It was 1.5m wide, 0.37m deep and ran adjacent to **110**. It contained two fills, the earliest of which, **130**, was an orange brown sandy silt. 0.05m deep and containing frequent limestone fragments. Above this was **109**, similar in nature to **130** but containing very little limestone. Approximately 0.3m west of **108** was the southern terminus of a linear gully, **106**. This 0.55m wide feature continued north beyond the limits of the excavation and contained one fill, **107**, a brown sandy clay, 0.17m deep from which three sherds of late-first/early-second century pottery were recovered. A second section was excavated across this feature, recorded as cut **160**, fill **161** of which contained nine sherds of late-first/early-second century pottery (Pl. 40).

The pipeline provided an uncommon opportunity to investigate the vicinity of the Roman Ermine Street, a road which extended from Winteringham (on the Humber) through Lincoln and on to

London. This road was used as a trade route into the late-fourth century; contemporary pottery from Lincoln has been found 25km to the south at Normanton 3.8km west of Ermine street (Williams forthcoming). Few excavations of Ermine Street have taken place locally. In 1987 the South Lincolnshire Archaeological Unit investigated it at Coleby, approximately 10km south of the present exposure (Chowne 1987). The abandonment of the Roman road has not been closely dated, and the metalled surface may have remained in use for many years. Parts of the road remain in use beneath modern roads to the south of Navenby and north of South Park, Lincoln. Elsewhere the route survives as an unadopted green lane. Where it has disappeared, some clues as to its longevity can be gleaned from its use as the marker of parish boundaries (probably of late Saxon date), and by its reuse in the Norman period as a floor to St. Mary's Guildhall, Lincoln. Grantham Road, which replaces it south of Bracebridge Heath, has recently been found to overlie a Saxon burial ground (of perhaps seventh century date) at Waddington village (Tann 1999).

Although all of the road surface within the easement had been removed by ploughing and other later activity, parts of the construction and flanking ditches were revealed. There is also some indication that the road was widened (by backfilling ditch **110**), perhaps to accommodate an increase in traffic as the Roman city of Lincoln developed in the late-first and second centuries. There was evidence at Coleby of similar, undated, widening of the road which may correspond to the possible phase of widening at Waddington.

Other Features (Figs. 7-13)

A number of other features were found in this area. At the west end, immediately east of the existing field hedge, was a 0.8m wide construction trench **126** (Pl. 41). This 0.22m deep, north-south aligned feature contained a orange clay and limestone backfill, **127**, which presumably acted as a foundation for a wall, the tumbled remains of which were present east and west of the trench, as **128** and **129** (Pl. 42). One iron object was recovered from **129**; one small sherd of Roman pottery and a piece of Roman roof tile were present in **128**.

Approximately 18m east of the modern hedge was the northern terminus of a 2m wide, 0.65m deep ditch, **135** (Pl. 43). This north-south aligned feature was visible beyond the excavation area as a depression crossing the easement. The base of the ditch was filled with **137**, a 0.16m deep deposit of limestone rich orange/brown clay, from which one sherd of mid-first century AD pottery was recovered. Above this was **142**, a 0.15m thick layer of grey silty clay and broken limestone fragments. No finds were recovered from this context which was sealed by the uppermost fill, **136**, a grey/brown clay silt containing occasional limestone fragments, charcoal and a sherd of possibly Late Iron Age pottery (which joined a sherd recovered from **147**, fill of pit **146**). 1.4m NE of this feature was a small sub-oval depression, **153**. This apparently natural 0.16m deep feature was 0.52m long, 0.37m wide and contained orange/brown clay **152**.

Immediately NW of cremation pit **133** was **146**, a sub-circular pit feature with an average diameter of 0.65m, a depth of 0.2m and fill, **147**, a brown sandy clay containing occasional limestone fragments (Pl. 44). Four sherds of mid- second century pottery (including a join with a sherd from **136**, perhaps dragged by modern ploughing), three fragments of wall plaster and one fragment of Roman tile were recovered from this context. Although there was very little material from this deposit it is possible that the material may derive from a high status building located nearby. Mortar was also present in grave **157**, 11m to the NE.

0.3m SE of pit **146** was **148**, a small irregular natural feature (Pl. 44). This 0.44m long and 0.33m wide depression was 0.15m deep and contained **149**, an orange/brown sandy clay. An irregular oval feature **150**, 1.38m long, 0.52m wide and 0.3m deep, was found 0.5m NE of cremation pit **133**. It contained **151**, an orange/brown sandy clay and is also probably the result of natural processes. At the extreme eastern end of Area A, two large irregular natural undulations in the natural limestone were present. **116** was 1.3m wide, 0.2m deep and contained a red/brown clay fill, **117**. The second undulation **118** also contained a mid-orange/brown silty sand **119**.

Area B (Fig. 14)

This excavation area was located immediately to the west of a hedgerow which forms the current parish boundary between Bracebridge and Canwick. During initial appraisal of the easement route, a broad low linear ridge **1G** was observed to the west of the field boundary, extending an unknown distance south towards RAF Waddington and about 80m north (Pl. 7). It was noted that the northern limit coincided with an abrupt change in direction of the modern parish boundary, and this suggested that the feature was associated with the parish boundary in some way. During topsoil stripping, a broad zone of subsoil was observed but no other features were visible. Suspecting it to be a Saxon or later feature, arrangements were made for a 1.5m wide slot to be cut through the subsoil zone in order to reveal its depth and extent. This rapid evaluatory exercise discovered a broad ditch beneath the subsoil, and a section was hand excavated across it to produce further information. The position and extent of the excavation area were constrained by the need to allow contractors' equipment to pass the corner (Pl. 45).

The exceptionally deep topsoil **200** to the west of the field boundary was 0.6m thick. It overlay **208**, a yellow/brown sandy clay subsoil with an average depth of 0.16m.

The NW-SE aligned linear ditch **201** cut the subsoil **208**; the appearance of an extensive subsoil deposit beneath the ploughsoil was the result of similar coloured lower fill deposits which were visible where the uppermost levelling fills had been truncated and spread. Ditch **201** had a maximum width of 6.2m in section and a surviving depth of 1.6m below the stripped easement (Fig. 14; Pl. 46).

The ditch contained six fills, the earliest of which was **205**, a stony deposit of clay on the western side, possibly the remains of early slumping from an adjacent upcast bank before it had become

consolidated with vegetation. The primary silting layer **207** was restricted to the other side of the ditch floor, where it overlay the slumped material.

Above the two earliest deposits was **206**, a 0.26m thick deposit of brown clay containing frequent limestone fragments. The layer rode up the eastern ditch face to where it had been truncated by ploughing. This deposit could possibly represent slump from a bank to the east, but there were no other indications of a bank there. Another explanation is that it derives from deliberate levelling of a bank to the west, and that shovelled material fell mostly on the eastern face. This interpretation would suggest that the ditch had a particularly short life with little opportunity for natural silting to occur.

Above **206** was **204**, a layer in the centre of the ditch, consisting of dark grey clay with a maximum thickness of 0.47m. This deposit was rich in limestone fragments, some burnt, and charcoal. Two sherds of Late Iron Age/Early Roman pottery, animal bone, and two fragments of mortar were collected from **204**. An enviromental sample from this deposit has been analysed (Appendix 10).

Overlying **204** was **203**, a 0.16m thick layer of grey brown clay containing frequent limestone fragments, which had apparently entered from the western side of the ditch. This deposit produced three sherds of pottery with a date range of mid-late first century AD to early second century, in addition to a sheep's tooth and oyster shell fragments. The uppermost surviving fill of the ditch was **202**, brown sandy clay with frequent limestone fragments and a maximum thickness of 0.7m. **202** contained a single sherd of Iron Age or Early Roman pottery, and a small quantity of slag.

Ditch **201** is an archaeological feature of considerable interest, which would warrant further detailed investigation in the future. It will be affected by the Lincoln Eastern bypass if the current proposed route is constructed; the two 90° bends in the pipeline route beside the hedgeline were designed to prepare for its eventual construction. The present results are tantalising rather than definitive, but do suggest that it was excavated towards the end of the Iron Age. It is conceivable that further contemporary ditches are present on the western side of **201** and that it forms part of a multiple ditch system defining a territory; this may be difficult to determine from aerial photography because of the nearby active airfield and residential developments.

The excavation suggests that the ditch started backfilling naturally with upcast bank material shortly after its excavation and before natural primary silting had made noticeable deposition. This phase may have lasted weeks or months rather than years. It was followed by a dramatically different phase of backfilling, during which limestone lumps were redeposited on its eastern face. The cause of this is uncertain but may indicate deliberate levelling of the upcast bank. Taking place after primary silting but before other backfilling processes could be evidence for abandonment and slighting of the laboriously dug barrier soon after its completion.

The stratigraphically earliest dateable finds from the ditch are from **204**, a deposit containing domestic refuse and two sherds of Late Iron Age or Early Roman pottery. Further similar finds were found from overlying fills, with pottery possibly as late as the early second century in fill **203**. This may be evidence for the origins of this feature lying at the end of the Iron Age, shortly before Roman influence was established. There is a growing number of parallels in Lincolnshire for Roman destruction of Iron Age physical features, apparently in an attempt to assert dominance and rearrange existing organisational structures. Sites where this has been observed include Brauncewell multiple ditch system and Greetwell multiple ditch system.

Deliberate backfilling of the ditch was not the end of this feature, and its position may have remained in use as a territory division throughout the Roman period. If the low ridge beside the ditch can be detected today at ground level, the remnants of the bank and ditch will have remained a visible landscape feature for many centuries. The watching brief maintained during topsoil stripping produced a scatter of third-fourth century Roman pottery to the east of the modern field boundary, but an absence of any Roman finds between the boundary hedge and Ermine Street, 350m to the west. It is suggested that the finds distribution reflects two distinct Roman estates, separated by the destroyed boundary ditch. Known focii of Romano-British settlement are west of Ermine Street, and St. John's Heath, beside Sleaford Road.

By the late Saxon period, when the existing arrangement of parishes was becoming established, it seems that the line of the Late Iron Age/Early Roman ditch was chosen for the Waddington/Bracebridge Heath parish boundary in preference to either of the two Roman roads. Since that period the earthwork of the bank and ditch has been levelled and brought into cultivation, resulting by the time of Enclosure in the slight divergence of the parish boundary and the almost invisible line of the ditch.

Areas C- F (Figs. 15-19)

During topsoil stripping, sixteen sherds of Roman pottery were found in Field 2, east of the Waddington/Bracebridge Heath parish boundary. Closer inspection suggested that a series of silty features in the surface of the limestone bedrock might be of artificial origin, and archaeological excavation of sample areas was arranged.

Area C (Fig. 15, Pl. 47)

Two ditches were identified aligned NW-SE in the western half of this area. **301**, the earliest, was 1.2m wide, 0.44m deep with a narrow slot at its base, and contained two fills (Fig. 13, Pl. 48). The earliest fill was **312**, a 0.15m thick deposit of grey/brown silty clay with many small limestone fragments. Above this was **309**, an orange/brown sandy silt, 0.3m thick. A second ditch **308** had removed the eastern half, and appeared to have been a recut of ditch **301**, following the same alignment. Ditch **308** was 0.7m wide and 0.25m deep, containing **302**, a grey/brown sandy silt with small quantities of limestone fragments.

3.2m west of **301/308** was a 0.15m deep irregular feature **310**, probably produced by an uprooted sapling or tree. It contained **311**, a red/brown silty clay with frequent stone inclusions and a fragment of possibly third or fourth century Romano-British pottery. The sherd had apparently fallen into the disturbance.

A large shallow undulation **303** in the surface of the bedrock was observed to the north of the examined area. This irregular feature had an average depth of 0.1m, and was filled by **304**, an orange/grey clay silt which produced one sherd of Early Roman pottery. The layer sealed **305**, a 1.2m diameter sub-circular feature cut into the bedrock by root or water action. It contained a single fill, **306**, a 0.22m thick orange/brown silty clay. A second undulation was present across the eastern half of the examined area. This large, irregular feature **313** was at least 0.2m deep although only one small box-section was excavated through it. It contained two fills: **314**, a 0.16m thick dark red/brown clay silt which contained occasional small limestone fragments, and beneath it **315** a 0.04m deep layer of pea-grit. These features were discounted from further investigation.

Area D (Fig. 16, Pl. 49)

This was a separate area of anomalies in Field 2, east of Area C. No Romano-British or earlier pottery was found in this area during excavation.

401 appeared to be an irregular feature, 2.56m x 2.3m at its widest points, and 0.45m deep (Pl. 50). It was filled by **402**, an orange/brown silty clay. 2m west of **401** was **403**, a sub-circular feature with a maximum width of 0.73m and a depth of 0.22m. This contained **404**, an orange/brown silty clay.

In the western half of the area a linear feature, **405**, was excavated. This 0.24m wide, 0.11m deep feature contained one fill, **406**, an orange/brown silty clay. None of these features was considered to be of archaeological origin.

Area E (Fig. 17)

The surviving topsoil **500** produced a single third/fourth century pottery sherd. In the south of this area was **501**, an irregular natural feature containing **507**, an orange/brown silty clay. 2m NE of this was **502**, an irregular linear feature 0.9m wide and 0.5m deep (Pl. 51). This geological feature contained a single fill, **503**, an orange/brown silty clay.

In the western half of the area, a large patch of orange/brown subsoil **508** was investigated by means of two box-sections. It was found to be filling a number of natural depressions within the limestone bedrock.

Area F (Fig. 18, Pl. 52)

Within the bedrock were a number of natural depressions filled with an orange brown silty clay subsoil, **605**.

In the north of the area was **601**, a sub-circular pit-like feature with a diameter of 2.2m and a depth of 0.55m (Pl. 53). It contained two fills; the earliest, **603**, was a 0.05m thick deposit of stony grey silty clay. Above this was **602**, a grey/brown sandy silt which contained occasional small limestone fragments (Fig. 13). No finds were recovered from this feature.

Area G (Fig. 19, Pl. 54)

This area lay within Field 3, west of Sleaford Road. Two parallel irregular features aligned SW-NE were observed, and examined close to the northern easement edge (Pl. 55). **702** was 1.4m wide, 0.3m deep and contained **701**, a red/brown sandy clay. **704** was 0.4m to the SE, similar in nature to **702** although only 0.85m wide. It was filled by **703**, a red/brown sandy clay containing occasional small limestone fragments. Both these features were interpreted as of natural origin although their form suggests artificial excavation. No further pottery sherds were collected from the excavation.

Conclusion

Archaeological involvement in this project revealed a concentration of prehistoric and Romano-British activity between Sleaford Road and Grantham Road. The results improved existing knowledge of the area and allowed controlled investigation of archaeological features to take place, complementing data gathered in the past.

The Beaker sherd from Field 3, and the five flint flakes and broken artefact fragments from Field 2 indicate some Neolithic presence in the area, but insufficient was collected to allow this activity to be understood.

The absence of material in the fields east of Sleaford Road may be a valid reflection of past activity decreasing in the vicinity, although a Saxon burial later notified from Bloxholm Lane hints at unknown activity in the area (Appendix 1).

Acknowledgements

LAS are grateful to Anglian Water Services, especially Gary Wentworth and Paul Renshaw for their help. Further co-operation was received from the contractors, Morrisons, in particular John Boyton and the machine operators.

Thanks are also due to Jim Bonnor (Assistant County Archaeological Officer), Mark Bennet (SMR Officer) and Sarah Grundy, Kate Orr (North Kesteven Heritage Officer), Doug Pratt (North Kesteven Tree Officer) and the staff of Lincolnshire Archives Office.

James Rackham (Environmental Archaeology Consultancy) and John Redshaw (Lincs. Trust for Nature Conservation) prepared and produced the report used for the Hedgerow Removal Order. James Rackham provided additional advice and examined environmental samples and animal remains from the project.

The flints were identified by Robert Middleton. Prehistoric pottery was examined by Drs Carol Allen and David Knight, and drawn by Nicky Smith (Network Archaeology Ltd). Roman pottery was examined by Maggi Darling and illustrated by Dave Hopkins. Post-Roman pottery was examined by Jane Young. Metal and other registered finds were conserved and x-rayed at the Lincolnshire Conservation Laboratory under the direction of Rob White, before identification by Jen Mann (City of Lincoln Archaeology Unit). Slag was identified by Jane Cowgill. Human remains were examined by Sue Ensor.

The watching brief and initial identification of the areas of archaeological potential was carried out by Geoff Tann. Archaeological excavations were directed by Rob Armour-Chelu and Mark Williams, assisted by Liz Davies, Sue Farr, Rachel Gardner, Mike Garrett, Jeremy Mordue and Simon Savage.

The report has benefited from discussion with Dr. Alan Vince and Naomi Field. Illustrations were prepared by Mick McDaid and Rob Armour-Chelu, the report was collated and produced by Jane Frost.

Geoff Tann, Rob Armour-Chelu and Mark Williams
Lindsey Archaeological Services
12th March 2000

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Archive Summary

Combined Archive

Archaeological finds: flints, pottery, tile, skeletal, animal bone, slag, metal

Anglian Water Services route maps

Annotated AWS maps

Correspondence

Specialists' reports and archive lists

Context sheets

Field section and plan drawings

Inked section and plan drawings

Photographs: colour prints, LAS Film Nos. 98/15/22-29; 98/21/12-37; 98/23/0-37; 98/24/2-37; 98/25/2-35; 98/26/1-37; 98/28/2-37; 98/29/6-37; 98/30/0-37; 98/34/3-17; 98/41/0-28; 98/79/0-6; 99/18/9 (including photographs used in this report).

The Appendices

APPENDIX 1

A group of Anglo-Saxon finds from Bracebridge Heath, Lincolnshire

A Report by Kevin Leahy, BA, FSA, AMA, MIFA
For: Lindsey Archaeological Services
July 1999

Background

The material described in this report was found by Mr G. R. Horton while he was employed by contractors on the construction of the Anglian Water Services pipeline from Bracebridge Heath to Dunston. Unaware of the presence of archaeologists on the project, he removed the objects from the site returning a few days later with a metal detector. As nothing further was found it may be assumed that all of the metalwork at least was recovered. Mr Horton did not observe any human bones which, in view of the poor level of preservation elsewhere on the site, need cause no surprise. Some of the objects show signs of earlier damage and it is likely that the deposit had suffered some earlier disturbance. The find came to the notice of the writer some months after its discovery and he was given an opportunity to record the material recovered. The objects found are now in the collection of the City and County Museum, Lincoln (Accession Numbers 2000.70-75).

The find consisted of four metal objects, an iron sword with a copper alloy pommel, an iron spearhead, fragments of a copper alloy bowl with one of its enamel decorated mounts and a conical iron fragment which probably came from a shield boss. Also found was a small copper alloy fitting, which is seen as a modern intrusion into the group. The condition of objects was varied; the iron was in poor condition and, while the upper part of the bowl was well preserved, its base had been destroyed and the mount and pommel cap were badly corroded.

The Finds

The Sword

The remains of an iron sword, now in two pieces, with a surviving total length of 790mm to which must be added the missing the tip of the blade and the tang. As the fractures are corroded it appears that this damage occurred prior to the discovery of the sword. The blade is double edged and has a flat cross-section with a maximum width of 47mm and a thickness of about 6mm. Much of its corroded surface has flaked away and, although organic traces survive around the hilt, these are too poorly preserved for identification. A rectangular projection at the junction of the blade and the tang may represent the mineralised remains of a guard made from an organic material, perhaps wood (MacGregor 1985, 165-7).

The quality of this weapon was not recognised until an X ray examination was carried out. This showed that the blade was of a pattern-welded construction. While its condition makes it

impossible to determine the details of manufacture, the blade appears to consist of three main elements:

- A main central section made up of a number (perhaps three) twisted composite iron/ steel rods hammer welded together.
- A steel cutting edge welded onto each side of the central section.
- A tang at the top of the blade, probably made from plain wrought iron.

This elaborate technique was used to produce a tough, resilient blade but recent work has tended to emphasise the aesthetic qualities of pattern welding, the weapons being valued for their beauty as much as their strength (Lang and Ager 1989, 109-110).

The pommel cap is undecorated and made from cast copper alloy. It has a length of 41.2mm and is hollow with a maximum wall thickness of 3.0mm. Radiography revealed an 8mm x 5mm rectangular opening at the top of the cap. This is concealed by iron corrosion products from the tang. The pommel cap represents the well-known 'cocked hat' type, which is best seen on the examples from Sutton Hoo (Bruce-Mitford 1978, 289-92) and Coombe, Kent (Ellis and Webster 1967, 1-4). On these fine weapons the cap represents only the top of an elaborate pommel although, in other cases, the cap is all that survives of a hilt made from an organic materials. Cocked hat pommels were produced during the sixth and seventh centuries AD (Evison 1987, 22).

The spearhead

This is incomplete and is now in two pieces, corrosion suggesting that it was broken during an earlier disturbance of the deposit. It has a surviving length of 235mm and a maximum blade width of 38mm. The blade has a flat cross section and has the shape of an elongated, broad-based leaf. It is linked to the socket by a short solid section. Down the length of the socket is the wide split characteristic of Anglo-Saxon spearheads. Radiography revealed no sign of pattern welding on the blade. This spearhead can be assigned to Swanton's Group C2 (Swanton 1973, 51-5). While these have a wide date range most appear to date from the seventh century with some examples from the end of the century.

The shield boss

An iron object resembling half of a Rugby football, hollow with a wall thickness of about 4mm. It was broken at some time prior to discovery and has a surviving height of 53.8mm and a maximum diameter of 80.0mm. In addition to the damage around its lower edge there is a break at the apex of the cone suggesting the loss of a projection.

This object is best interpreted as the remains of a shield boss. Its proportions and shape suggest that it formed part of one of the tall 'sugar loaf' type bosses described by Vera Evison (Evison, 1963, 38-96) and further defined by Dickinson and Härke as their Group 7 (1992, 20). These bosses have a tall, up to 200mm high, cone rising from a low carination. At the apex of the cone

there is usually a spike topped by a small disc. The material associated with other finds of 'sugar loaf' shield bosses points to a later seventh century dating for the type.

The bowl

This had an original rim diameter of c. 250mm but is now in pieces. Although parts of the upper section are well preserved having, in some places, retained its metallic lustre, the base is missing. It is likely that ground water collected in the base of the bowl and caused its destruction. The bowl was made from thin copper sheet thickening towards the rim. This is flat topped and varies in width between 2.7mm and 3.7mm.

Metal section of the bowl

Immediately beneath rim	1.6mm
At 10mm beneath rim	0.9mm
At the shoulder	0.8mm
Average wall thickness	0.5mm

The body of the bowl varies in thickness between 0.40mm and 0.55mm.

At six points around the top of the bowl's rim are groups of radial lines. Some are obscured by corrosion but they appear to have been formed by the removal, rather than the displacement, of metal and it is likely that they were cut with a file. The area between the rim and the shoulder bears a large number of shallow striations. These consist of short lengths of lightly incised horizontal lines, each around 0.5mm wide and may have served to articulate the surface of this area of the bowl.

Just under the rim of the bowl there evidence for three groups of fittings consisting of:

- Two iron rivets, each c. 2.2mm in diameter set one above the other.
- To one side of the above are two larger holes, side by side. One is double, consisting of an oval hole, 3.8mm x 2.5mm, cutting or cut by a 3.4mm diameter hole. A burr shows these holes to have been rather crudely drilled through from the outside. The other hole is oval and measures 4.8mm x 5.3mm.
- Two small holes, one containing a c. 2.8mm diameter copper alloy rivet, the other empty.

