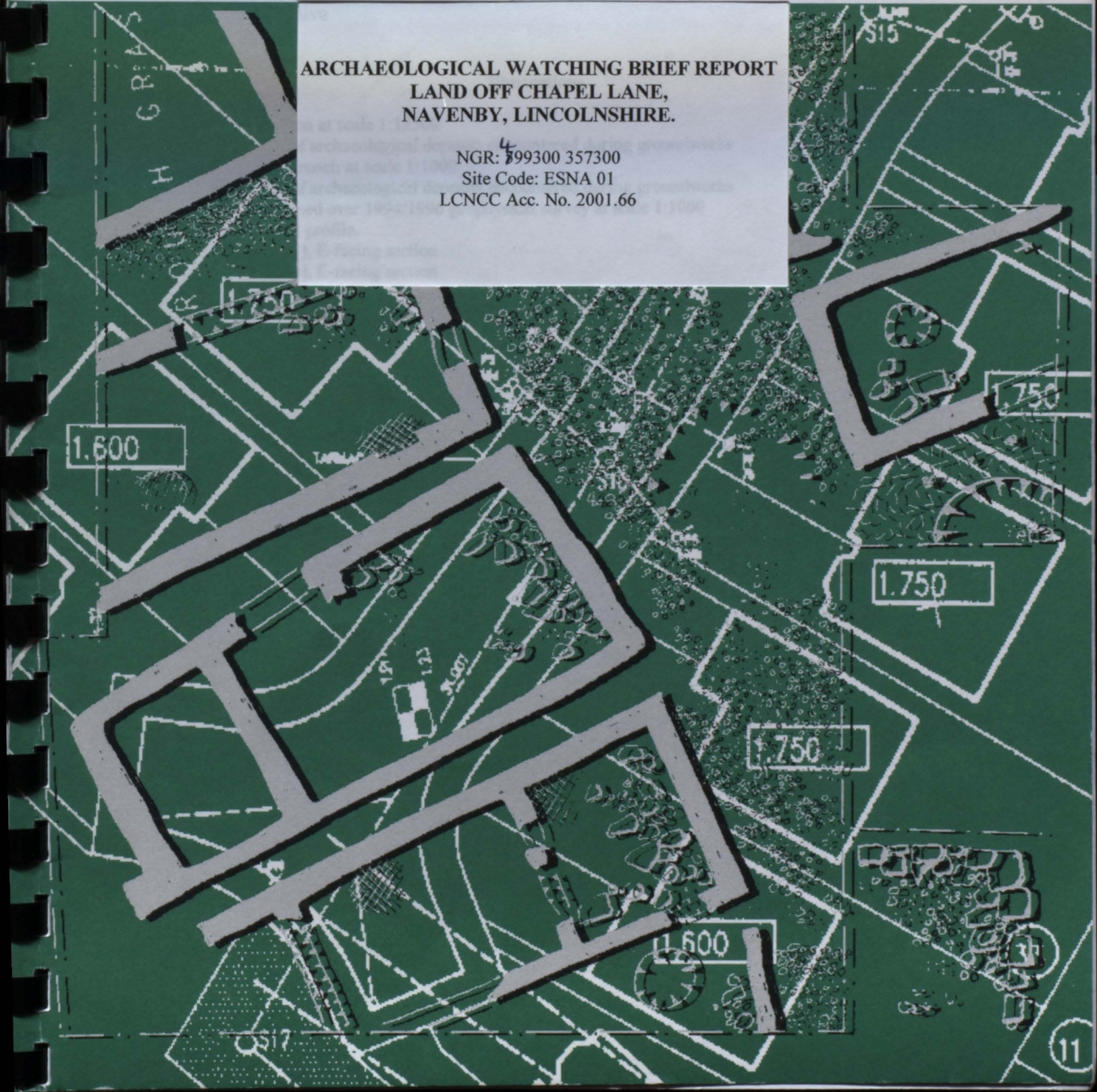




PRE-CONSTRUCT ARCHAEOLOGY L I N C O L N

**ARCHAEOLOGICAL WATCHING BRIEF REPORT
LAND OFF CHAPEL LANE,
NAVENBY, LINCOLNSHIRE.**

NGR: ⁴99300 357300
Site Code: ESNA 01
LCNCC Acc. No. 2001.66



EVENT L12597
 SOURCES L17194 L17195
 61721 Prehist.
 60537 Roman
 60557 Prehist
 61945 L182349 Med
 63248 L186359
 Roman

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Report Prepared for
 Ploughsound Ltd.
 by Mark Allen and Colin Palmer-Brown

November 2001

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Summary

- An archaeological watching brief was undertaken on behalf of Ploughsound Ltd during the groundworks for a sewer trench to the south of Chapel Lane and west of Ermine Street at Navenby in Lincolnshire.
- These works were recommended as a condition of planning due to the close proximity of the Romano-British settlement of Navenby and its late Iron Age precursor.
- The groundworks for the development exposed numerous features of Romano-British date, including a well shaft that provides important new evidence for a water supply to the settlement. Two human burials were exposed; one being the remains of a child associated with three copper alloy bracelets; the other an adult in a crouched posture.
- Several Romano-British ditches were cut by the service trench. These could represent property boundaries extending westwards from the Ermine Street frontage.
- A single feature of early Neolithic/early Bronze Age date was exposed. Adjacent, and possibly associated, was a curvilinear gully.



Figure 1: Site location at scale 1:25,000
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1.0 Introduction

An archaeological watching brief took place during the groundworks for a fould drain (fig. 1). This work was commissioned by Ploughsound Ltd.

This report documents the results of a programme of archaeological observation and recording (fig. 2). It has been prepared to meet the requirements of current local guidelines (Lincolnshire Archaeological Handbook; A Manual of Archaeological Practice, 1998); a formal project brief issued by the North Kesteven Heritage Officer, and a formal project specification that was prepared by this company and formed the basis of a contract between the developer and Pre-Construct Archaeology (Lincoln).

Copies of this report have been deposited with the commissioning body; with the North Kesteven Heritage Officer and the County Sites and Monuments Record for Lincolnshire. A summary will be submitted to the editor of the county journal, *Lincolnshire History and Archaeology*; and this will feature as a short note in due course. Reports will also be deposited at the City and County Museum, Lincoln, along with an ordered project archive for long term storage and curation.

2.0 Location and description

Navenby is in the administrative district of North Kesteven. It occupies high ground on the west side of the Jurassic Edge, and lies between Boothby Graffoe to the north and Wellingore to the south.

The site that is the subject of this report is situated approximately 60m west of Ermine Street, running southwards from Chapel Lane, and then westwards to the existing Chapel Heath residential development. The ground surface is predominantly level, and its elevation above mean sea level is approximately 68m OD.

To the west of the limestone ridge, the land drops dramatically to approximately 10m OD, where it approaches the floodplain of the River Witham. The river is approximately 7.5km west of the village, with the closest major natural water source being the River Brant; a tributary of the Witham, approximately 4.5km west of Navenby. Less significant sources of water follow the spring line along the edge of the limestone scarp.

3.0 Planning background

Full planning consent was granted by North Kesteven District Council for the construction of a main sewer, subject to the approval of a written scheme of archaeological investigation – an archaeological recording