These perforations differ in size and technique and appear unrelated to one another. It is notable that the groups are not opposite each other being set, not at 180°/180°, but at 154°/206°. Their function is unknown.

Included in the find is a severely corroded copper alloy disc, about one quarter of which has been recently broken away. The disc has a diameter of 47.8mm and a maximum thickness of 2.7mm. Its back is slightly concave and bears an area of a c. 3mm thick copper corrosion products. On the face of the disc is a deeply cut panel of decoration consisting of a running pattern of alternating

peltae surrounding a ring. The *peltae* were originally surrounded by red enamel inlay, a few traces of which survive. The central area contains traces of blue and green enamel but its decorative scheme can no longer be resolved.

This object is an example of what are known as 'hanging bowls', which are consistently found in Anglo-Saxon contexts but bear decoration showing that they were produced in a sub-Roman Celtic milieu, In this case, the description 'hanging bowl' is not altogether apposite as there is no means by which the bowl could be hung. It is unlikely that the associated mount represents one of the escutcheons by which the bowl was suspended. Its almost flat back would make it impossible to mount it onto the curving side of the bowl and its highly corroded condition is in keeping with it being from the centre of the bowl's lost base. The thick deposit on the back of the mount would also fit in with it being a basal mount.

The holes under the rim of the bowl lack the spacing needed for the three-point suspension used on hanging bowls. Their position is not in keeping with the way in which escutcheons secured; these are usually attached at points on the rim and below the carination/shoulder. A small area of white metal just under the shoulder of the Bracebridge Heath bowl may represent the solder by which an escutcheon was attached, its counter parts concealed by corrosion. The escutcheons could have been lost during the earlier disturbance of the grave or may, as was the case in Grave 20 at the Cleatham, Lincs., cemetery, have been removed prior to burial (Leahy, forthcoming).

Discussion

It is highly probable that these finds came from a high status Anglo-Saxon burial of seventh century date. The objects form a coherent group and the associated finds can be paralleled elsewhere in Lincolnshire. A sword and a hanging bowl were found together in Grave 179 at the Castledyke, Barton on Humber cemetery. As at Bracebridge Heath, the Castledyke sword was pattern welded and showed a similar method of manufacture with multiple bundles of twisted rods making up its central section (Gilmour 1998, 246-8). This method was also used on a weapon from Lovedon Hill, and Gilmour has suggested that it may represent a regional preference (ibid.). Two seventh century pattern-welded swords were found at the Sheffield's Hill, Lincs., cemetery but a detailed examination has yet to be carried out.

While no other pommel caps have been found in association with swords, a number of 'cocked hat' caps are known from Lincolnshire with examples from Bigby, Cleatham, Hemingby and Welton le Marsh. All of these were secured to the pommel by means of rivets at each end of the cap. The simple method used on the Bracebridge Heath pommel, where the tang passed through a hole in the cap and was expanded by hammering is unusual for Lincolnshire. It occurs on swords from Alfriston, Sussex (Welch, 1983, fig. 9c) and Bowcombe Down, Isle of Wight, where an early sixth century date was suggested (Arnold, 1982, 95, fig. 63, a-b).

The discovery of the Group C2 spearhead in the Bracebridge Heath group causes no surprise. This type is concentrated in the South of England and Midlands but the distribution extends into Lincolnshire (Swanton, 1973, 53, fig.12). The 'sugar loaf' type shield boss an unusual find for Lincolnshire but is not unique. An example was dredged from the River Witham between Kirkstead and Lincoln in 1787/8 (Evison 1963, 46, fig. 12). This boss has a height of 157mm and cone diameter of 122mm. It is now in the collection of the City and County Museum, Lincoln, (Acc No. 9758-06).

Lincolnshire has produced more hanging bowls that any other county, with 15 examples being listed in 1993 (Bruce-Mitford, 1993, 47), to which the writer can add a further four recent finds (excluding Bracebridge Heath). Most of the features of the Bracebridge Heath bowl can be paralleled amongst the highly varied Lincolnshire bowls, although the striations under the rim are unusual. The late Celtic *peltae* used to decorate the Bracebridge Heath mount can be paralleled, in spirit, on the bowl from Manton, North Lincolnshire, which also exhibits a similar rim form to that on the Bracebridge Heath bowl and was inlayed with enamel (ibid. 54, Pl. 8, fig. 5.6.4; 5.8.1-3). A better parallel is provided by the small bowl from the Sutton Hoo ship burial where the opposed peltae have the same proportions to those seen on the Bracebridge Heath bowl and were also inlayed with red enamel (Bruce-Mitford, 1983, 257-63). The Manton bowl, referred to above, is strongly linked to the large hanging bowl from Sutton Hoo and probably came from the same workshop (ibid. 270). It is interesting to note that this latter bowl has the unusual feature of a decorative band on the top of its rim, although it is perhaps unsafe to compare the marks cut into the rim of the Bracebridge Heath bowl with the neat running chain used on the Sutton Hoo bowl. It is possible that the Bracebridge Heath hanging bowl has some illustrious relatives.

In conclusion it appears likely that the Bracebridge Heath burial with its sword, spear, shield and bowl represents a high status, seventh century warrior burial. Other warrior burials of this date are known from Lincolnshire, the grave of the youth buried with a sword and bowl in Grave 179 at Castledyke acted as a nucleus for other burials, emphasising his status (Drinkall and Foreman 1998, 88, fig. 43). There are some apparently isolated warrior burials. At Kirton in Lindsey, a sword was found with a seax, a spearhead, two knives and a bridle bit, (unpublished). A grave at Asgarby was found to contain a sword, shield boss, a knife and a decorated belt set and, while no weapons were found, there can be no doubt about the high status of the individual found beneath the large mound at Caenby (Everson 1993, 94). It is possible that a mound originally covered the Bracebridge Heath burial. The find was made on the parish boundary between the parishes of Bracebridge Heath and Branston, in the corner of Bracebridge Heath. Burial mounds made convenient landmarks when estates were laid out. It is interesting to note that 1.25km to the west, the boundary between the parishes of Bracebridge Heath and Waddington followed a large Iron Age ditch. The Bracebridge Heath find makes an important contribution to our knowledge of Anglo-Saxon Lincolnshire.

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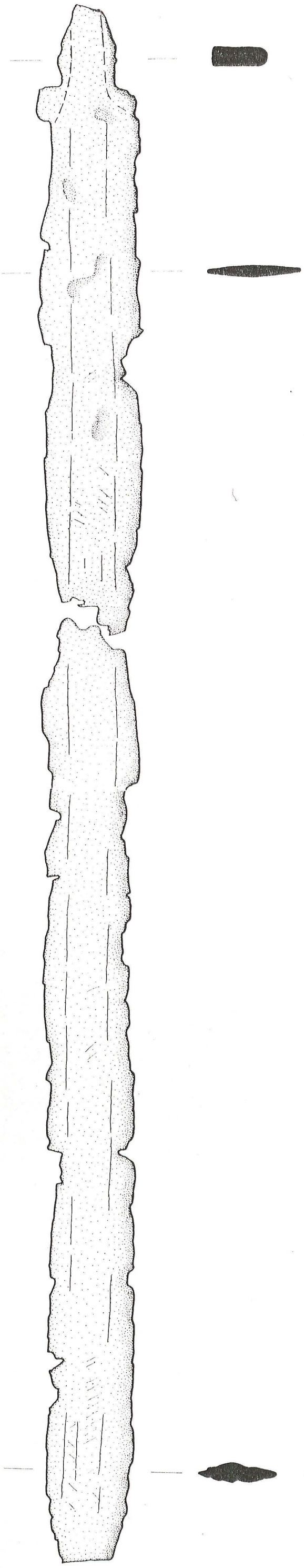

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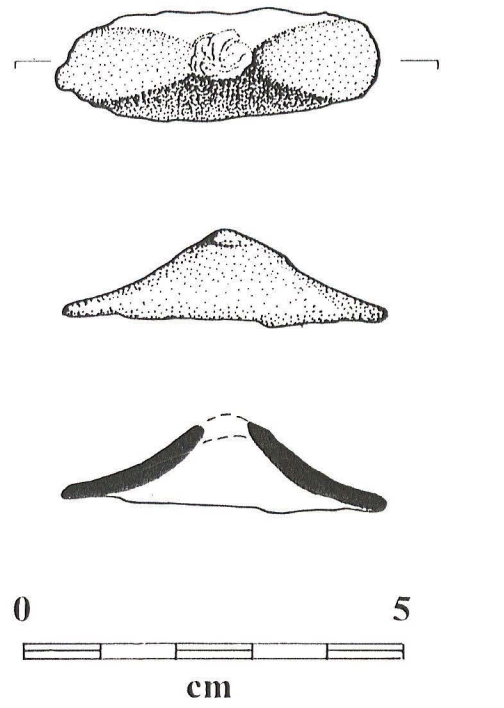
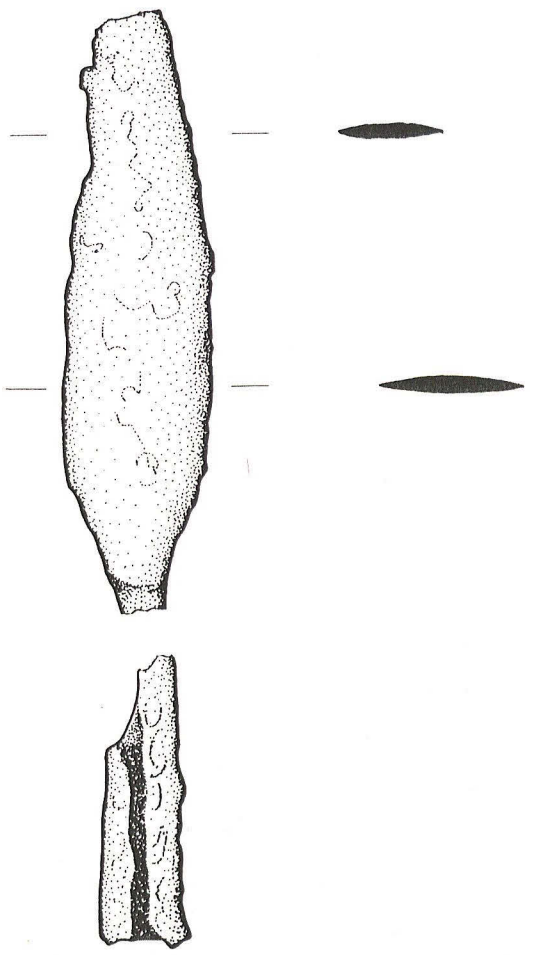




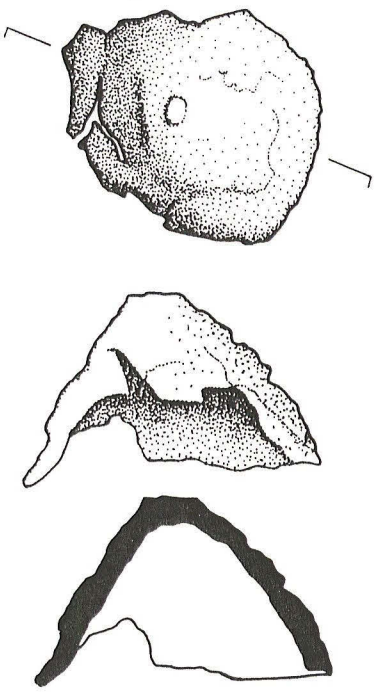
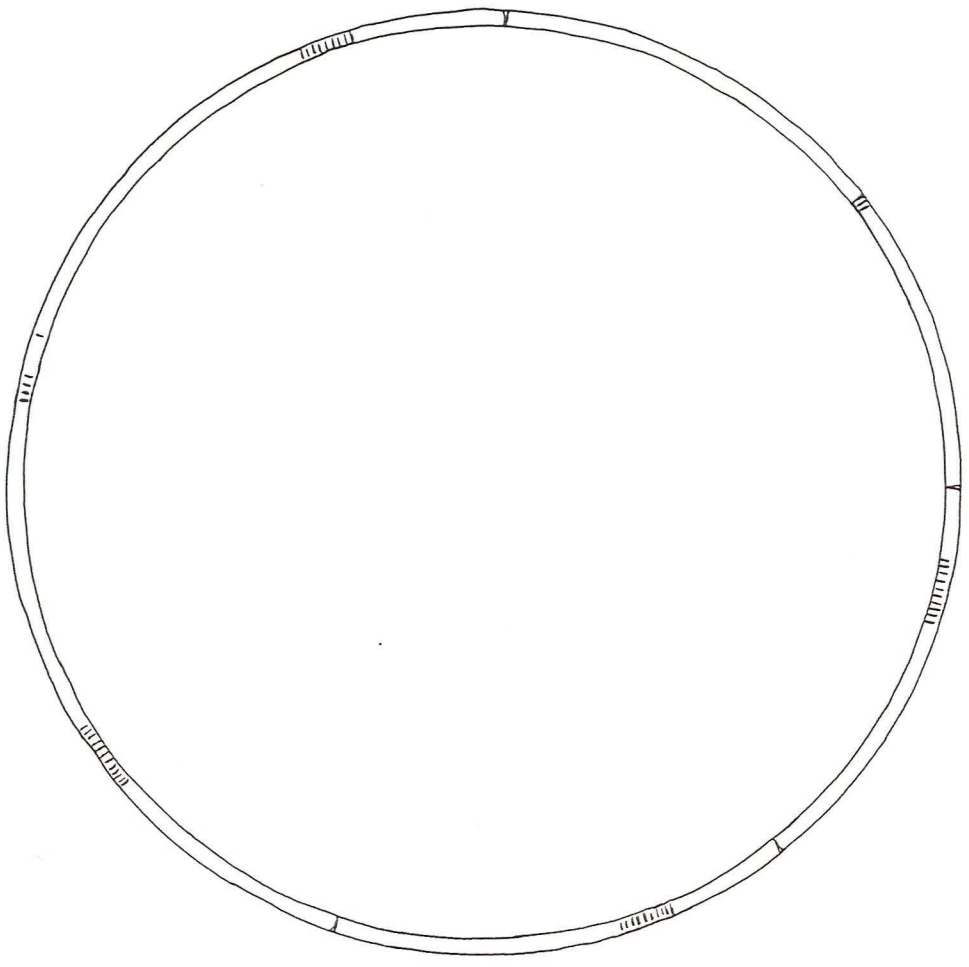
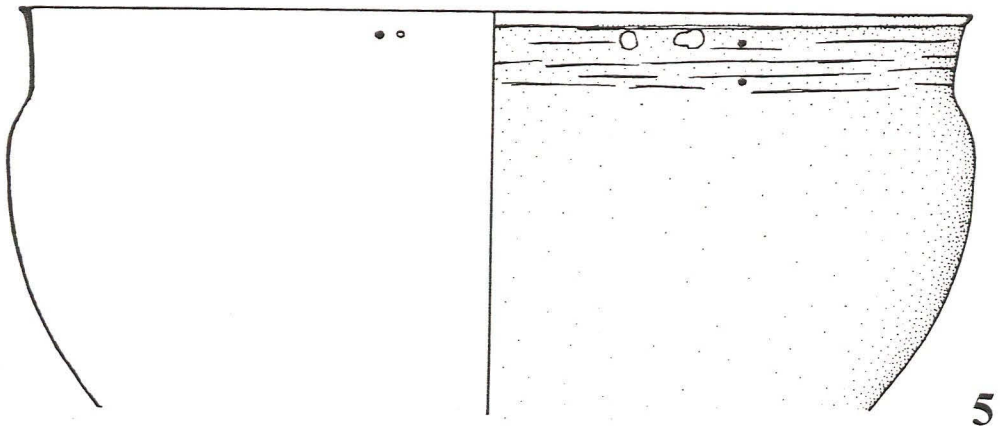


Fig. 1 Bracebridge Heath Saxon grave group.
1. Sword 2. Pommel cap 3. Spearhead 4. Shield boss.
(scale 1:2 except pommel cap 1:1) ***(Drawn by M. Elwes)***





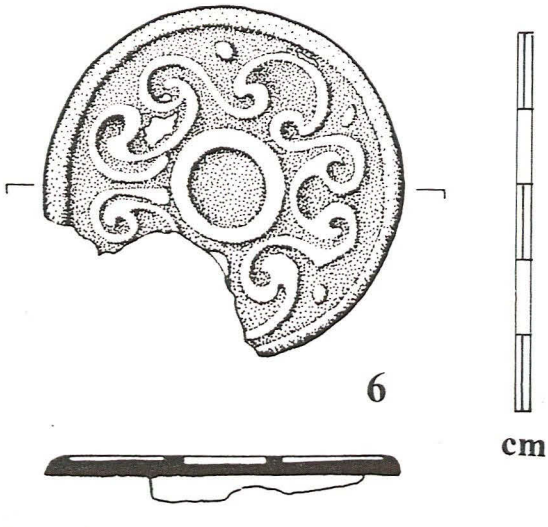


Fig. 2 Bracebridge Heath Saxon grave group.
5. Bronze bowl (scale 1:2) **6. Enamelled mount** (scale 1:1)
(Drawn by M. Elwes)

APPENDIX 2

Context Summary

Context No.	Type	Description	Finds
Area 1			
100	Topsoil	brown clay loam	
101	Cut of 102	cremation pit	
102	Fill of 101	red brown silty clay	42 sherds early/mid 2ndC cremation urn
103	Unused		
104	Unused		
105	Fill of 157	brown sandy clay with limestone rubble	3 sherds 2ndC pottery and 30 fragments of mortar
106	Cut	ditch	
107	Fill of 106	mid brown sandy clay	3 sherds late 1st/early 2ndC pottery
108	Cut	ditch	
109	Fill of 108	orange brown sandy clay	
110	Cut	camber/slope to west of Roman road edge	
111	Subsoil	mixed orange, grey brown silty clay	3 sherds of late 1st/early 2ndC pottery; 1 fragment of Roman brick; 1 horse tooth
112	Not used		
113	Not used		
114	Cut of 115	post hole	
115	Fill of 114	grey brown soft silty sand	
116	Natural depression		
117	Fill of 116	orange brown silty sand	
118	Natural depression		
119	Fill of 118	orange brown silty sand	
120	Cut	grave	skeleton 154
121	Fill of 120	yellow brown silty clay	15 sherds early/mid 2ndC pottery; 1 fragment unidentified bone 14 iron nails
122	Cut	grave	skeleton 138
123	Fill of 122	mid grey brown silty clay	49 iron nails; 6 sherds 2ndC pottery; 1 sheep tooth. 4 pieces Roman tile
124	Not used		
125	Not used		
126	Cut	wall construction trench	
127	Fill of 126	orange brown sandy clay	

Context No.	Type	Description	Finds
128	Layer	limestone lumps in orange brown sandy clay	1 Roman sherd; 1 fragment Roman tile
129	Layer	limestone lumps in an orange brown sandy clay	
130	Fill of 108	orange brown silty sand	
131	Natural depression		
132	Fill of 131	orange grey sandy clay	
133	Cut	pit for cremation	cremation urn
134	Fill of 133	orange brown sandy clay	84 sherds early/mid 2ndC pottery
135	Cut	ditch	
136	Fill of 135	grey brown clayey silt	1 sherd ?Late Iron Age pottery
137	Fill of 135	brown orange silty clay	1 sherd mid 1st C pottery
138	Fill of 122	human skeleton	
139	Layer	metalling from Roman road	
140	Layer	orange brown silty clay	
141	Layer	brown silty clay above 139	1 fragment Roman tile; 1 fragment Roma brick; 27 sherds ?Bronze Age/Early Iron Age/Roman pottery
142	Fill	greyish brown clayey silt	
143	Cut	grave	skeleton 159
144	Fill of 143	orangey brown clay silt	2 sherds early/mid 2ndC pottery
145	Fill of 143	yellowish grey brown sandy silty clay	23 sherds early/mid 2ndC pottery 15 iron nails
146	Cut	pit	
147	Fill of 146	brown sandy clay	4 sherds of early/mid 2ndC pottery; 3 fragments Roman plaster; 1 fragment Roman tile
148	Natural depression		
149	Fill of 148	brown sandy clay	
150	Natural depression		
151	Fill of 150	brown sandy silt	
152	Fill of 153	mid reddish brown clay	
153	Natural depression		

Context No.	Type	Description	Finds
154	Fill of 120	human skeleton	
155	cut	grave	skeleton 162
156	Fill of 155	mid grey brown silty sand	15 iron nails, coffin remains, min No 42
157	cut	grave	skeleton 158
158	Fill of 157	human skeleton	
159	Fill of 143	human skeleton	
160	Cut	gully	
161	Fill of 160	brown sandy clay	9 sherds late 1st/early 2nd century pottery
162	Fill of 155	human skeleton	
163	Fill of 164	orange brown sandy clay	
164	Cut	ditch	
165	Cut	wall construction trench?	
166	Fill of 165	wall foundation in orange brown sandy silt	
167	Natural layer	fragmented limestone	
168	Natural layer	orange brown clay	

Context No.	Type	Description	Finds
Area 2			
200	Layer	grey brown sand clay	
201	Cut	ditch	
202	Fill of 201	brown sandy clay	1 sherd Iron Age/Roman pottery
203	Fill of 201	grey brown sandy clay	3 sherds mid-late 1st/early 2ndC pottery; 1 sheep tooth.
204	Fill of 201	grey brown sandy clay	2 sherds Late Iron Age/Early Roman pottery; 2 fragments mortar
205	Fill of 201	brown sandy clay	
206	Fill of 201	brown sandy clay	
207	Fill of 201	brown silt sand clay	
208	Natural layer	yellow brown sandy clay	
209	Natural layer	broken limestone	
Area 3			
300	Topsoil	dark grey brown silty clay loa	
301	Cut	ditch	
302	Fill of 308	grey brown silty sand	
303	Natural	broken limestone	
304	Natural	orange grey clay silt	1 sherd early Roman pottery
305	Natural root hole		
306	Fill of 305	orange silty clay	
307	Natural	orange silty clay	
308	Cut	ditch	
309	Fill of 301	orange brown silty sand	
310	natural tree bole		
311	Fill of 310	reddish brown silty clay	1 sherd ?3rd/4thC pottery
312	Fill of 301	greyish brown silty clay	
313	Natural depression		
314	Fill of 313	reddish brown silty sand	
315	Natural gravel		
316	Natural	fragmented limestone	

Context No.	Type	Description	Finds
Area 4			
400	Topsoil	dark black clayey loam	
401	Natural treebole		
402	Fill of 401	orange brown sandy silt	
403	Natural depression		
404	Subsoil	orange brown sandy silt	
405	Natural depression		
406	Fill of 405	orange brown silty clay	
407	Fill of 406	brown silty clay	
Area 5			
500	Topsoil	dark greyish brown clay loam	1 sherd ?late 3rd-4thC pottery
501	Natural depression		
502	Cut	ditch	
503	Fill of 502	orange brown sandy silt	
504	Natural linear		
505	Natural depression		
506	Natural	brown silty clay	
507	Natural	orange brown silty clay	
508	Natural	orange brown silty clay	
Area 6			
600	Topsoil	dark greyish brown	
601	Cut	pit	
602	Fill of 601	greyish brown sandy silt	
603	Fill of 601	grey brown sandy silt	
604	Natural	light brown silty clay	
Area 7			
700	Topsoil	grey brown clay sand	
701	Fill of 702	brown sandy clay	
702	Natural gully		
703	Fill of 704	brown sandy clay	
704	Natural gully		
705	Subsoil	brown sandy clay	

BRACEBRIDGE HEATH TO DUNSTON WATER MAIN
BDM 98 - SK 9880 6649
REPORT ON BEAKER SHERD

A small sherd of Beaker pottery, approximately 30x25mm, was found on this site during topsoil stripping. The sherd is unabraded and although friable is in good condition with fine decoration.

Fabric: SHMM/QUSF

The sherd exhibits a number of small elongated voids which indicate that a moderate amount (10-19%) of medium to coarse (modal size 0.5-3mm) shelly limestone material has been leached out during deposition. The site lies on a silty clay below which lies oolitic limestones (which are not oolitic in spite of their name) and a nearby outcrop of this fossilised shelly limestone could have supplied the material for the manufacture of this pot. The fabric also contains a sparse amount of fine quartz, probably naturally occurring in the clay. Therefore the material for the pot could have been obtained fairly locally (although thin-section analysis would be required to confirm this with certainty).

Decoration, Date and Comparable Vessels

This sherd originated from a thin walled vessel, about 5mm thick, and is decorated with fine incised lines forming a lattice pattern within a v-shaped border. This style is comparable with local traditions of this type of pottery and is known in Lincolnshire for example at Woolsthorpe (Clarke 1970, 930). It is not possible to know the form of the pot from this sherd, but the zoned decoration suggests this is a later type. A programme of radio-carbon dating on Beaker associations by Kinnes *et al* (1991) has suggested that a date towards the end of the second millennium cal BC would be appropriate for this style and type.

Context

The sherd is friable due to the nature of its fabric, but the surface condition is good suggesting that this had not been lying for long outside a feature. Fine Beaker wares are most commonly known from burial and barrow sites, and a single sherd with

identical fabric and decoration was found within a pit at Deeping St James in Lincolnshire (Allen 1997). There was no indication whether the Deeping St James sherd originated on a burial or settlement site.

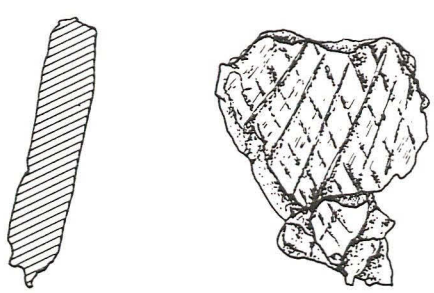
References

Allen C S M, 1997. Report on Late Neolithic and Early Bronze Age Pottery: Deeping St James, Lincs. Heritage Trust of Lincolnshire.

Kinnes I, Gibson A, Ambers J, Bowman S, Leese M and Boast R, 1991. `Radiocarbon Dating and British Beakers: the British Museum Programme', Scottish Archaeological Review 8, 35-78.

Clarke D L., 1970. Beaker Pottery of Great Britain and Ireland.

Carol Allen
1 February 1999



Beaker sherd. Actual size (N. Smith)

REPORT 43 ON THE POTTERY FROM BRACEBRIDGE HEATH, BDM98

for LINDSEY ARCHAEOLOGICAL SERVICES

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

6 December 1998

QUANTITY AND CONDITION

The total quantity recorded was 276 sherds, 1.983kg. The condition varied considerably, and included some very fragmented and friable sherds from context 141 particularly. Sherds from contexts 1C-3D were often very abraded. No problems are anticipated for long term storage. The pottery has been archived according to the guidelines of *The Study Group for Roman Pottery*, the archive including sherd count and weight. A copy of the archive database is attached (Appendix 1). Vessels selected for illustration have been assigned drawing numbers (as quoted,where necessary, below), and are separated from the main pottery bags. There was no specialist pottery as mortaria, samian and amphorae.

The pottery came from 37 contexts. A summary of the quantities by context, with date, comments and information relating to sherd links between contexts, layers and features, ordered numerically is on Table 1.

Table 1Summary by context with dates, sherd links.

Cxt	Sherds	Weight	Date	Comments;Links
1C	2	3	ROM	
1D	1	3	EROM	
2A	4	26	2C?	
2B	4	16	ROM	
2C	3	30	ROM	
2F	3	8	PMED	
2G	1	6	POSTRO	
2H	1	5	2C?	
2J	1	1	ROM	
2J[3-30]	2	3	ROM	
2K	1	35	ROM	
3B	2	16	POSTRO	
3C	6	22	PREH-2C?	
3D	2	38	2C?	NO DEFINITE DATING
100	3	58	4-PRO?	QUERY OX/?GLAZE LROM BKFO?
101	48	347	EM2	LOWER PT ONLY CREM VESS
105	3	5	2C?	
107	3	35	L1E2	same 161
111	3	7	L1E2	
121	15	143	EM2?	
123	6	39	2C?	
125	1	1	UNDATABLE	
128	1	3	ROM	
134	84	542	EM2	CREMATION JAR
136	1	10	LIA+?	joins 147

137	1	6	M1+	
141	27	185	BA/EIA-ROM?	V FRIABLE POOR CONDITION
144	2	10	EM2?	joins 145
145	23	114	EM2?	joins 144
147	4	26	EM2?	joins 136
161	9	143	L1E2	same 107
202	1	3	IA-ROM?	
203	3	13	ML1E2	CPN AS DARL88;7-59?
204	2	35	LIA/EROM?	
304	1	14	EROM	
311	1	19	3-4?	NO DEFINITE DATING
500	1	13	3-4?	NO DEFINITE DATING
Total	276	1983		

Sherd links were noted between contexts 107 and 161, 136 and 147 and 144 and 145. There may also be a link between 107 and 111.

OVERVIEW OF FABRICS

The fabrics from the total site are detailed on Table 2.

Table 2 Fabrics

Fabric	Code	Sherds	%	Weight	%
Oxidized light	OXL	1	0.36	8	0.40
Oxidized	OX	7	2.54	21	1.06
Black-Burnished ware	BB1	132	47.83	889	44.83
Calcite-gritted	CALG	13	4.71	58	2.92
Coarse	COAR	2	0.72	6	0.30
Grey	GREY	62	22.46	494	24.91
Grey minimal shell	GYMS	2	0.72	2	0.10
IA tradition gritty	IAGR	17	6.16	223	11.24
IA tradition shell-gritted	IASH	5	1.81	53	2.67
*IA tradition shell-gritted?	IASH?	28	10.14	191	9.63
Tile	TILE?	2	0.72	6	0.30
Fired clay	FCLAY?	1	0.36	1	0.05
PostRo	PRO	4	1.45	31	1.56
Total		276		1983	

*includes one very fragmented vessel (141)

The bulk of the group comes from the two cremation vessels, both BB1 cooking pots, the one from context 101 being much more fragmentary, consisting of only the base and part of the wall, the latter heavily burnt and flaked externally, removing all evidence of lattice decoration, and two very small rim fragments. The cooking pot from 134 has a sizeable amount of the rim, including burnished wavy line decoration, and evidence for lattice decoration (dwg 1). The rim form indicates an early to mid 2nd century date, and it is likely the other cremation was of similar date.

The GREY sherds include two everted rim beakers, one with a complete profile from 121 (dwg 4), and the other from contexts 144 and 145 of similar type (dwg 3). IAGR fabric, a pimply type derived from a late Iron Age tradition often termed Trent Valley ware, includes a common type of cooking pot (dwg 2) from 161, with possible other sherds in 107. IASH includes a damaged rim fragment probably from a similar LIA to early Roman cooking pot

from 203. CALG calcite-gritted ware occurs only as a single vessel (dwg 5) from 145. This is a comparatively unusual vessel and fabric, the inclusions being mainly calcite, very rarely seen in Lincoln. A single fine-grained light oxidized sherd from 2B, in poor very abraded condition, might be from a large flagon, but the evidence is equivocal. The other oxidized sherds are all very fragmentary and in relatively poor abraded condition with loss of surfaces.

A notable vessel is a shell-gritted jar or bowl base, hand-made, from 141, in a poorly mixed coarse clay. The poor friable condition may be partly due to soil conditions, but this is not certainly of Iron Age date. A further unusual vessel is represented by two sherds from 3C, hand-made in a coarse fabric with deep closely-set lattice decoration. This may also be of earlier date and both vessels should be seen by a specialist in earlier prehistoric pottery.

DISCUSSION

With contexts often represented by either one or two sherds or even single vessels, dating is necessarily tenuous. Most of the material would fit into the range of the later 1st into the early to mid 2nd century. The cremation pots are of early to mid 2nd century date, and at this period, many cooking pots made in the preceding late Iron Age tradition are likely to have still be in use; the arrival of BB1 from Dorset in the Hadrianic period appears to have been the cause of their decline. The comparatively complete nature of the GREY beaker (dwg 4) from 121 could indicate that it was from a cremation group - or maybe the wake! The absence of any Nene Valley colour-coated sherds common on most sites in the 3rd century suggests a terminal date for most activity in the early to mid 2nd century.

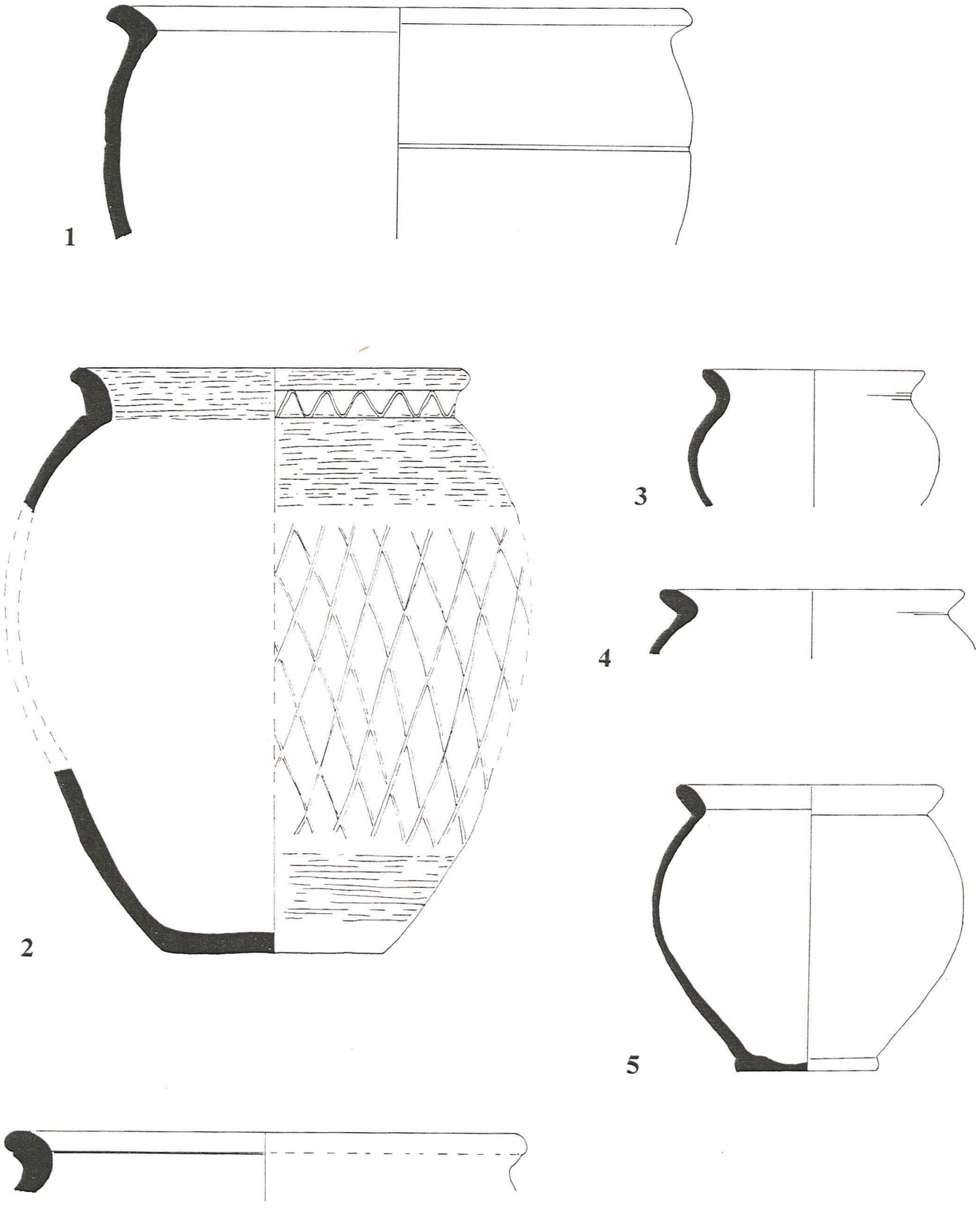
The only contexts with later Roman pottery are 100, with a collared jar of the type made at the late Roman Swanpool kilns in Lincoln, possibly 311 with a rim reminiscent of a wide-mouthed bowl possibly of 3rd century date, and an over-fired GREY body sherd from 500 (possibly indicative of pottery manufacture in the area?) appeared to be of later Roman type. There is a further over-fired vessel, a small jar or beaker with a curved rim from 3C, noted as requiring illustration. Post-Roman sherds came from 2F, 2G, 3B and 100.

RECOMMENDATIONS

Just six vessels have been identified as needed illustration, one being the cremation vessel from 134; these are listed in Appendix 2. There is also the possibility that the decorated body sherds from 3C in COAR fabric will require illustration.

Cxt	Fabric	Form	Manuf	Vess	D?	DNo	Details	Links	Shs	Wt
1C	GREY	-	-	-	-	-	CHIPS	-	2	3
1C	ZDATE	-	-	-	-	-	ROM	-	-	-
1D	IAGR?	-	-	-	-	-	CHIP ONLY	-	1	3
1D	ZDATE	-	-	-	-	-	EROM	-	-	-
2A	GREY	-	-	-	-	-	BS	-	1	3
2A	GREY	J	-	-	-	-	SHLDR BS;LTGRY	-	1	12
2A	IASH	-	-	-	-	-	DKGRY BS;VESIC	-	1	6
2A	TILE?	-	-	-	-	-	FLAKE	-	1	5
2A	ZDATE	-	-	-	-	-	2C?	-	-	-
2B	GREY	J	-	1	-	-	J BSS;DKGRY;SOOTED	-	3	8
2B	OXL	-	-	-	-	-	ABR FINE LTBN BS;?AMPH	-	1	8
2B	ZDATE	-	-	-	-	-	ROM	-	-	-
2C	GREY	-	-	-	-	-	VABR BSS/PT BASE	-	3	30
2C	ZDATE	-	-	-	-	-	ROM	-	-	-
2F	GREY	-	-	-	-	-	CHIP	-	1	1
2F	IASH?	-	-	-	-	-	TINY CHIP	-	1	1
2F	PRO	-	-	-	-	-	PMED GLAZE	-	1	6
2F	ZDATE	-	-	-	-	-	PMED	-	-	-
2G	PRO	-	-	-	-	-	RIM;GREEN GLAZE	-	1	6
2G	ZDATE	-	-	-	-	-	POSTRO	-	-	-
2H	GREY	JCUR?	-	-	-	-	RIM FR;BURNT;BBT CP?	-	1	5
2H	ZDATE	-	-	-	-	-	2C?	-	-	-
2J	GREY	-	-	-	-	-	BS	-	1	1
2J	ZDATE	-	-	-	-	-	ROM	-	-	-
2J[3-30]	GREY	CP?	-	-	-	-	SANDY BS	-	1	2
2J[3-30]	TILE?	-	-	-	-	-	FLAKE	-	1	1
2J[3-30]	ZDATE	-	-	-	-	-	ROM	-	-	-
2K	GREY	BK	-	-	-	-	PED FOOT BASE	-	1	35
2K	ZDATE	-	-	-	-	-	ROM	-	-	-
3B	GREY	-	-	-	-	-	ABR BS	-	1	2
3B	PRO	-	-	-	-	-	CREAM W YELLOW/BN GLAZE	-	1	14
3B	ZDATE	-	-	-	-	-	POSTRO	-	-	-
3C	COAR	-	HM;SLA	1	D?	-	FRAGS;SCORED CLOSE LA;BA-IA?	-	2	6
3C	GREY	-	-	-	-	-	BSS;ABR	-	3	9
3C	GREY	JBKCUR	-	-	D	6	O'FIRED RIM/SHLDR;RB FAB;GRY SURFS	-	1	7
3C	ZDATE	-	-	-	-	-	PREH-2C?	-	-	-
3D	GREY	-	-	-	-	-	LTGRY THK'ISH BS;LATER ROM?	-	1	24
3D	GREY	JBK	-	-	-	-	LTGRY FTM BASE	-	1	14
3D	ZDATE	-	-	-	-	-	2C?	-	-	-
3D	ZZZ	-	-	-	-	-	NO DEFINITE DATING	-	-	-
100	GREY	JCR	-	-	-	-	RIM VABR SPT JAR	-	1	37
100	GREY	JCUR	-	-	-	-	RIM VABR	-	1	16
100	PRO	-	-	-	-	-	RB SANDY W ?GLAZE	-	1	5
100	ZDATE	-	-	-	-	-	4-PRO?	-	-	-
100	ZZZ	-	-	-	-	-	QUERY OX/?GLAZE LROM BKFO?	-	-	-
101	BB1	CP	-	-	-	-	BSS X CREM VESS	-	17	65
101	BB1	CP	-	1	-	-	BSS/BASE;TINY RIM FR;BURNT EXT FLAKED	-	31	282
101	ZDATE	-	-	-	-	-	EM2	-	-	-
101	ZZZ	-	-	-	-	-	LOWER PT ONLY CREM VESS	-	-	-
105	GREY	BK?	-	1	-	-	THIN WALL BSS;RB W DKGRY SURFS	-	2	1
105	GREY	J?	-	-	-	-	CURVED NECK FR;LTGRY	-	1	4
105	ZDATE	-	-	-	-	-	2C?	-	-	-
107	GYMS	-	-	-	-	-	CHIP;DKGRY OCCAS WHITE ?SHELL	-	1	1
107	IAGR	CPN	-	1	-	-	BSS W GROOVE;WM CF SHS IN	161	2	34
107	ZDATE	-	-	-	-	-	L1E2	-	-	-
111	GREY	BK?	-	-	-	-	NECK>CARINATION BS	-	1	2
111	GYMS	-	-	-	-	-	CHIP AS IN 107	-	1	1
111	IAGR	-	-	-	-	-	BS FRESH BREAK CF 161;107	-	1	4
111	ZDATE	-	-	-	-	-	L1E2	-	-	-
121	GREY	BKEV	-	1	D	4	COMP PROF;LTGRY	-	15	143
121	ZDATE	-	-	-	-	-	EM2?	-	-	-
123	GREY	J?	-	1	-	-	BASAL ZONE BSS;LTGRY	-	6	39
123	ZDATE	-	-	-	-	-	2C?	-	-	-

Cxt	Fabric	Form	Manuf	Vess	D?	DNo	Details	Links	Shs	Wt
125	OX	-	-	-	-	-	VABR CHIP;NO SURFS	-	1	1
125	ZDATE	-	-	-	-	-	UNDATABLE	-	-	-
128	OX	-	-	-	-	-	ABR BS;BRIGHT LTRB	-	1	3
128	ZDATE	-	-	-	-	-	ROM	-	-	-
134	BB1	CP	LA;BWL	1	D	1	RIMS/BSS/BASE NONJ	-	84	542
134	ZDATE	-	-	-	-	-	EM2	-	-	-
134	ZZZ	-	-	-	-	-	CREM VESS	-	-	-
136	IAGR	-	HM?	-	-	-	BS GRY F/INT;LTBN EXT;CLAY LUMPS;JOINS	147	1	10
136	ZDATE	-	-	-	-	-	LIA+?	-	-	-
137	IASH?	-	-	-	-	-	BS;PROB CPN;DKGRY W LTRB SURFS;VESIC	-	1	6
137	ZDATE	-	-	-	-	-	M1+	-	-	-
141	IASH?	-	HM	1	-	-	COARSE POOR MIX;SHEL/VEGET;DKRB FAB;GRY SURFS	-	26	184
141	OX	-	-	-	-	-	VABR LTRB BS	-	1	1
141	ZDATE	-	-	-	-	-	BA/EIA-ROM?	-	-	-
141	ZZZ	-	-	-	-	-	V FRIABLE POOR CONDITION	-	-	-
144	GREY	BKEV	-	-	-	-	BSS;ONE VESS;JOIN	145	2	10
144	ZDATE	-	-	-	-	-	EM2?	-	-	-
145	CALG	JBCUR	HM	1	D	5	RIM FR;GROOVE INT RIM;SOOTED;NON J BSS	-	13	58
145	FCLAY?	-	-	-	-	-	LUMP	-	1	1
145	GREY	-	-	-	-	-	CHIP	-	1	1
145	GREY	BKEV	-	1	D	3	RIM/WALL	144	4	26
145	IAGR	-	-	-	-	-	BS;BURNT;AS 161 ETC	-	1	13
145	OX	-	-	-	-	-	BS;GRY CORE RB FAB	-	1	10
145	OX	-	-	-	-	-	CHIP & VABR LUMP	-	2	5
145	ZDATE	-	-	-	-	-	EM2?	-	-	-
147	GREY	-	-	-	-	-	BS;SURFS LOST;LTGRY	-	1	7
147	GREY	CP?	HM?	1	-	-	BASE FRAGS;DKGRY;BURNISHED;DKGRY;BBT?	-	2	17
147	IAGR	-	HM?	-	-	-	CHIP GRY F/INT;LTBN EXT;JOINS	136	1	2
147	ZDATE	-	-	-	-	-	EM2?	-	-	-
161	IAGR	CPN	-	1	D	2	RIMS/GROOVED SHLDR/BODY;CF IN	107	9	143
161	ZDATE	-	-	-	-	-	L1E2	-	-	-
202	IASH	-	HM?	-	-	-	DKGRY BS;SPARSE SHELL	-	1	3
202	ZDATE	-	-	-	-	-	IA-ROM?	-	-	-
203	GREY	-	-	-	-	-	BS;LTGRY	-	1	3
203	IASH	CPN	-	-	-	-	DAMAGED RIM FRAG;DKGRY;PROB WM	-	1	9
203	OX	-	-	-	-	-	TINY CHIP BRIGHT RB	-	1	1
203	ZDATE	-	-	-	-	-	ML1E2	-	-	-
203	ZZZ	-	-	-	-	-	CP AS DARL88;7-59?	-	-	-
204	IASH	-	HM?	1	-	-	BSS;GRY FAB;BN CORT;GRYBN SURFS	-	2	35
204	ZDATE	-	-	-	-	-	LIA/EROM?	-	-	-
304	IAGR	-	-	-	-	-	VABR BS;BURNT	-	1	14
304	ZDATE	-	-	-	-	-	EROM	-	-	-
311	GREY	JB	-	-	-	-	THICK RIM;BWM OR JL?	-	1	19
311	ZDATE	-	-	-	-	-	3-4?	-	-	-
311	ZZZ	-	-	-	-	-	NO DEFINITE DATING	-	-	-
500	GREY	JB?	-	-	-	-	O'FIRED BS;SPALLED	-	1	13
500	ZDATE	-	-	-	-	-	3-4?	-	-	-
500	ZZZ	-	-	-	-	-	NO DEFINITE DATING	-	-	-



BDM 98. The Roman pottery. Scale 1:2 (N. Field)
Illustration: context = 1:161; 2: 134; 3:145; 4: Field no. 3C; 5, 121; 6, 145.

TILE ARCHIVE: BDM98 TYPES BY FINDSPOT OR CONTEXT

Context	Type	Sherds	Weight	Comments
1C	PNR	1	7	? DATE
1C	BRK	1	15	? DATE
1D	PNR	1	0.5	? DATE
1D	PNR	2	16	FLAT;MED
1D	PNR	1	36	ROM/MED
1D	PNR	1	28	ROM/MED;VITR
2A	PNR	5	80	FLAT;MED
2A	PNR	1	38	FLAT;ROM/LMED
2C	BRK	1	124	18TH
111	RBRK	1	81	-
123	RTIL	3	18	? ID
123	TEG	1	25	-
128	RTIL	1	2	? ID
141	RTIL	1	197	RBRK/TEG
141	RBRK	1	265	-
147	RTIL	1	6	? ID
302	PNR	2	21	? DATE
304	PNR	1	11	? DATE

BDM98 BUILDING MATERIALS ARCHIVE: TYPES BY CONTEXT

Context	Form	Frags	Weight	Subform	Comments
1C	PNR	1	7	-	? DATE
1C	BRK	1	15	-	? DATE
1D	PNR	1	0.5	-	? DATE
1D	PNR	2	16	-	FLAT;MED
1D	PNR	1	36	-	ROM/MED
1D	PNR	1	28	-	ROM/MED;VITR
2A	PNR	5	80	-	FLAT;MED
2A	PNR	1	38	-	FLAT;ROM/LMED
2C	BRK	1	124	-	18TH
105	MORR	30	875	-	ROM
111	RBRK	1	81	-	-
123	RTIL	3	18	-	? ID
123	TEG	1	25	-	-
128	RTIL	1	2	-	? ID
141	RTIL	1	197	-	RBRK/TEG
141	RBRK	1	265	-	-
147	PLAS	3	0	-	ROM
147	RTIL	1	6	-	? ID
204	MORR	2	5	-	ROM;BACKING
302	PNR	2	21	-	? DATE
304	PNR	1	11	-	? DATE

APPENDIX 6

REPORT ON THE REGISTERED FINDS FROM BRANSTON TO DUNSTON MAIN (BDM98)

1. Archive

All finds were examined and, as agreed, only those items which were not nails, or where further information could be supplied other than that originally listed, were recorded on standard finds cards. All data was entered onto the computer using the CLAU finds thesaurus. The ironwork was X-rayed at the Lincoln City and County Museum Conservation Laboratory.

2. The Finds

One hundred and fourteen registered finds were examined and identified; one item (<45>) was not received. This does not appear to have been X-rayed, so it is either missing, or was originally listed in error. All pieces are of iron, except for a single fragment of mortar <115> which is almost certainly of Roman date; this is too small to merit retention as part of the material archive.

The majority of the finds are iron nails, in varying degrees of preservation and completeness. The identification of the other fragments as nails is less certain; those pieces which are probably also from nails are listed as NAIL? on the database; other small fragments which could be (but are less certainly) from nails are listed as (NAIL?).

Two groups of hobnails (<94-5>) were recovered from the same context (156). Examination of these, in conjunction with the X-rays, suggests that the minimum number present is at least 42 but the original number could have been a great deal more if these represent the studding from the soles of a pair of shoes. The majority appear to have the common, convex-domed heads but several may be more pyramidal in shape.

Apart from several small pieces of sheet or strip, the only other recognisable item is a ferrule <113> with an open, circular socket.

JEM

15/07/99

BDM98: REGISTERED FINDS ARCHIVE LIST

Context	Finds No	Material	Object	Comments
111	1	IRON	-	WEDG SHAP
123	2	IRON	-	HOOK/NAIL?
123	3	IRON	NAIL	-
123	4	IRON	NAIL	-
123	5	IRON	NAIL	-
111	6	IRON	NAIL	-
123	7	IRON	NAIL	-
123	8	IRON	NAIL	-
129	9	IRON	-	SHEET
123	10	IRON	NAIL	-
123	11	IRON	NAIL	-
123	12	IRON	NAIL	-
123	13	IRON	-	(+ WOOD)
123	14	IRON	-	(NAIL?)
123	15	IRON	NAIL	-
123	16	IRON	-	(NAIL?)
123	17	IRON	NAIL	-
123	18	IRON	NAIL	-
123	19	IRON	-	(NAIL?)
123	20	IRON	NAIL	-
123	21	IRON	NAIL	-
123	22	IRON	NAIL	-
123	23	IRON	NAIL	-
123	24	IRON	NAIL	+ 2
123	25	IRON	NAIL	-
123	26	IRON	-	SHEET
123	27	IRON	-	(NAIL?)
123	28	IRON	-	NAIL? (+ WOOD)
123	29	IRON	-	(NAIL?)
123	30	IRON	-	(NAIL?)
123	31	IRON	NAIL	-
123	32	IRON	NAIL	-
123	33	IRON	NAIL	-
123	34	IRON	NAIL	-
123	35	IRON	NAIL	-
123	36	IRON	-	NAIL?
123	37	IRON	NAIL	-
123	38	IRON	NAIL	-
123	39	IRON	NAIL	-
123	40	IRON	NAIL	-
123	41	IRON	NAIL	-
123	42	IRON	NAIL	-
123	43	IRON	NAIL	-
123	44	IRON	NAIL	-
123	45	IRON	NAIL	MS
123	46	IRON	NAIL	-
123	47	IRON	NAIL	-
123	48	IRON	NAIL	-
123	49	IRON	NAIL	-

123	50	IRON	-	X2 CURVX1 (+ WOOD)
123	51	IRON	NAIL	-
121	52	IRON	-	(NAIL?)
145	53	IRON	NAIL	-
145	54	IRON	NAIL	-
145	55	IRON	NAIL	-
121	56	IRON	NAIL	-
121	57	IRON	-	(NAIL?)
121	58	IRON	-	NAIL?
121	59	IRON	NAIL	-
121	60	IRON	-	(NAIL?)
121	61	IRON	NAIL	-
121	62	IRON	-	NAIL?
121	63	IRON	-	(NAIL?)
145	64	IRON	-	NAIL?
145	65	IRON	-	NAIL?
145	66	IRON	NAIL	-
145	67	IRON	NAIL	-
145	68	IRON	NAIL	-
145	69	IRON	NAIL	-
121	70	IRON	NAIL	-
121	71	IRON	-	-
156	72	IRON	NAIL	-
121	73	IRON	-	(NAIL?)
121	74	IRON	NAIL	-
156	75	IRON	NAIL	-
145	76	IRON	NAIL	-
121	77	IRON	NAIL	-
121	78	IRON	NAIL	-
145	79	IRON	NAIL	-
145	80	IRON	NAIL	-
145	81	IRON	NAIL	-
145	82	IRON	NAIL	-
145	83	IRON	-	(NAIL?)
156	84	IRON	NAIL	-
156	85	IRON	-	X2
156	86	IRON	NAIL	-
156	87	IRON	NAIL	-
156	88	IRON	NAIL	-
156	89	IRON	NAIL	-
156	90	IRON	NAIL	-
156	91	IRON	NAIL	-
156	92	IRON	NAIL	-
156	93	IRON	NAIL	-
156	94	IRON	HOB	X40 (= MN20)
156	95	IRON	HOB	X68 (= MN42)
156	96	IRON	NAIL	-
156	97	IRON	NAIL	-
156	98	IRON	NAIL	-
156	99	IRON	NAIL	-
156	100	IRON	NAIL	-
156	101	IRON	NAIL	-
156	102	IRON	NAIL	-

156	103	IRON	-	NAIL?
156	104	IRON	-	NAIL?
156	105	IRON	-	NAIL?
156	106	IRON	NAIL	-
156	107	IRON	NAIL	-
156	108	IRON	NAIL	-
156	109	IRON	NAIL	-
156	110	IRON	-	NAIL?
156	111	IRON	NAIL	-
141	112	IRON	-	STRIP
402	113	IRON	FERR	-
311	114	IRON	-	STRIP TERM
121	115	-	-	MORR 2GMS

Abbreviations

Code	
CURV	curved
FERR	ferrule
MN	minimum number
MS	missing
SHAP	shape(d)
TERM	terminal
WEDG	wedge

(+ WOOD): traces of minerally preserved organic material, almost certainly wood, surviving within the corrosion products

APPENDIX 7

pottery archive bdm98

Jane Young **Lindsey Archaeological Services**

context	cname	full name	form type	sherds	vessels	weight	part	description	date
100	MP	Midlands Purple ware	jar?	1	1	5	BS	int glaze	15-16th
2F	BL	Black-glazed wares	jar?	1	1	7	BS	int & ext Glaze	17-18th
2G	MEDLOC	Medieval local fabrics	jar/pipkin	1	1	6	rim	glaze;worn	13-15th
3B	CMW	Coal Measures whiteware	?	1	1	15	base	? ID;well worn ;int glaze	16-18th

BDM98 Animal Bone
Richard Moore

This site yielded three teeth and one piece of bone. The horse cheek tooth from context (111) was moderately worn, but had not yet begun to form roots. This indicates that it came from a mature animal, probably over three years old, but not of any great age.

The two sheep teeth, from contexts (123) and (203), appear to be from a single individual. They are moderately worn, suggesting that this animal was around four or five years old when it died. It is difficult to judge the size of animals from their teeth, but these seem to be typical of the small, 'unimproved' sheep commonly found in archaeological contexts. Most modern breeds are significantly larger. The enamel of the teeth is chalky and eroded and the dentine has been etched out from the occlusal surfaces, probably due to acid conditions in the soil.

The fragment from context (121) is a single piece of eroded tabular bone, approximately 3 cm across. It is probably a surface flake from a long-bone of a cow-sized animal, but could be from a scapula or cranium.

Context	Animal	Bone	Side	Comments
111	Horse	Tooth	Right	Lower molar or premolar.
121	unidentified	fragment		
123	Sheep	Tooth	Left	Lower second molar, wear stage g. (Grant 1982)
203	Sheep	Tooth	Left	Lower third molar, wear stage g.

Reference

Grant A 1982 'The use of tooth wear as a guide to the age of domestic animals', in Wilson B, Grigson C and Payne S (eds), 'Ageing and sexing animal bones from archaeological sites' *British Archaeological Reports*, British Series 109, Oxford.

Bracebridge to Dunston Pipeline - BDM98

Environmental Assessment of a samples from the Boundary ditch

A single soil sample of 22 litres collected from context 204, a charcoal rich fill of a large boundary ditch of probable Iron Age date was submitted for processing and assessment. This sample was processed in the following manner.

Sample volume and weight was measured prior to processing. The sample was washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and float were dried, and the residue subsequently re-floated to ensure the efficient recovery of charred material. The residue and second flot were then re-dried. The dry volume of the flot was measured, and the volume and weight of the residue recorded.

The sample residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. The residue was then discarded. The float of the sample was studied under a low power binocular microscope. The presence of environmental finds (ie snails, charcoal, charred seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

Results

The residue of the sample, caught on a 1mm mesh and approximately 16% by weight of the original sample, comprised small and larger limestone brash with fragments up to 8cm across. The bulk of this material was over 7mm in diameter and probably derives from reworking of limestone thrown onto the bank during the original construction of the ditch.

Archaeological finds were extremely limited and included only a single fragment of burnt clay and a sherd of pottery in a soft condition. No animal bone was recovered.

The environmental finds although abundant are of limited range. Charcoal fragments are very abundant with the flot comprising over 200 mls, most of which is charcoal. Many of these fragments would be identifiable to species and they include pieces of twig, roundwood and larger timber fragments with some pieces up to 2 cms diameter.

No charred seeds were present in the flot and only a single unidentifiable fragment of charred cereal grain was present. A single uncharred seed of goosefoot, *Chenopodium* sp., is considered to be intrusive.

The most abundant environmental remains were snail shells. The assemblage from the sample comprises well over 500 shells, almost exclusively dominated by terrestrial species (Table 1). The most dominant in the assemblage are species typical of calcareous grasslands, *Vallonia* sp. and *Pupilla muscorum*, with species of the genus *Vertigo,* which occur in grassland or marsh, also frequent. There is little evidence that the ditch at this level was wet. Apart from possible species of *Vertigo* only a very few shells of *Lymnaea truncatula* suggest a damp habitat within the ditch. The frequent occurrence of *Carychium tridentatum* may be due to the availability of moisture and shade within the vegetation in the ditch although this species can

occur in ungrazed grassland (Evans 1972). A number of species are more characteristic of woodlands or shaded conditions, but these occur in relatively low numbers, and those more catholic in habit, such as *Hygromia hispida*, *Cochlicopa* sp. and *Helicella* sp. are more numerous.

Shells of the snail *Pomatia elegans* occur in small numbers. This is a species associated with disturbed ground into which it burrows (Evans 1972) and its occurrence here in conjunction with the limestone brash in the samples reinforces the suggestion that a limestone bank above the ditch may have been eroding at the time context 204 was forming or the soils were disturbed by the 'clearance' represented by the charcoal.

Table 1: BDM98 - List of species and genera identified during scanning of the molluscs Sample 1, context 204

Vallonia sp.	+++
Vallonia costata	+
Vallonia excentrica	+
Pupilla muscorum	++
Vertigo sp.	++
Punctum pygmaeum	+
Cochlicopa sp.	+
Carychium tridentatum	++
Oxychilus sp.	+
Retinella sp.	+
Vitrea sp.	+
Discus rotundatus	+
Acanthinula sp.	+
Ceciliodes acicula	+
Helix nemoralis	+
Pomatia elegans	+
Helicella sp.	++
Helicella itala	+
Hygromia hispida	++
Clausilia sp.	+
Lymnaea truncatula	+

+ - a few shells; ++ - shells common; +++ - shells abundant

Apart from the charcoal there is little evidence of occupation in the immediate vicinity, and the relative absence of charred cereals, animal bone and other finds with charcoal of twigs, small roundwood and other timber may indicate a local fire related more to boundary maintenance than occupation.

Acknowledgments
I should like to thank Alison Foster for the sample processing.

Bibliography
Cameron, R.A.D. and Redfern, M. 1976 *British Land Snails*. Linnean Soc. Synopses of the British Fauna No. 6
Evans, J.G. 1972 *Lands Snails in Archaeology*, Academic Press
Williams, D.1973 Flotation at Siraf, *Antiquity*, 47, 198-202

APPENDIX 10

HEDGEROW SURVEY

at

DUNSTON
LINCOLNSHIRE

for

D J RACKHAM

Undertaken by
Lapwings Consultants
Banovallum House
Manor House Street
Horncastle
Lincolnshire LN9 5HF

March 1998

CONTENTS

FIGURES

1.0 INTRODUCTION

1.1 Lapwings Consultants is a wholly owned trading company of the Lincolnshire Trust for Nature Conservation with four Directors appointed by the Council of the Trust. The Trust aims to safeguard wildlife and wild places and to promote a better understanding of nature conservation. Lapwings Consultants' service is operated in the interests of good standards of conservation and management and all profits are covenanted to the Trust to enable it to further its aims.

Lapwings Consultants is a member of the Association of Wildlife Trust Consultancies, a body set up by the Wildlife Trusts (Royal Society for Nature Conservation), to monitor and advise Trust consultancies on matters relating to professionalism, standards and quality of service.

1.2 The Consultancy has access to a wide range of expertise in key ecological and environmental areas, covering

- Habitat and Species Monitoring and Survey
- Habitat Creation and Restoration
- Biological Records Database
- Wildlife and countryside Management Plans
- Wildlife Interpretation, Education and Training
- Land Management Advice

1.3 Lapwings Consultants were commissioned by James Rackham, Environmental Archaeology Consultant to undertake a hedgerow and ground flora survey on a section of hedgerow at Dunston, Lincolnshire (Grid Ref TF 063625) in advance of pipeline construction being carried out by contractors for Anglian Water Services Ltd. The said hedgerow being situated on the parish boundary between Dunston and Metheringham, immediately south of the Sleaford to Lincoln railway line.

1.4 Following our visit to site our brief was as follows:

a) Provide a report on the survey results;
b) Make recommendations for procedures that should be adopted by the pipeline contractors during the preparation of the easement and the construction phase of the work.
c) Make recommendations concerning the replanting and reinstatement of the hedge and boundary after the pipe has been laid.

It was anticipated that the easement including pipe trench would be 15 metres wide.

2.0 DESCRIPTION OF SITE

2.1 The hedgerow to be surveyed is situated on the northern bank of a fast flowing stream and it appears that the centre of the stream, rather than the hedge, is the parish boundary at this point. Indeed the hedge appears not to be a hedge at all but purely a line of mixed unmanaged scrub and trees growing on the slope of the stream bank. If it were a parish boundary hedge one would expect it to be growing at the top of the slope. However, for the purposes of this report the linear woody growth is referred to as 'the hedge'.

2.2 To the north of 'the hedge' there is a large field of semi-improved grassland containing a wet depression and a spring. Alongside the railway embankment to the east and between the field and "the hedge" there are barbed wire stock fences.

2.3 Immediately to the south of 'the hedge' there is the stream running over, in parts, a weathered limestone or cornbrash bed, and in parts over silty grit. Beyond the stream there is a grass verge next to the concrete access road to the AWS pumping station. Parts of the southern bank and verge contain clumps of scrub and mature crack willow trees.

2.4 The pipeline contractors advised that the width of the fenced working limit would be 18 metres and that the position of entry of the pipeline into the pumping station compound would be 5 metres in from the eastern fence though there may be a small amount of flexibility on this point.

Fig 1 shows the location of the pipeline route, "hedge" and stream.

3.0 THE BOTANICAL SURVEY

3.1 The site was visited on 12 March 1998 and all tree, shrub and ground-layer plant species were recorded from 'the hedge', from the stream and from scrub on the south side of the stream. Recording was carried out within the 18 metres wide working width where it crossed the above features, together with a note of additional species found within the standard hedgerow survey length of 30 metres. Fig 2 shows the 18 metre survey length in detail.

3.2 The following species were recorded along the 18 metres section of 'the hedge' and steamside scrub:

Dogwood	*Cornus sanguinea*
Goat Willow	*Salix caprea*
Hawthorn	*Crataegus monogyna*
Blackthorn	*Prunus spinosa*
Elder	*Sambucus nigra*
Crack willow	*Salix fragilis*
Wild Arum (Lords and Ladies)	*Arum maculatum*
Hogweed	*Heracleum sphondylium*
Dog Rose	*Rosa canina*
Nettle	*Urtica dioica*
Hard Rush	*Juncus inflexus*
Yorkshire Fog	*Holcus lanatus*
False Oat-grass	*Arrhenatherum elatius*
Cock's-foot	*Dactylis glomerata*
Bramble	*Rubus fruticosa*
Cleavers	*Galium aparine*
Ivy	*Hedera helix*
Ground Ivy	*Glechoma hederacea*
Cow Parsley	*Anthriscus sylvestris*
Hedge Garlic	*Alliaria petiola*
Creeping Buttercup	*Ranunculus repens*
Great Willowherb	*Epilobium hirsutum*
Field Bindweed	*Calystegia sepium*
Meadowsweet	*Filipendula ulmaria*
Dog's Mercury	*Mercurialis perennis*

The only additional species recorded within the 30 metres section was:

Watercress	*Nasturtium officinale*

3.3 The main species of interest within 'the hedge' and bankside scrub were the localised dog's mercury and wild privet (both on the south side of the stream) and the dogwood on the north side.

3.4 It is understood that the preferred route for the pipeline would enter the AWS compound at 5.0m from the security fence on the railway boundary. Due to an offset in fencelines this would place the crossing of 'the hedge' at 3.20 metres from the railway boundary fence on the north side of the stream. At this point the pipe trench and access would cross the main block of dogwood but, with care, would miss the dog's mercury and the wild privet.

3.5 Plant names follow:

J G Dony, et al, 1987 English Names of Wild Flowers. BSBI

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Due to the flow in the stream it is unlikely that it will be possible to create two soil bunds and pump over whilst the pipe trench is excavated through the bed. Therefore it seems possible that the pipe may need to be laid in a trench cut through the bed whilst the stream is still flowing. Once laid it may be necessary to temporarily pipe in the stream and fill over to gain access along the easement into the AWS compound. It may be that the preferred method of crossing the stream is to infill level with the top of the banks, and then pump over, in order to create access to the pumping station along the easement and then excavate through for the pipe trench. In this case it is recommended that 'Terram' or a similar geotextile membrane be laid over the existing soil profile after the shrubs have been coppiced, and then removed

4.2 Whatever method is used to cross the stream, sufficient operating width will be required for hydraulic excavator access to dig, rotate and deposit the excavated material on the grass field.

4.3 Crossing the stream at the preferred location would involve cutting down the dogwood on the north side, and blackthorn and hawthorn on the south side. In order to retain these shrubs it is recommended that they are coppiced just above ground level before earth moving starts. The stumps can then be filled over with soil during the progress of the stream crossing, and exposed again when the bank sides are reinstated. The stumps will recover and grow again. The only loss will be across the actual width of the trench, which is unlikely to be more than one metre wide. Dogwood will spread by suckers easily, as seen on site, and will subsequently recolonise back over the pipe trench. It is essential that soil and other excavated material is cleared from around the coppiced stumps on completion to allow early regeneration.

4.4 During excavation work care should be exercised to avoid damage, either from hydraulic arms or deposited soil, to the small patch of dog's mercury or the wild privet bush. If work is contained within high visibility netting at 'the hedge' these plants, and the large crack willow at 12 metres, need not be damaged.

4.5 When excavating the trench line through and immediately adjacent to 'the hedge' and on the southern bank of the stream, all topsoil to a depth of 15cm should be set-aside for re-use during reinstatement, thereby preserving the seedbank.

4.6 The stream bed should be reinstated with broken limestone to maintain its integrity and bed characteristics. The silty-grit shoals at the sides will get restored naturally with the seasonal flow of the stream.

4.7 Within the 30 metres hedgerow survey section five woody species were identified together with a further two species on the south side of the stream. It has been established that hedgerows acquire one extra woody species for each hundred years of life, and consequently on this basis 'the hedge' on the north side of the stream is quite an ancient feature and every effort should be taken to maintain its integrity and diversity.

4.8 By exercising care as described above during the preparation of the site, when excavating the trench and when reinstating the bank sides, it should not be necessary to carry out any remedial planting of new material.

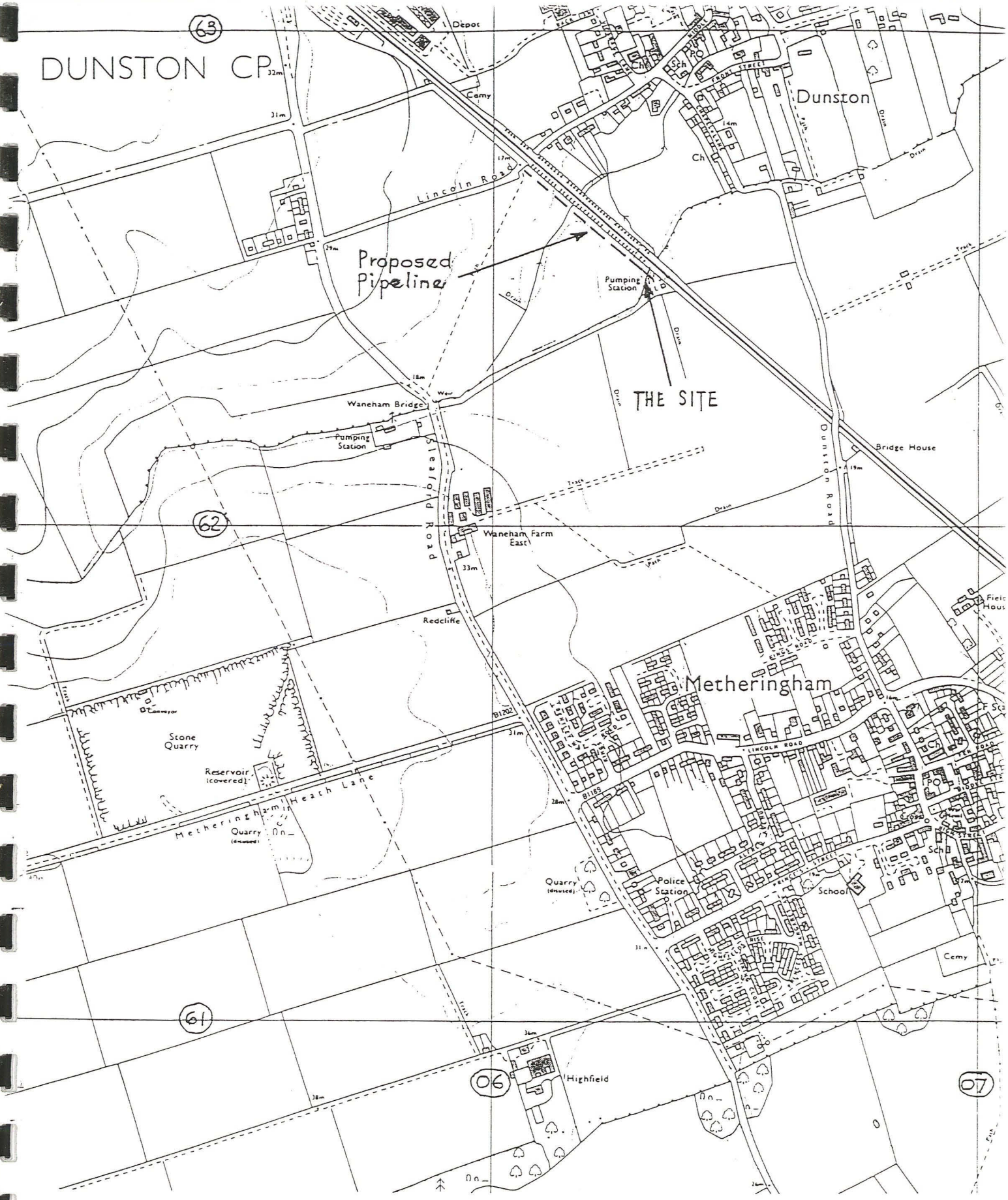


Fig. 1.

LOCATION PLAN

Scale 1: 10000

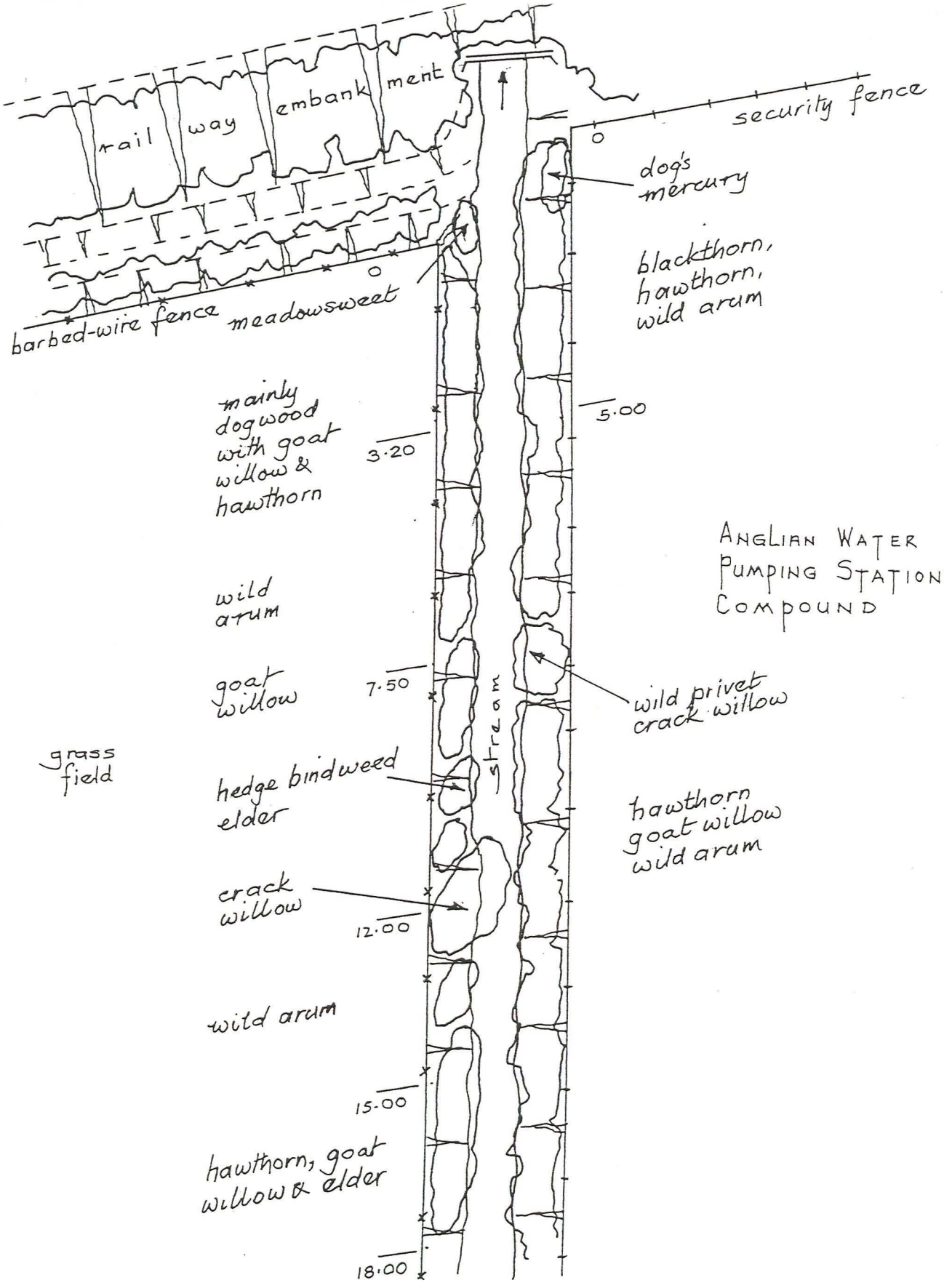


Fig. 2.

PLAN OF SITE WITH LOCATION OF MAIN SPECIES

Approx Scale: 1:100 linear

The Illustrations

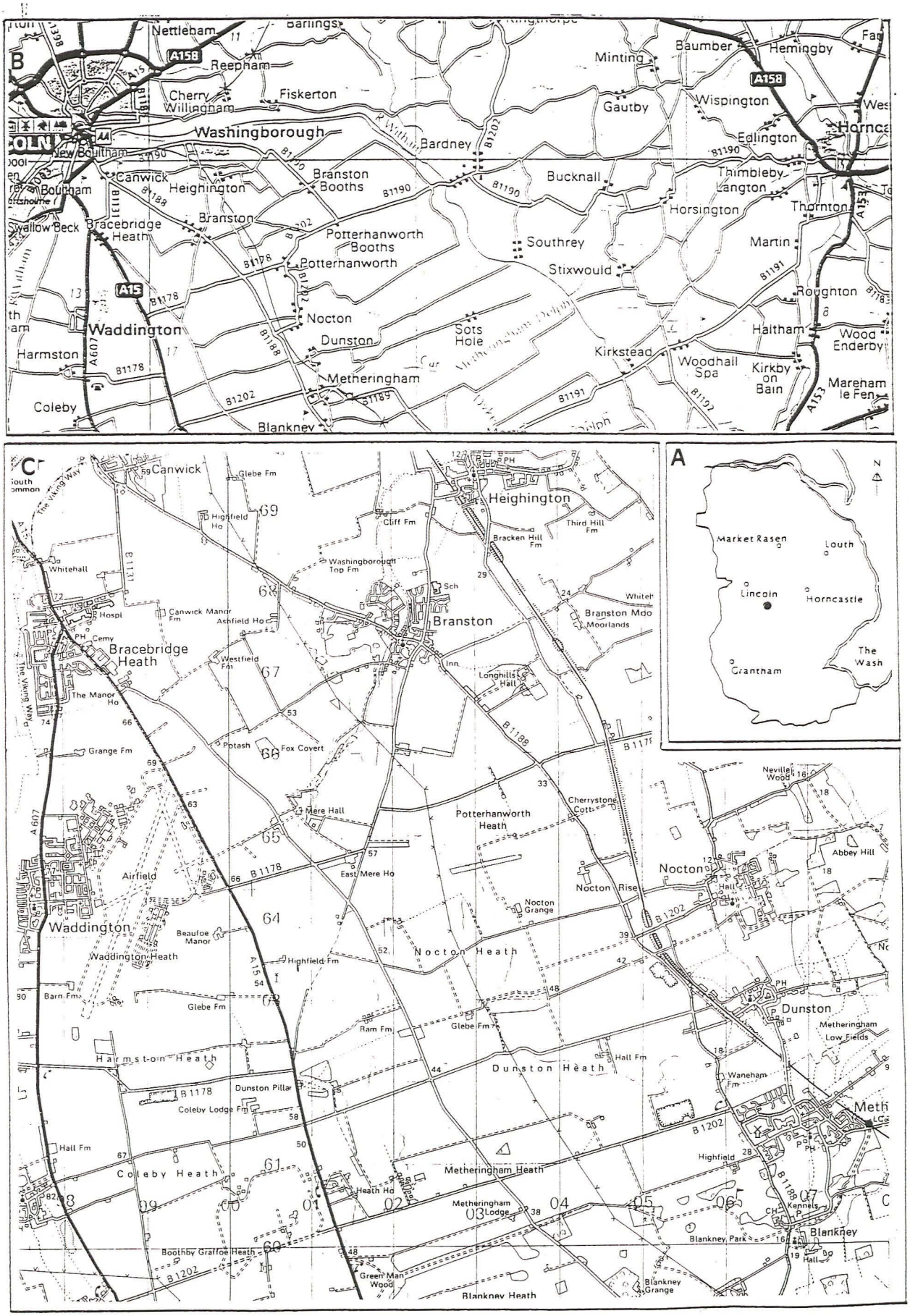


Fig. 1 Location of Bracebridge Heath and Dunston (inset C based on the 1989 Ordnance Survey 1:50,000 Landranger map Sheet 121. © Crown Copyright; reproduced (at reduced scale) with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

Fig. 2 The pipeline route between Bracebridge Heath and Dunston (based on a plan supplied by Anglian Water Services Ltd. © Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

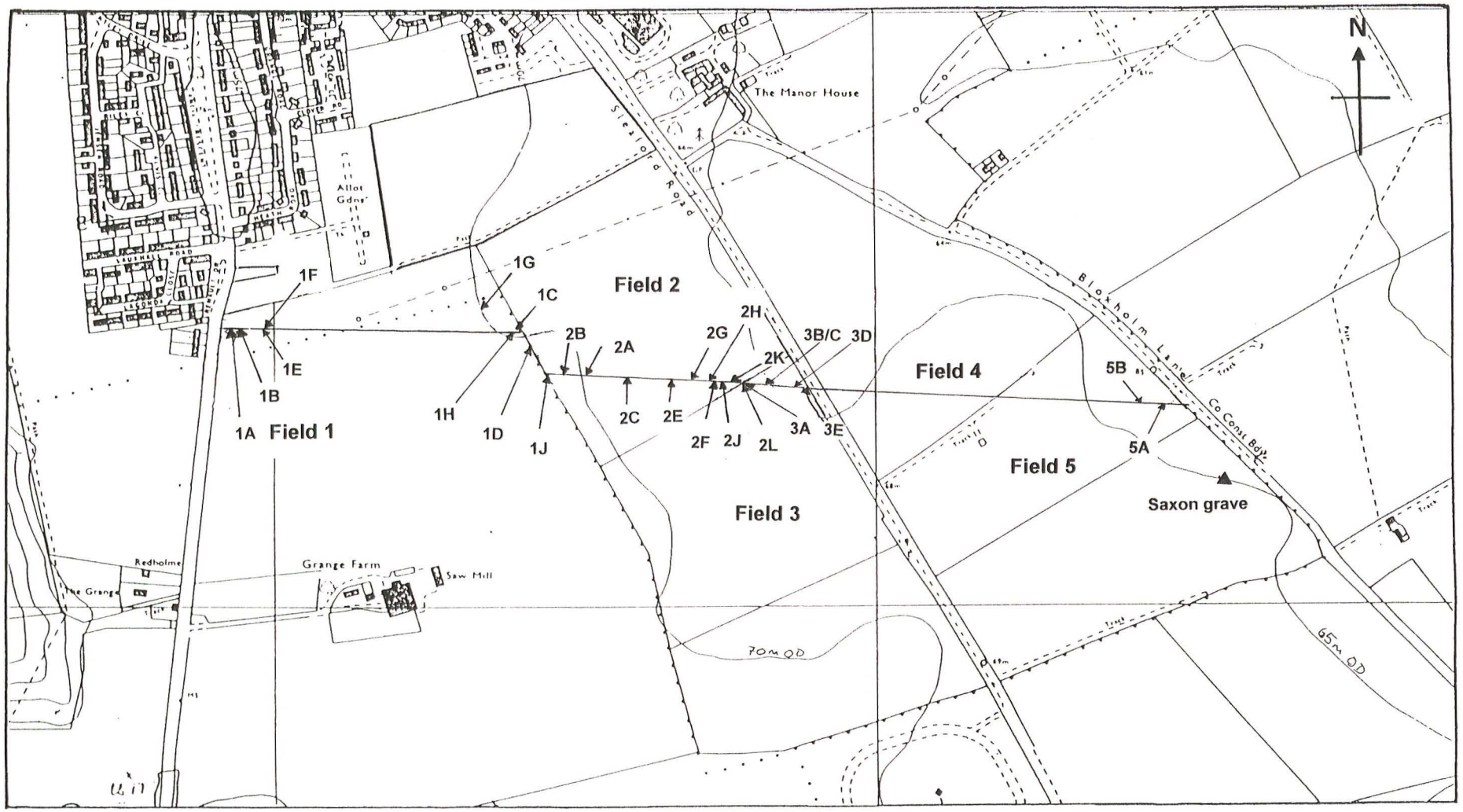


Fig. 3 Location of Watching Brief observations, Fields 1 - 5 (based on the 1984 Ordnance Survey 1:10,000 map. The location of the Anglo-Saxon finds group is also marked. © Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

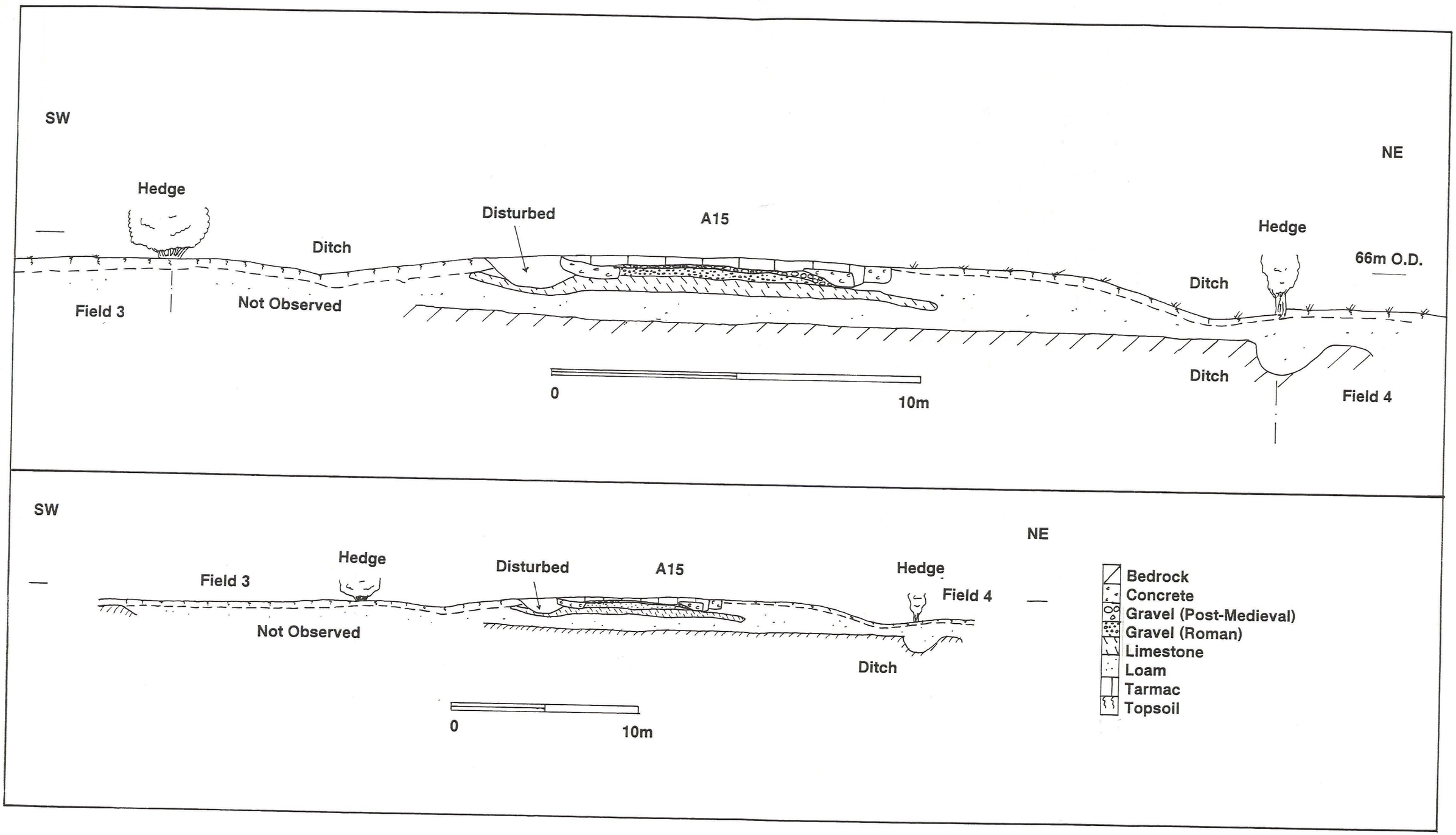


Fig. 4 Reconstructed section of deposits below the A15 Sleaford Road revealed in the pipe trench. The gravel surface and underlying limestone rubble was interpreted as the Roman King Street. a) Detail of the Roman road; b) possible Roman stone borrow pit to west of the road (McDaid after Tann).

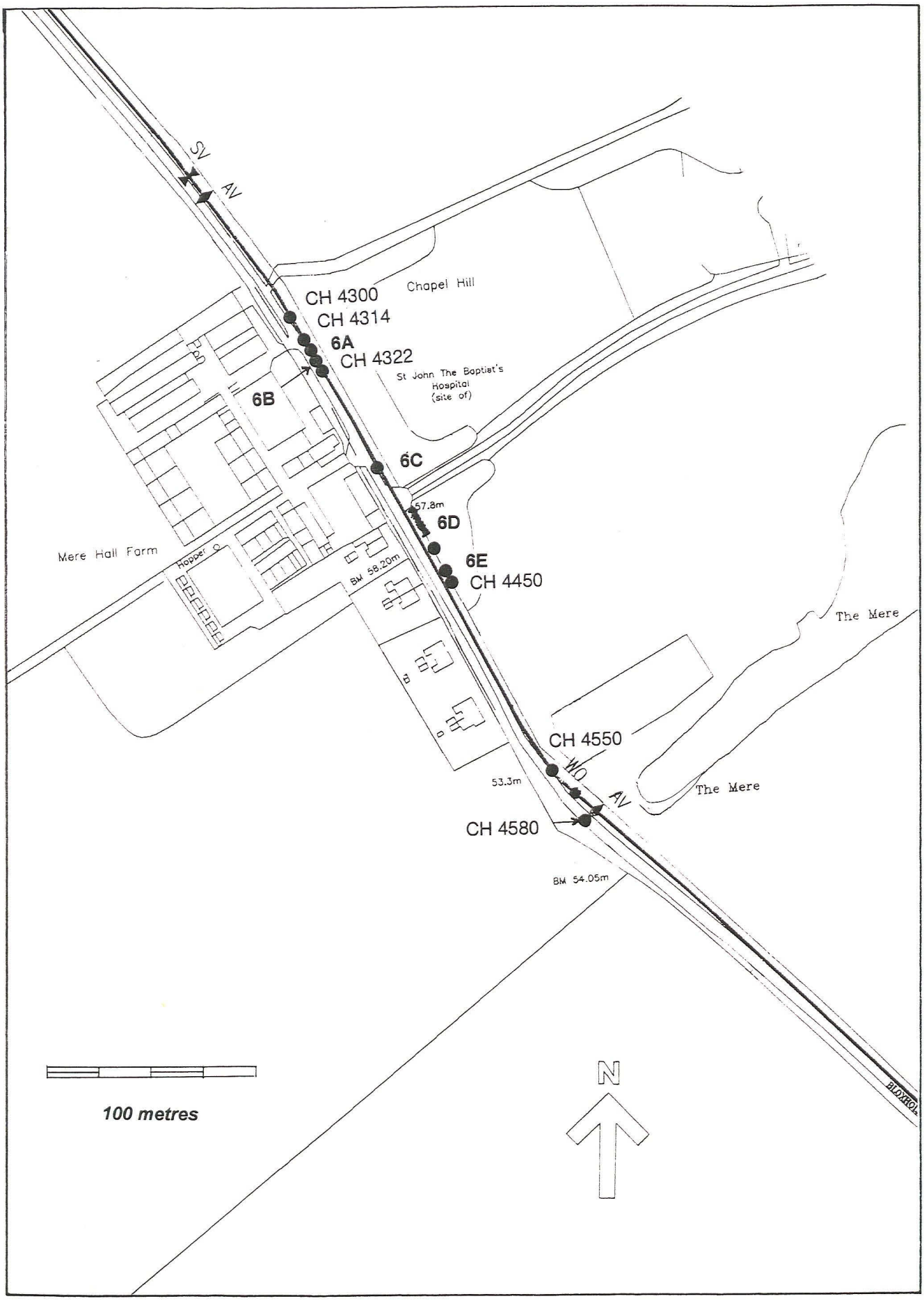


Fig. 5 Watching brief observations in Bloxholm Lane (based on a plan supplied by Anglian Water Services Ltd. © Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

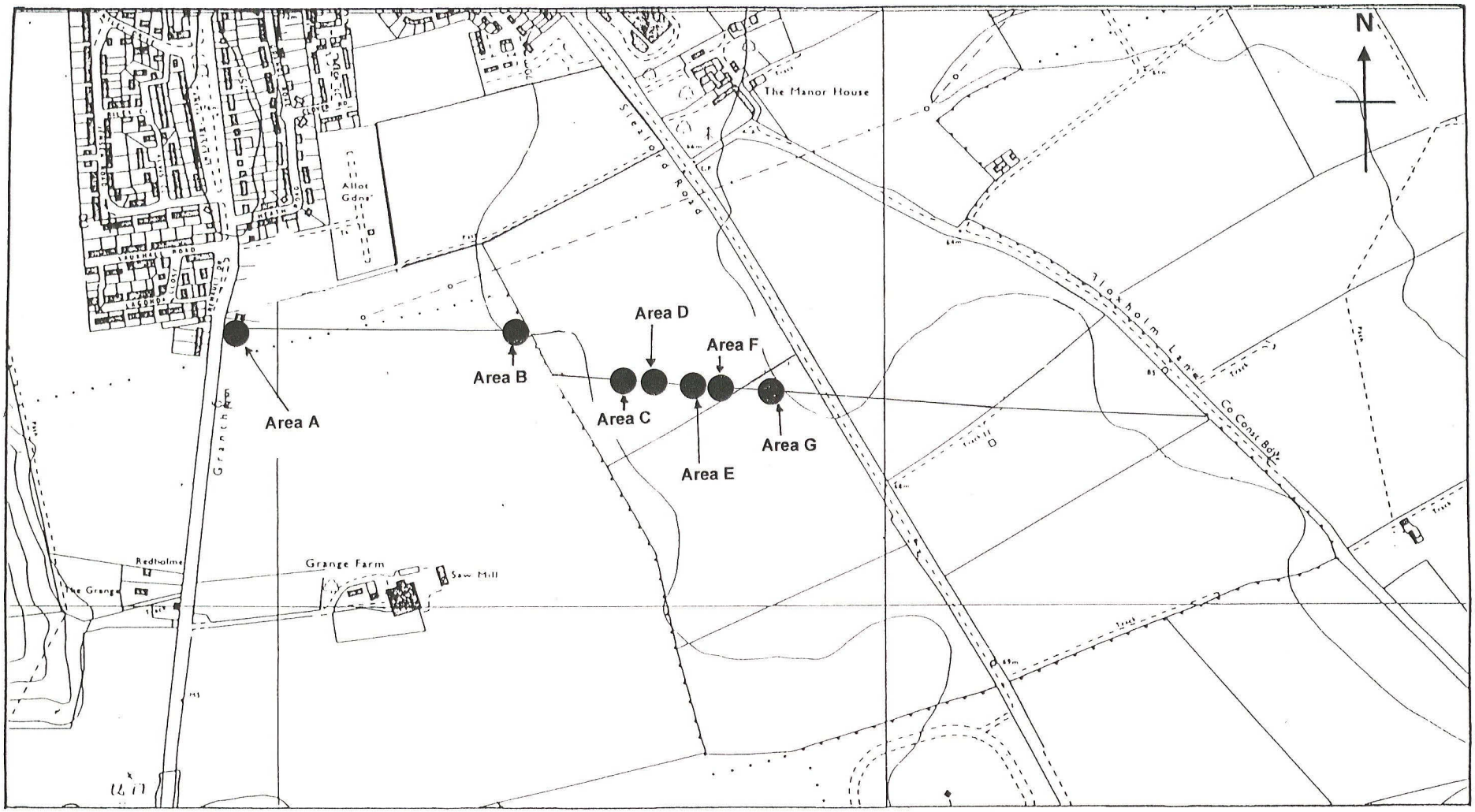
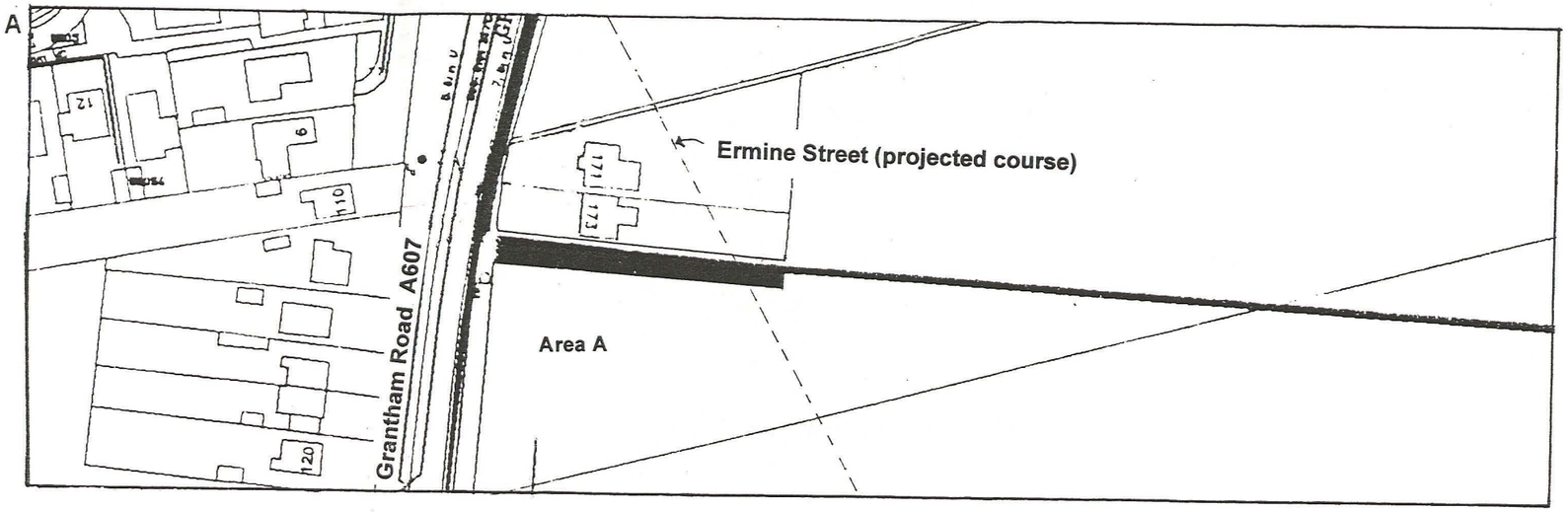


Fig. 6 Position of Excavation Areas A-G along the pipeline route (based on the 1984 Ordnance Survey 1:10,000 map. © Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

A



B

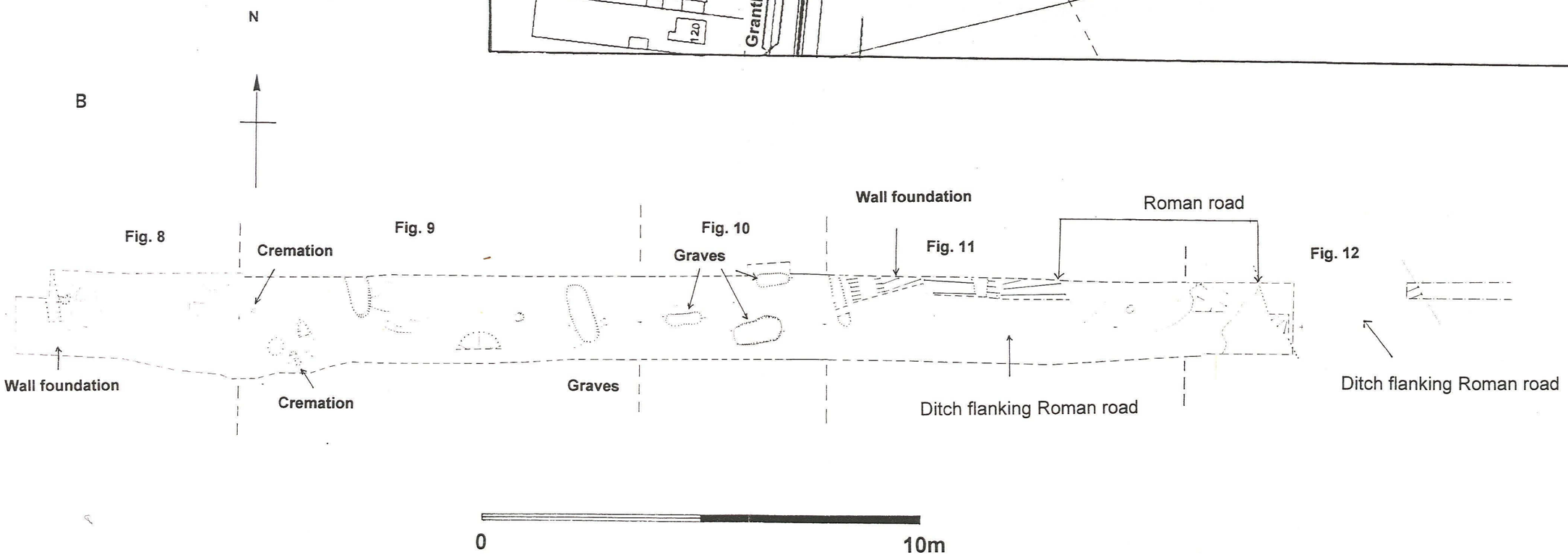


Fig. 7 a) Location of Area 1, showing the position of Ermine Street
b) Archaeological features excavated in Area 1, with position of detailed plans Figs. 8-12 marked. McDaid, after Chelu *et al.*

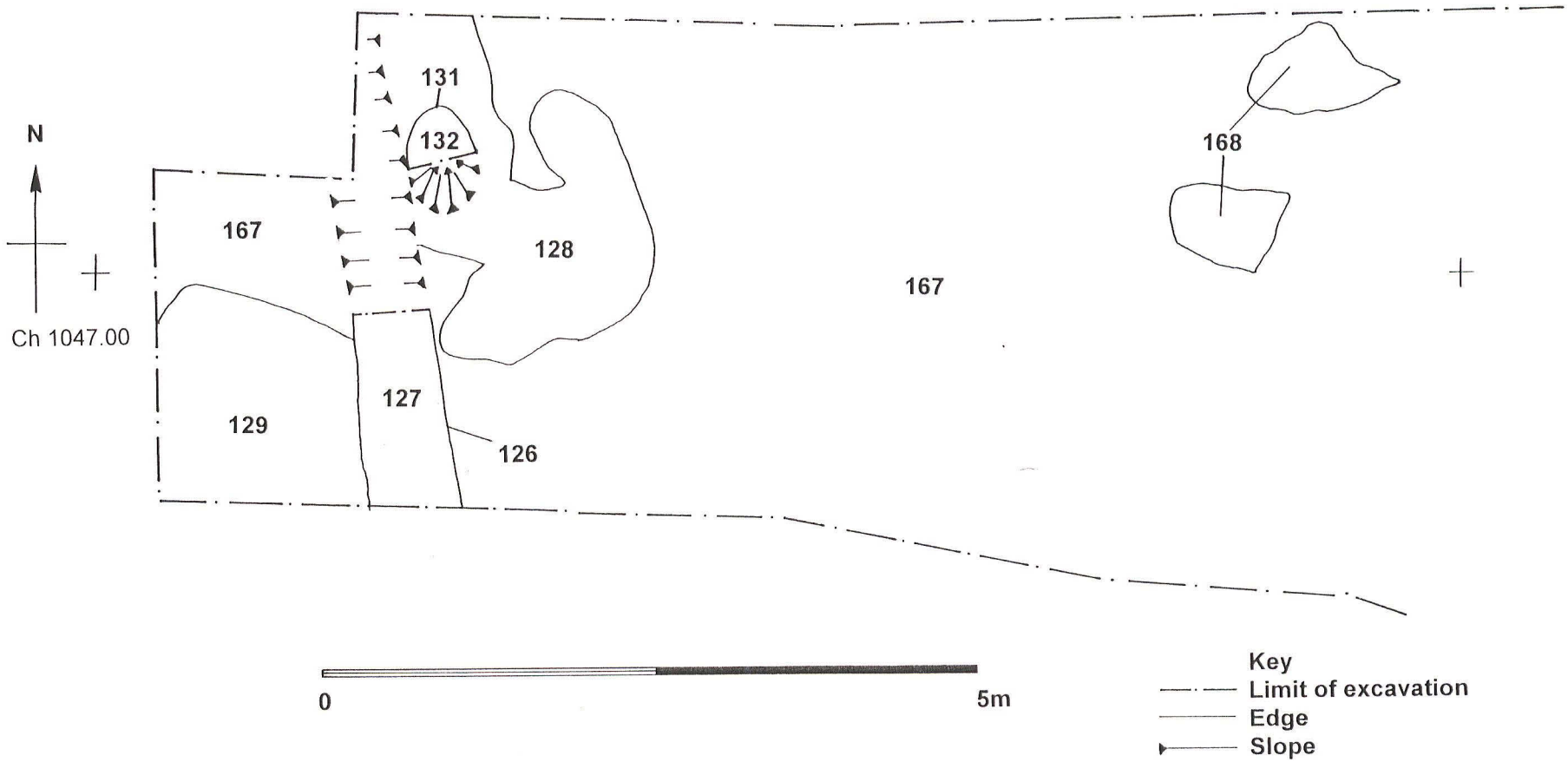


Fig. 8 Archaeological features at the west end of Area 1. McDaid, after Chelu *et al.*

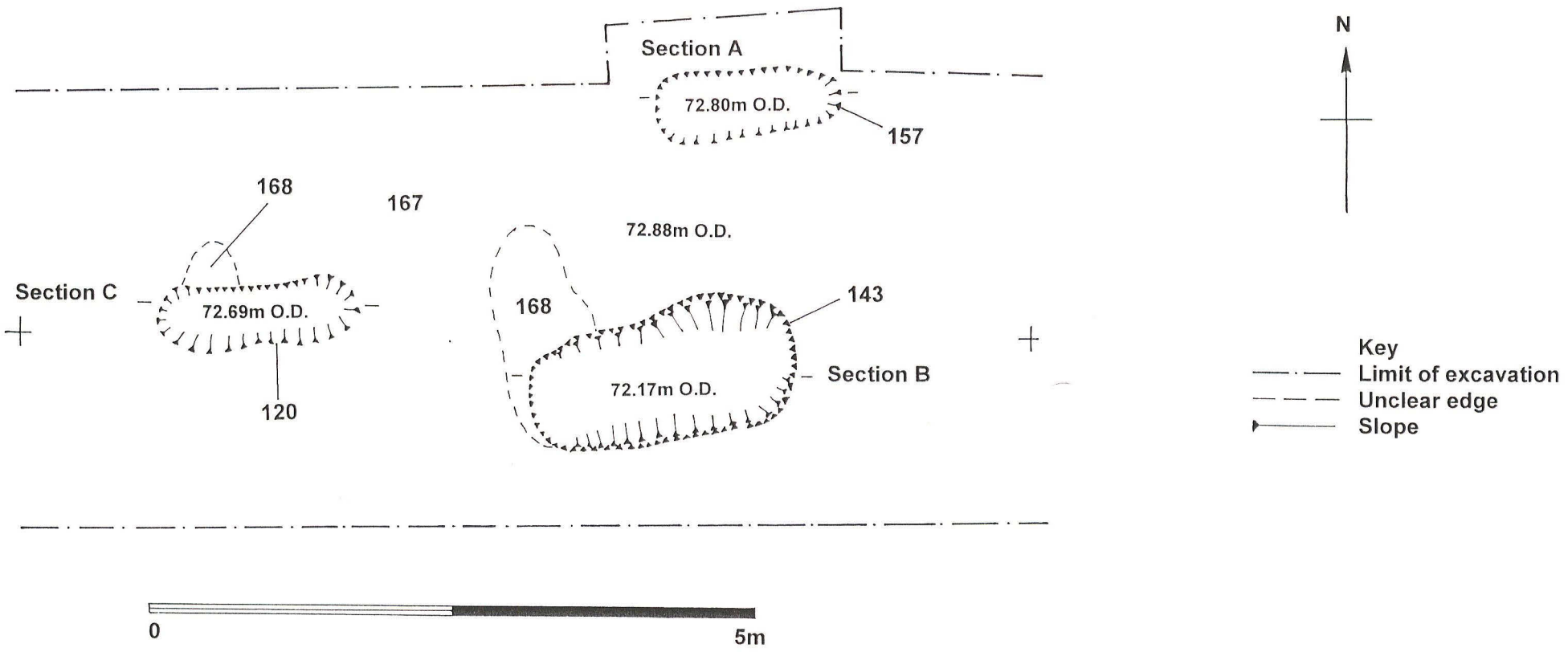


Fig. 9 Archaeological features in Area 1. McDaid, after Chelu *et al.*

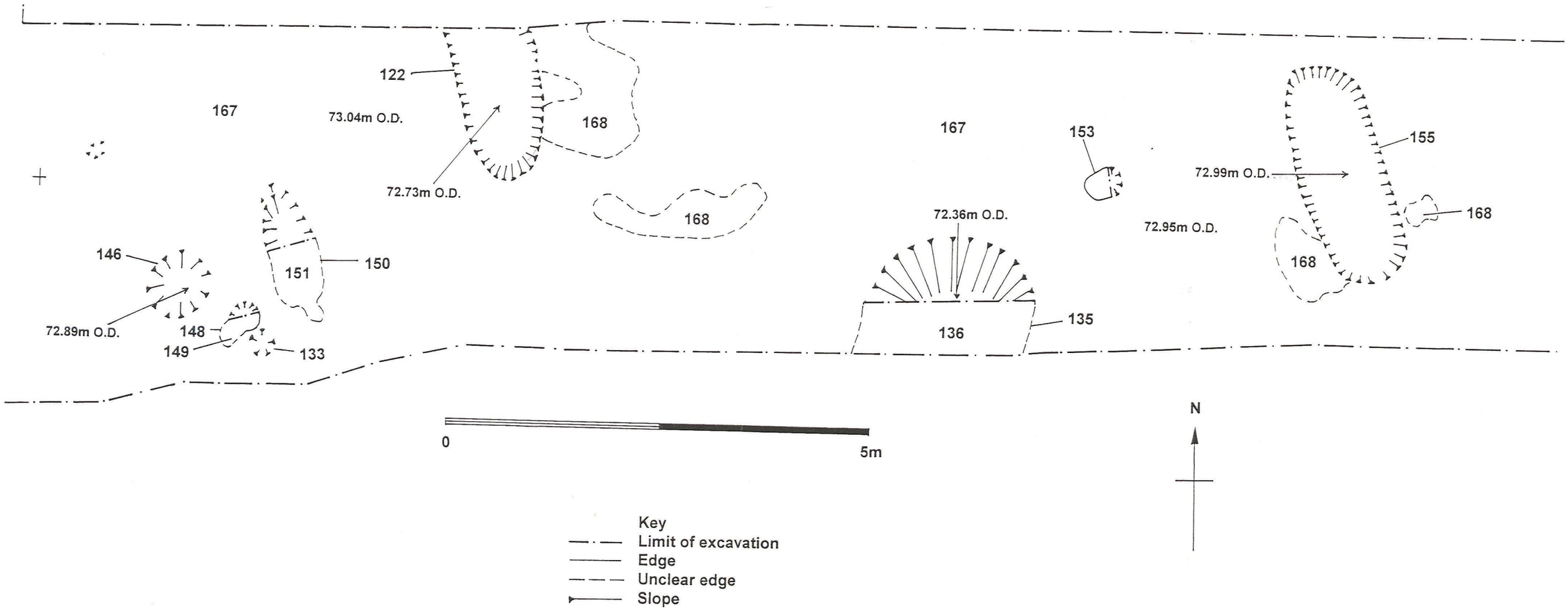


Fig. 10 Archaeological features in Area 1. McDaid, after Chelu *et al*.

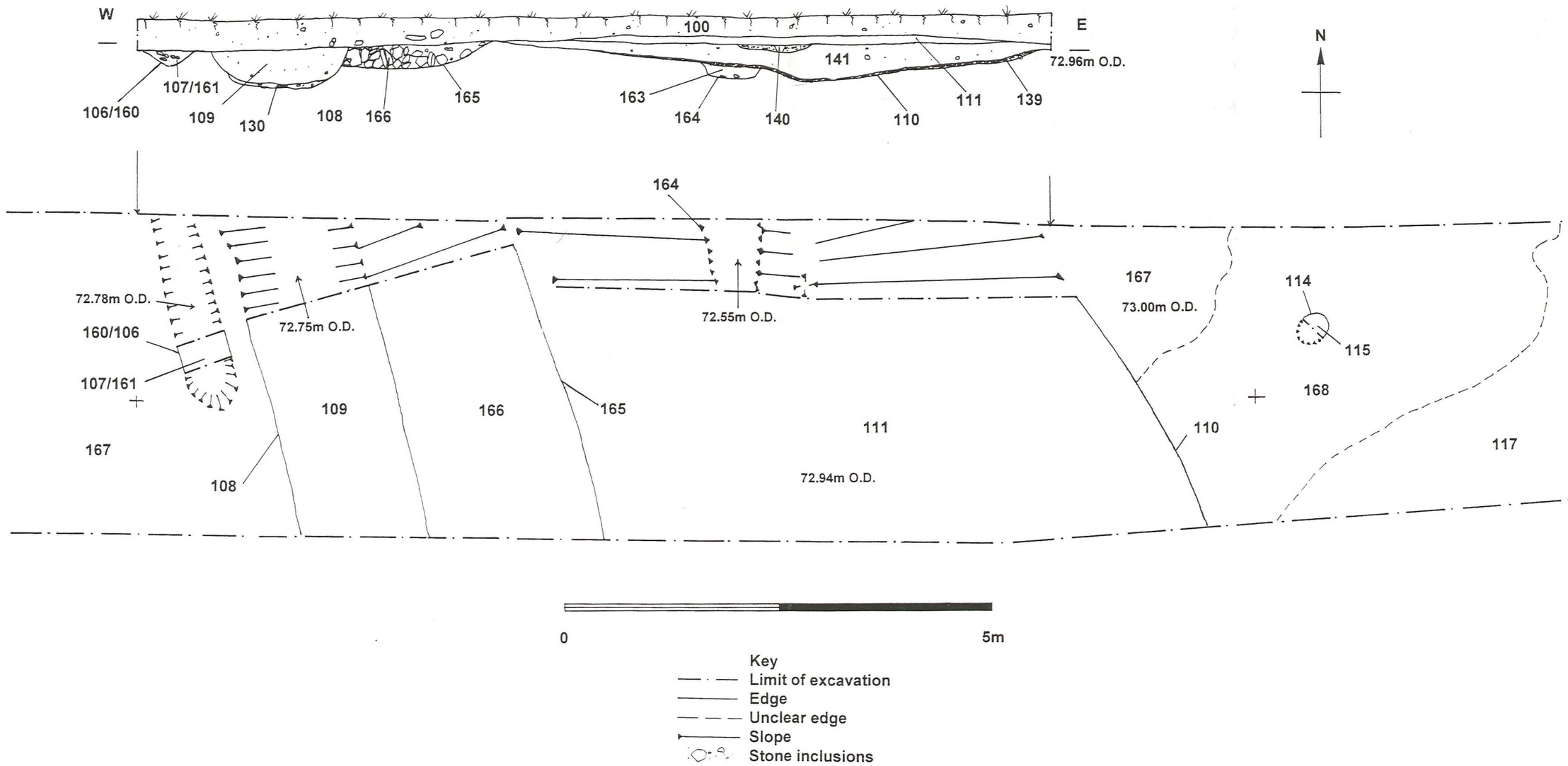


Fig. 11 Archaeological features in Area 1, including the Roman road. McDaid, after Chelu *et al.*

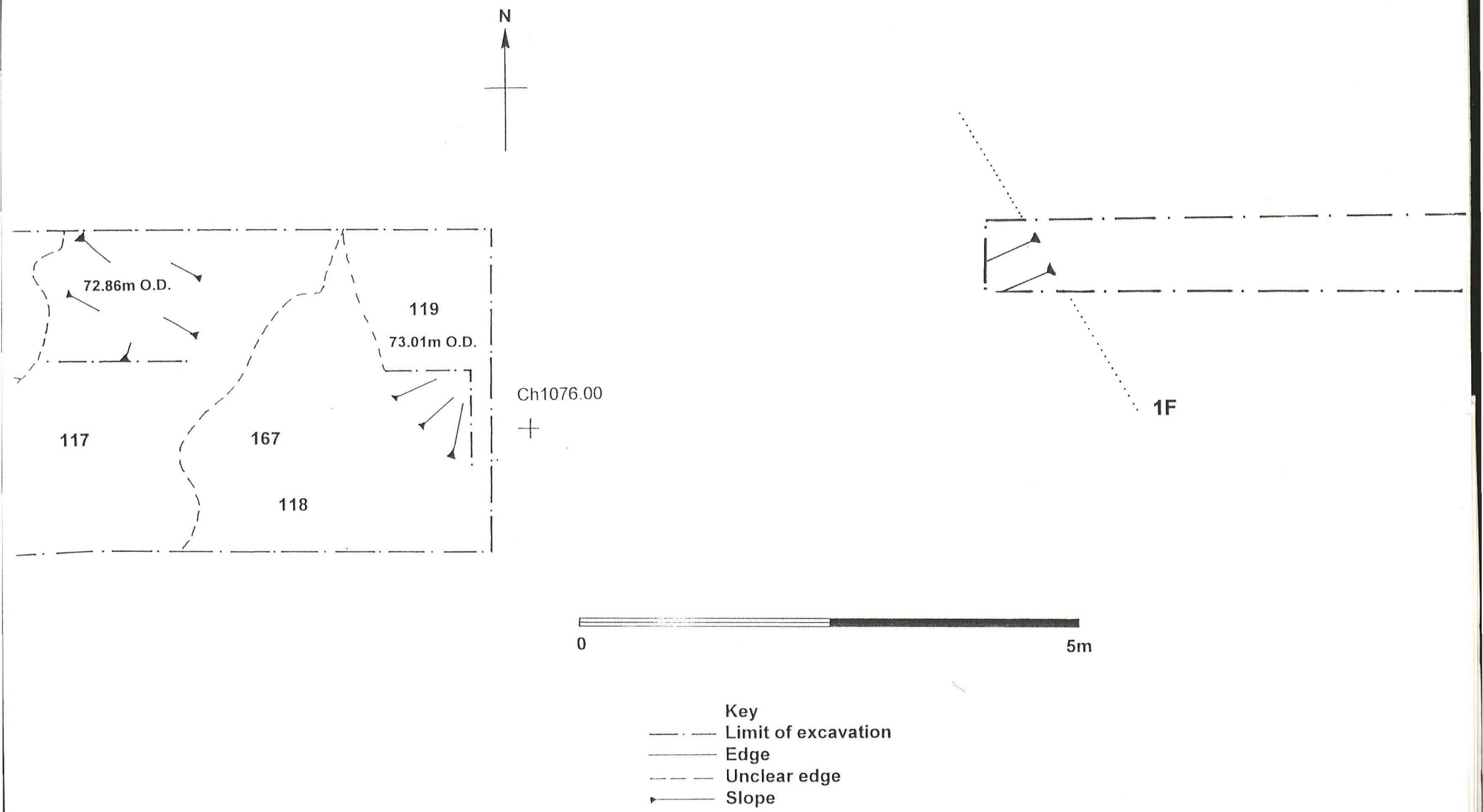


Fig. 12 Archaeological features at the east end of Area 1. McDaid, after Chelu *et al*.

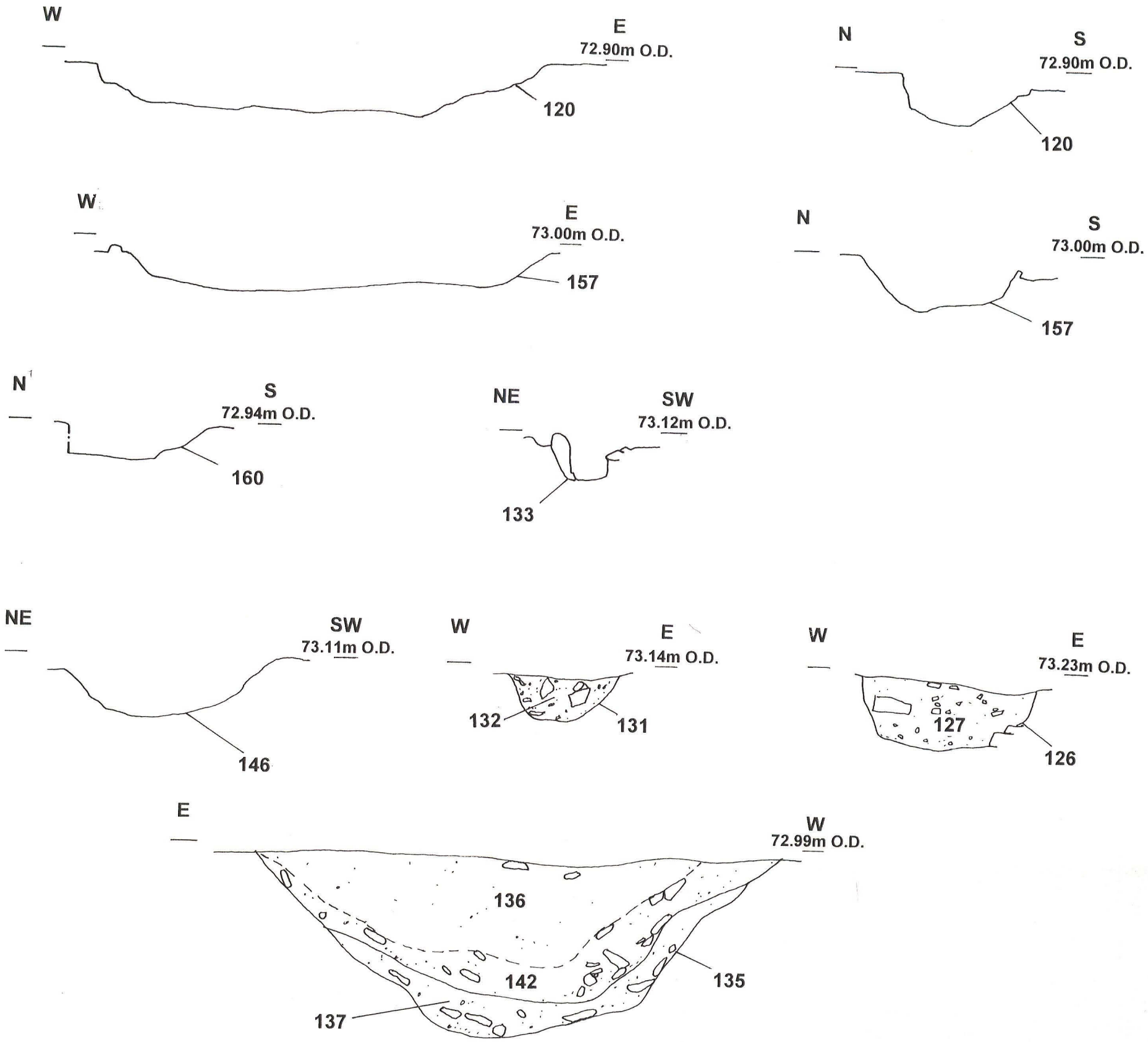


Fig. 13 Profiles and sections across archaeological features excavated along the pipeline route. McDaid, after Chelu *et al.*

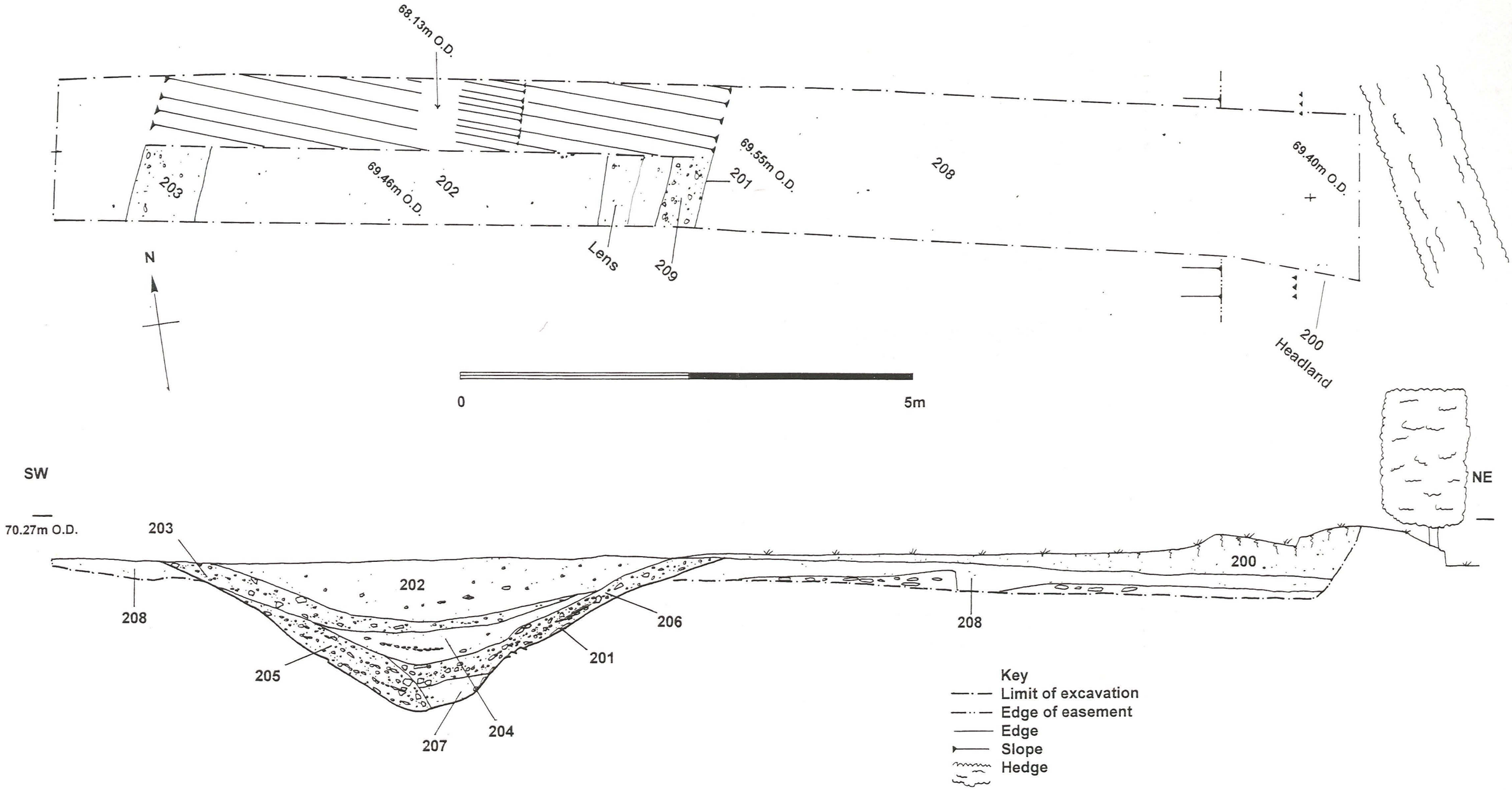


Fig. 14 Plan and section of the excavated Late Iron Age ditch in Area B, close to the Bracebridge Heath/Waddington parish boundary. McDaid, after Chelu *et al*.

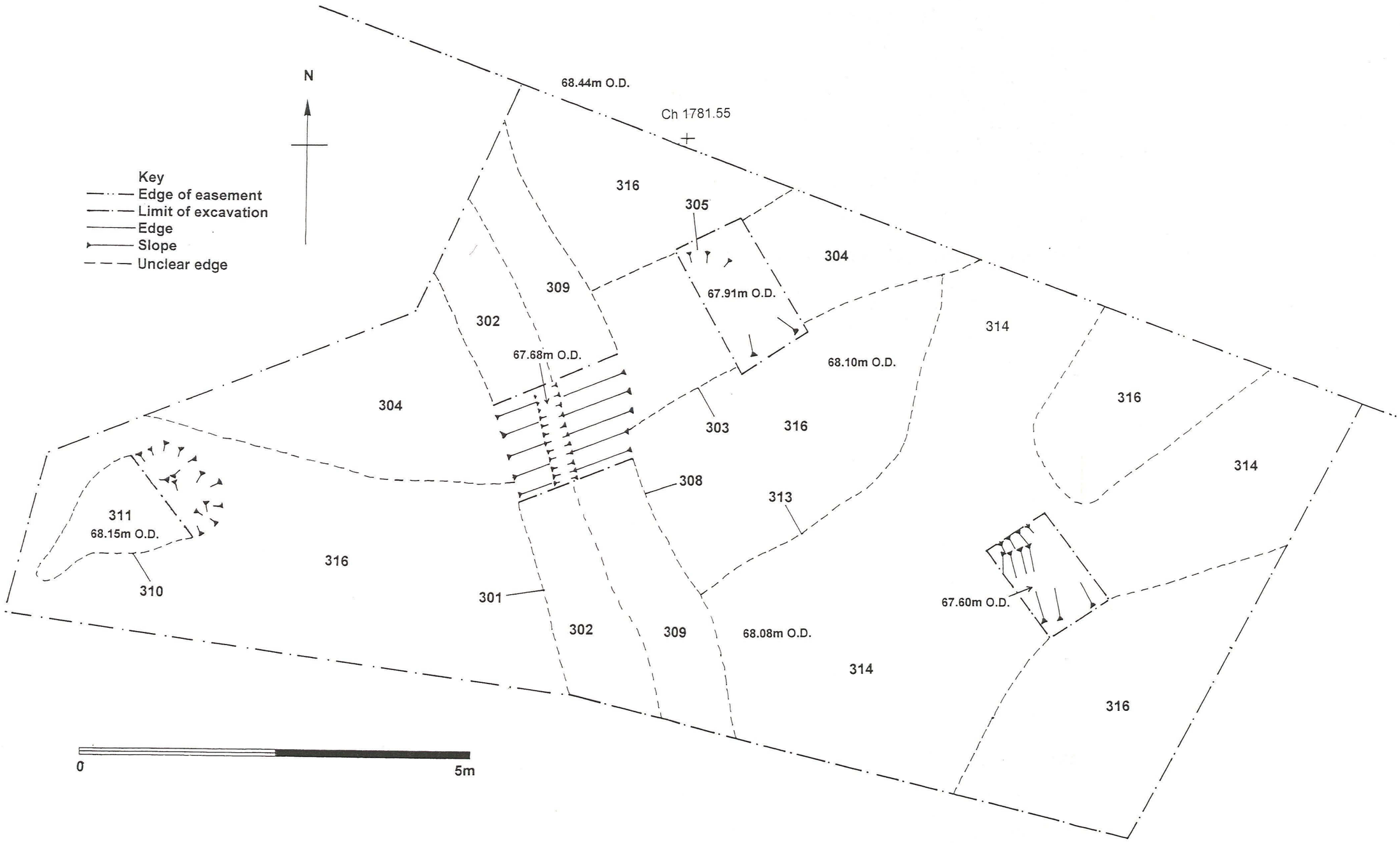


Fig. 15 Plan of features investigated within Area C, Field 2. McDaid, after Chelu *et al*.

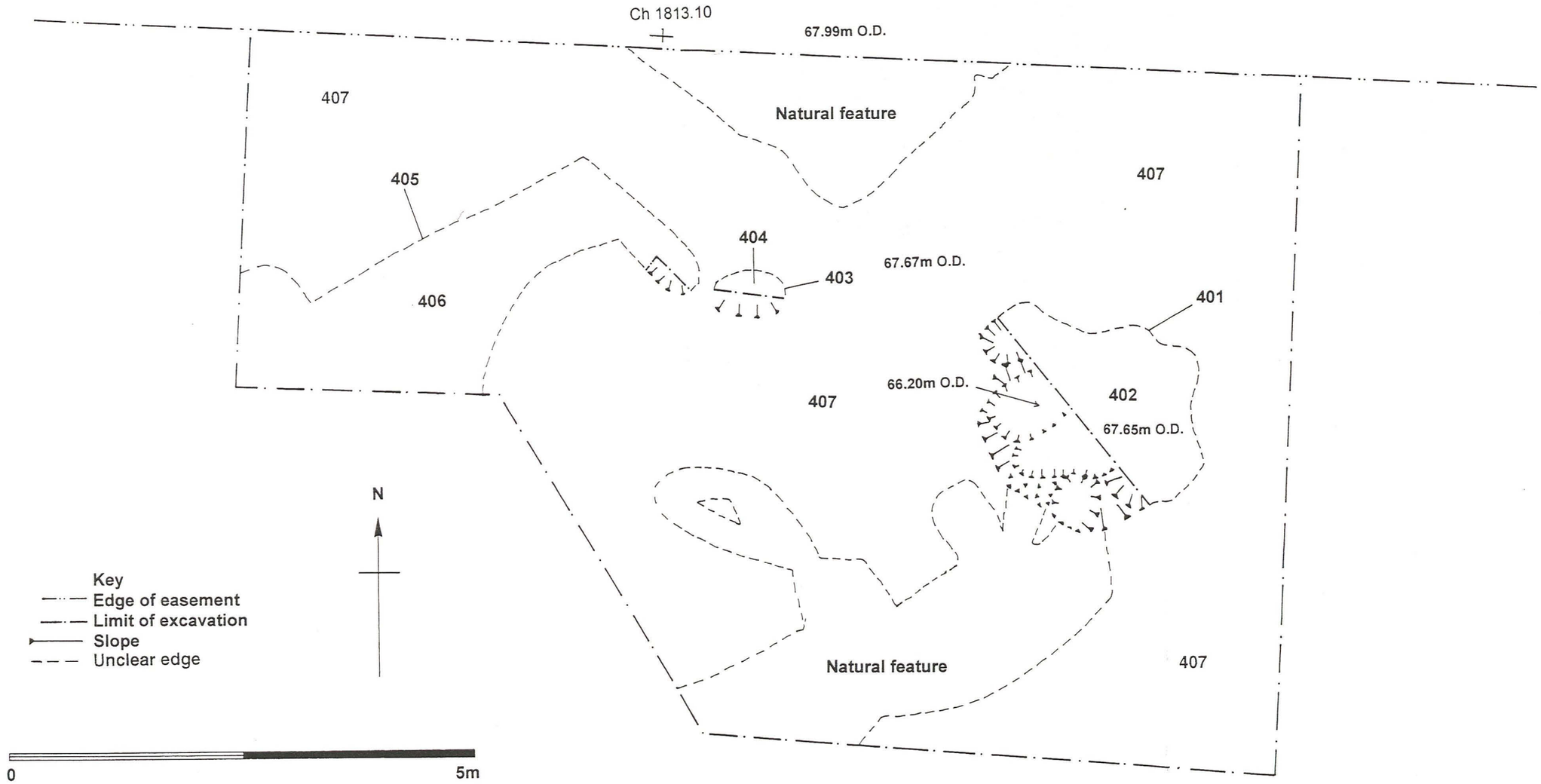


Fig. 16 Plan of features investigated within Area D, Field 2. McDaid, after Chelu *et al.*

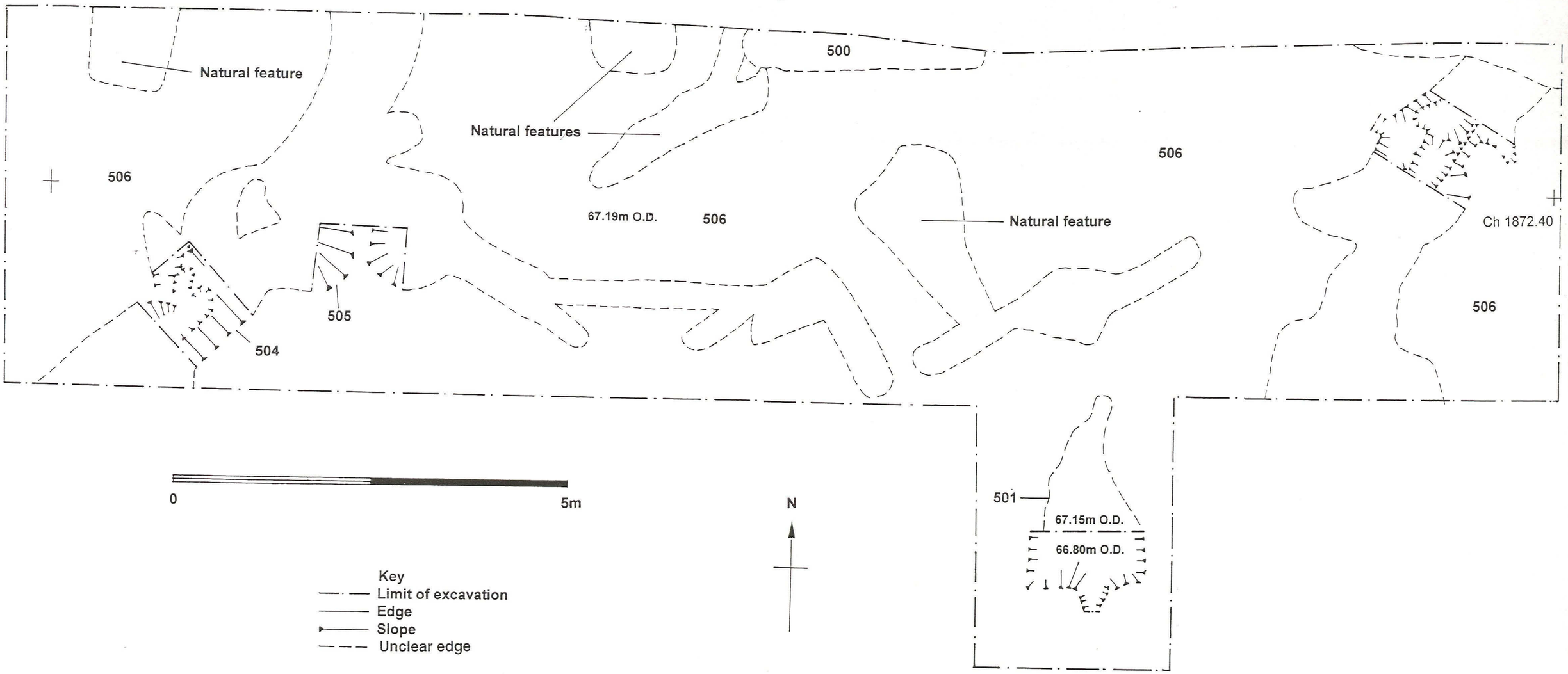


Fig. 17 Plan of features investigated within Area E, Field 2. McDaid, after Chelu *et al.*

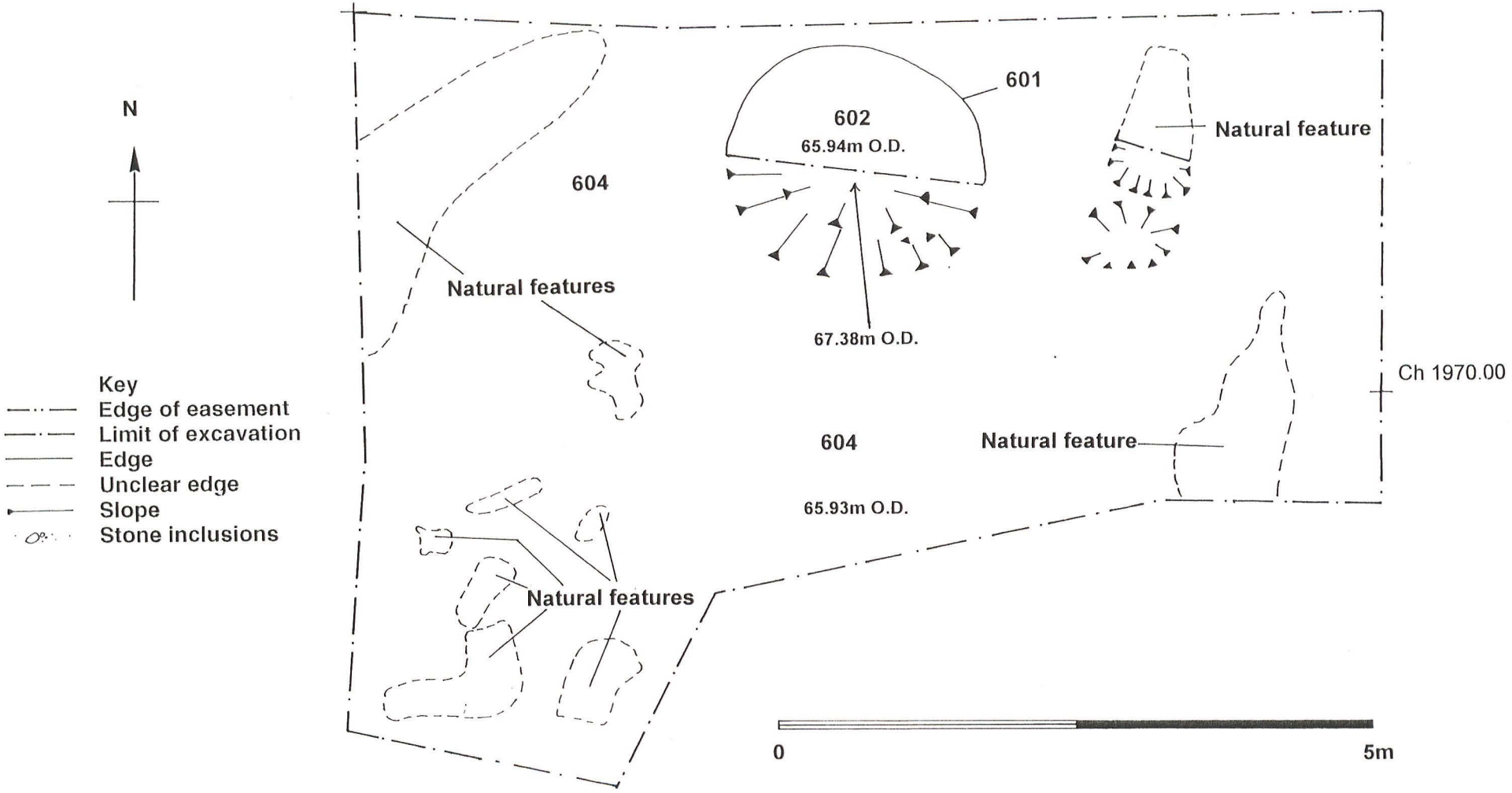
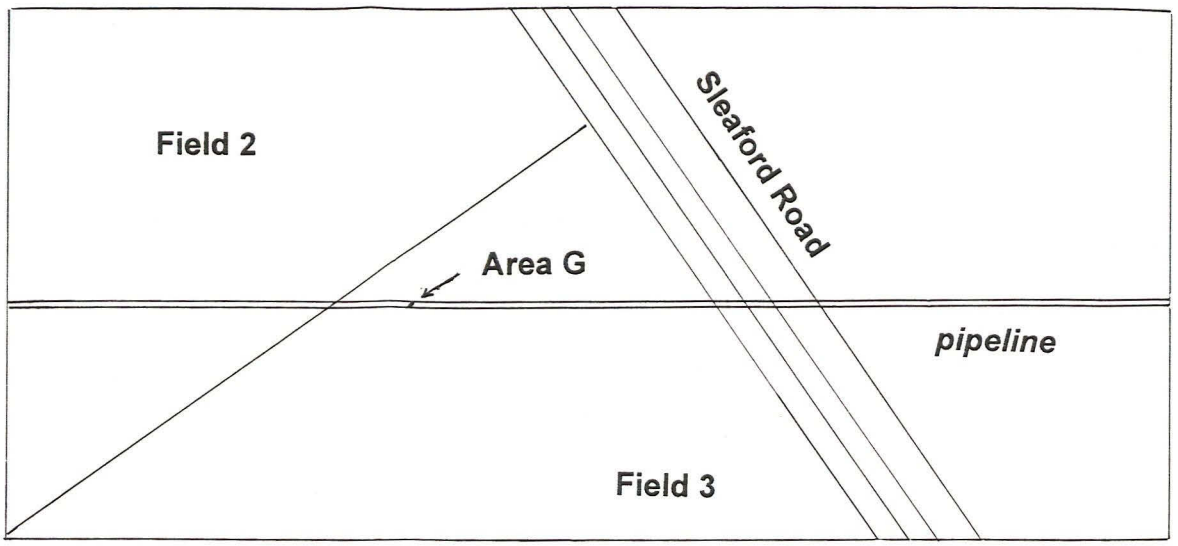


Fig. 18 Plan of features investigated within Area F, Field 2. McDaid, after Chelu *et al.*



B

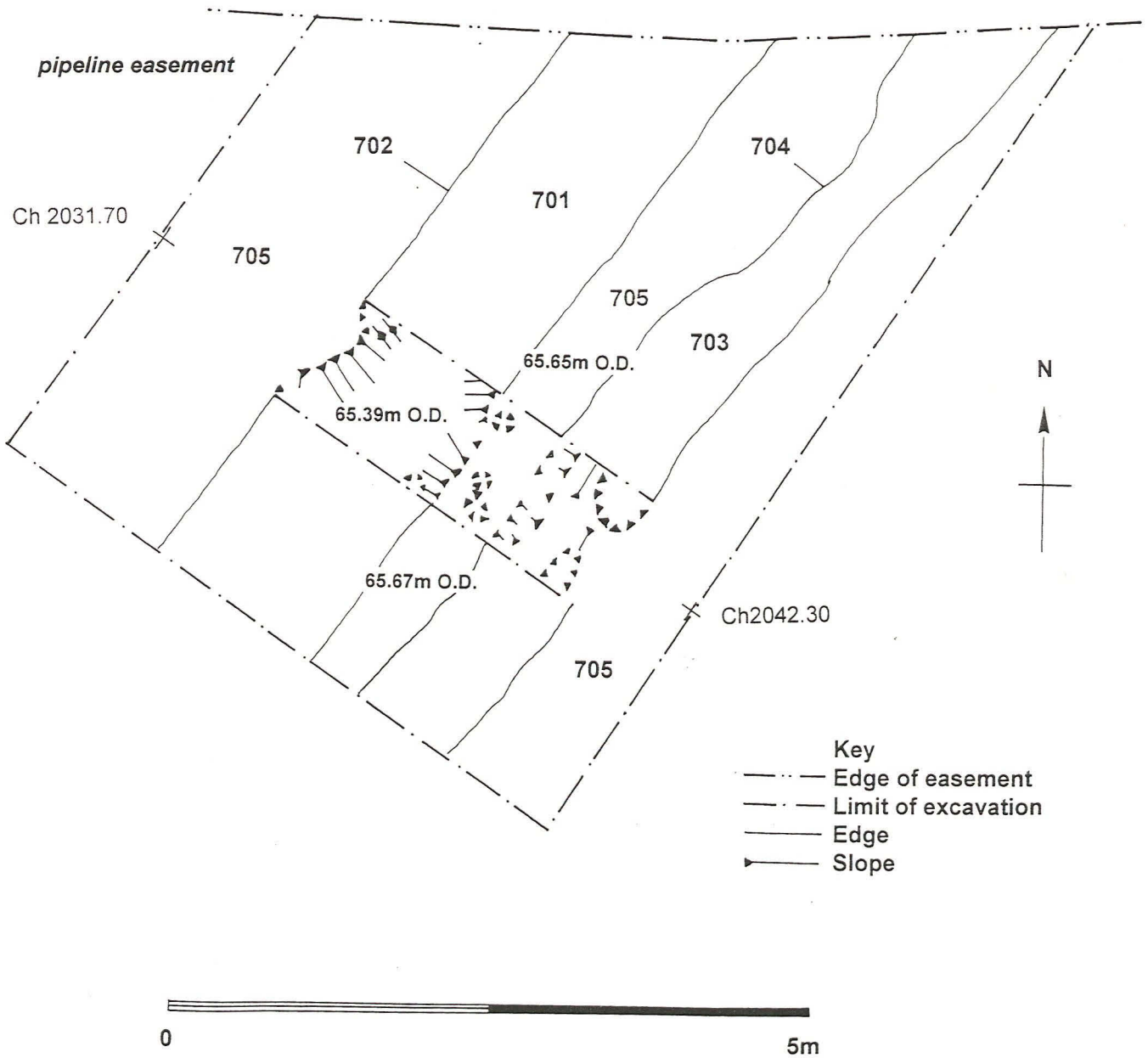


Fig. 19 Plan of features investigated within Area G, Field 3. McDaid, after Chelu *et al.*

Pl. 1 Western side of Field 1, prior to topsoil removal. The low ridge at the rear of the garden is probably a removed field boundary; there is no sign of the Roman Ermine Street (looking east).

Pl. 2 Field 1: Part of the stripped easement was scraped by machine to try to reveal the Roman road. Looking east from Grantham Road.

Pl. 3 Location of the Roman cremation vessel 102, found west of Ermine Street (looking NE).

Pl. 4 Stone rubble of field wall foundation 127, beside western field boundary of Field 1 (looking west to Grantham Road).

Pl. 5 Depression in arable field south of the pipeline easement, Field 1. This may be a stone quarry for Ermine Street or the modern Grantham Road. Looking NE.

Pl. 6 Position of ditch feature 1F, east of the rear garden of 173 Grantham Road (looking west).

Pl. 7 Brown loam fill of ditch 1F cutting limestone brash.

Pl. 8 A slight ridge was visible in Field 1, west of the parish boundary/field hedge. At a depression in the field (beyond the easement) the boundary turns west and the ridge ends. Looking north.

Pl. 9 A broad spread of red/brown loam 1C was interpreted as material from the upcast bank of an Iron Age ditch (looking east).

Pi. 10 Partly backfilled pipe trench alongside the parish boundary, Field 1. The dark brown loam in the trench side is subsoil and the fill of archaeological feature 1H. Looking NE.

Pl. 11 Narrow deep backfilled feature 1J, a ditch or post-hole, below the line of the field/parish boundary. Looking north past Fields 1 and 2.

Pl. 12 Field boundary between Fields 1 and 2. Note the difference in ground height, and the presence of spread loam subsoil in Field 1. (Looking NW from Field 2).

Pl. 13 Loam spread 3E at eastern edge of Field 3, contrasting with limestone brash in foreground. The fill may be within a Roman roadside ditch or Roman quarry pit. Looking east across Sleaford Road.

Pl. 14 Location of Fields 4 and 5. Looking SE along the stripped easement, across Sleaford Road.

Pl. 15 Excavation of the pipe trench across the western side of Sleaford Road. The fine rounded gravel of the Roman road surface is visible below the tarmac. Looking north.

Pl. 16 Sequence of road layers below the western side of Sleaford Road. The tarmac layers overlie large angular gravel of the post-medieval road, with fine compacted rounded gravel of the Roman road surface below. That surface is bedded onto crushed limestone, with a mound of redeposited soil beneath it.

Pl. 17 The Roman gravel road surface stopped before the modern concrete road extension (left) but the crushed rock foundation extended further west into the modern verge.

Pl. 18 The Roman crushed rock bedding extended about 2m further west than the modern Sleaford Road.

Pl. 19 Probable Roman post-hole or roadside ditch 4A (centre) beneath modern hedge to east of Sleaford Road, cut into limestone bedrock and filled with loam.

Pl. 20 Western edge of Field 4, looking up the agger of the Roman road beneath Sleaford Road. Scale divisions 0.5m.

Pl. 21 Silty loam deposit with some limestone 4B, in Field 4 to east of Sleaford Road. This may be a natural feature or a Roman stone borrow-pit.

Pl. 22 Brown loam deposit, apparently filling cut in limestone, in Field 4 to east of Sleaford Road. This may be a natural feature or a Roman stone borrow-pit.

Pl. 23 Composite view of earthwork remains of medieval settlement at Mere Hall Farm (looking east).

Pl. 24 Soil fill of northern side of backfilled ditch or moat 6B, cut into limestone (right) near Mere Hall. Scale divisions 0.2m.

Pl. 25 Site of a minor watercourse 6F, south of Mere Hall Farm, still evident in adjacent verge. Looking SE.

Pl. 26 The southern end of the pipeline route. Dunston Pumping Station lies beyond The Beck (tall willows, far left). The fields to the north exhibit previous courses of the stream. Looking SW from the railway embankment.

Pl. 27 Cremation pit 101 prior to excavation. Scale 0.5m.

Pl. 28 Cremation pit 101 showing poor state of preservation. Scale 0.5m.

Pl. 29 Cremation pit 133 with pot visible before excavation, looking west. Scale 0.5m.

Pl. 30 Burial 138 within grave 122, looking NW. Scales 2m & 0.5m.

Pl. 31 Burial 162 within grave 155, looking north. Scales 2m & 0.5m.

Pl. 32 Partial skeleton 154 within grave 120. Scales 2m & 0.5m.

Pl. 33 Burial 159 (partially removed) within grave 143, looking west. Scales 0.5m.

Pl. 34 Burial 158 within grave 157, looking east. Scales 2m & 0.5m.

Pl. 35 Road 110 with surfaces fully removed, ditch 108 to west, looking east. Scales 2m & 1m.

Pl. 36 Metalled surface 139, looking east. Scales 2m & 1m.

Pl. 37 Posthole 114, looking east. Scale 0.5m.

Pl. 38 Stone rubble 166, probably foundation of a Roman wall. This wall may have separated the cemetery from the road (looking north).

Pl. 39 Ditch 108, looking north. Scales 1m & 0.5m.

Pl. 40 Gully 106/160, looking north. Scales 2m & 0.5m.

Pl. 41 Construction trench 126, looking north, wall collapse visible to the north. Scale 0.5m.

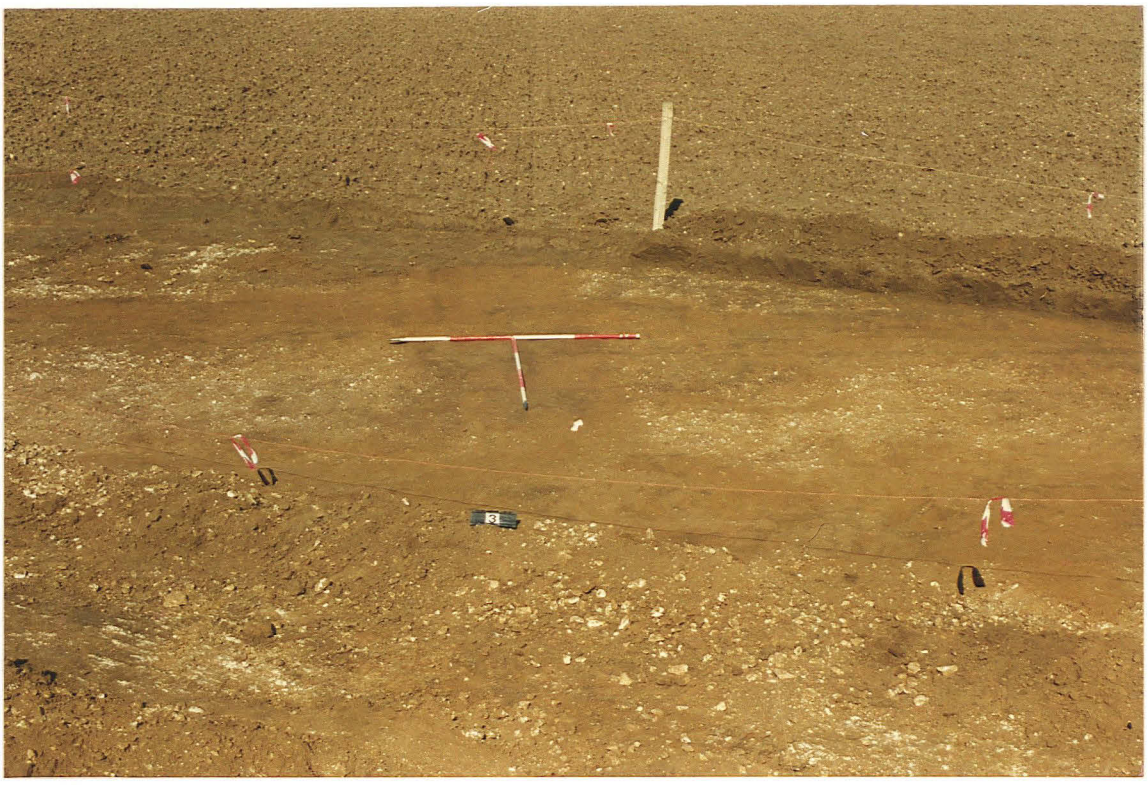
Pl. 42 Wall collapse 128, looking west. Scale 1m.

Pl. 43 Terminus of ditch 135, looking south. Scales 2m & 0.5m.

Pl. 44 Pit 146 with pits 148 (centre) and 150 (left), looking south. Scales 2m & 1m.

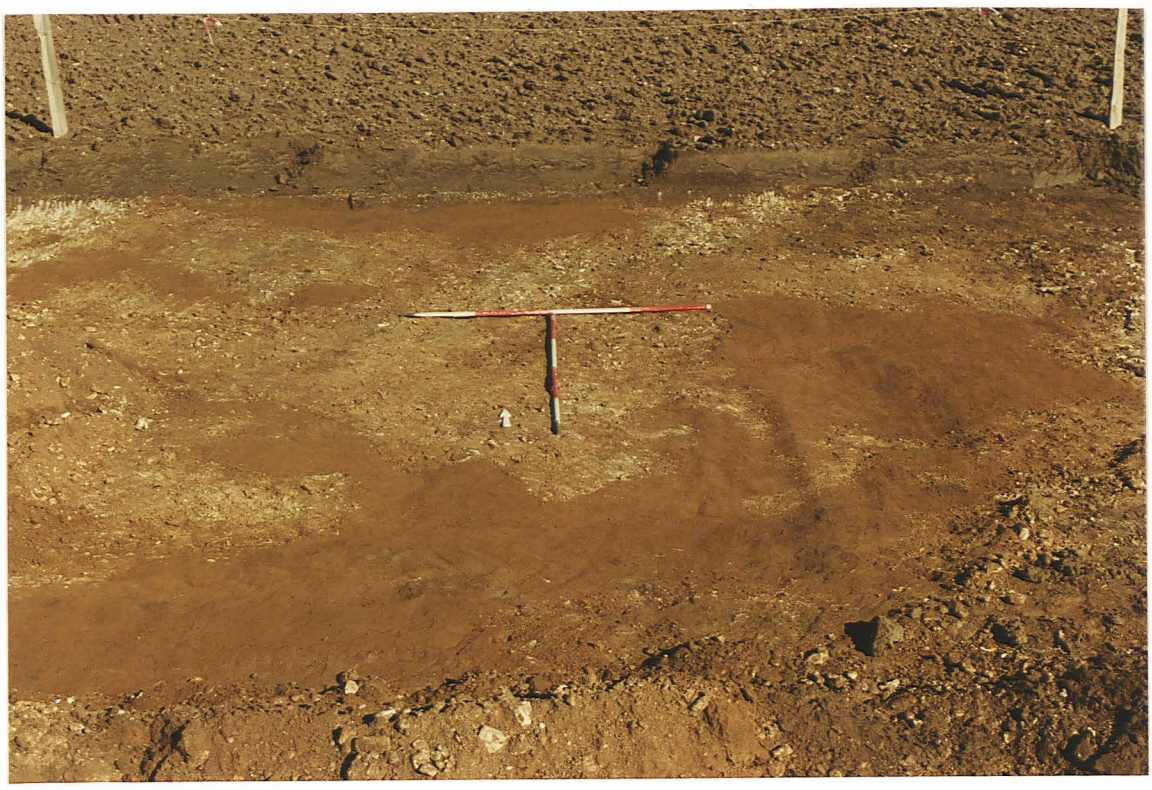
Pl. 45 Area 2, ditch 201 visible as a dark band in foreground end of trench, looking NE. Scales 2m.

Pl. 46 Late Iron Age/Early Roman ditch 201, looking NE. Scales 2m & 0.5m.



Pl. 47 Area 3, ditch 301 visible as a dark band aligned north-south in the centre of the area, looking north. Scales 2m.

Pl. 48 Ditch 301, looking south. Scale 2m.

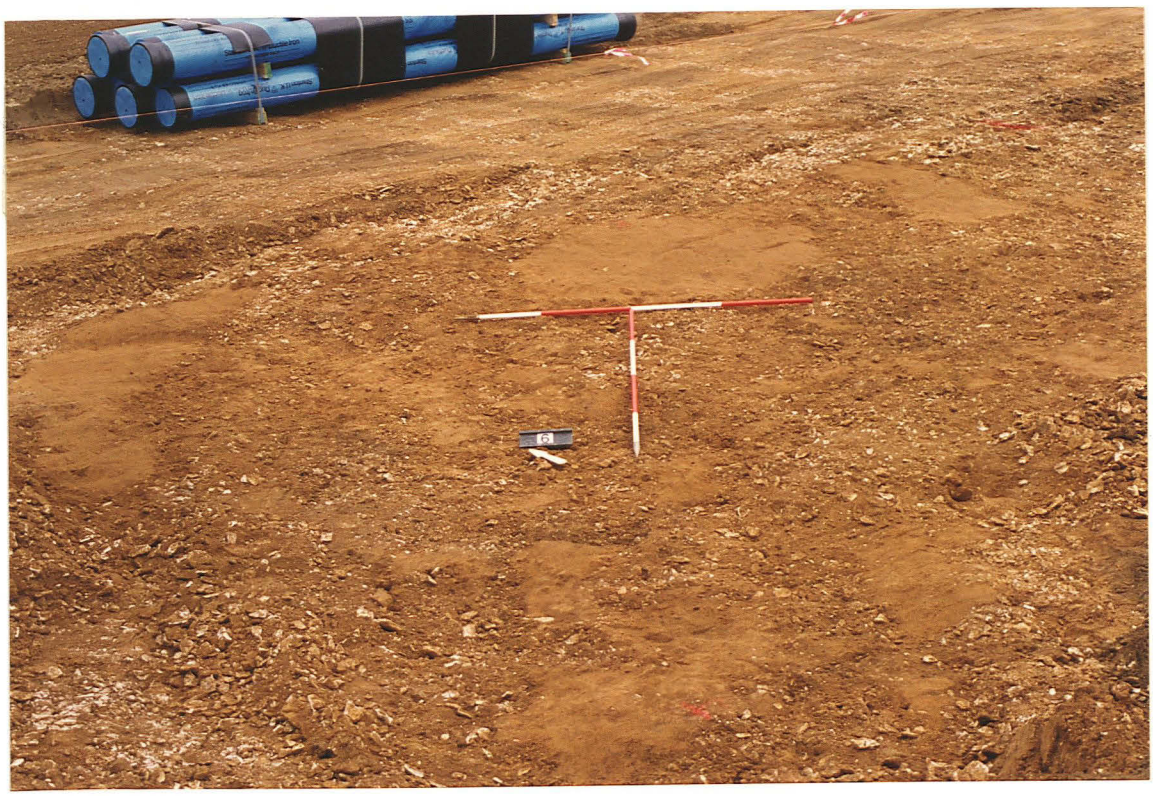


Pl. 49 Area 4, looking north. Scales 2m.

Pl. 50 Natural feature 401, looking NE. Scales 2m & 0.5m.

Pl. 51 Natural feature 502, looking SW. Scales 2m & 0.5m.

Pl. 52 Area 6, looking NE (scales 2m).



Pl. 53 Pit 601, looking east. Scale 2m.

Pl. 54 Area 7, looking NE (scales 2m).

Pl. 55 Natural features 702 (left) and 704 (part, right), looking NE.
Scales 2m & 0.5m.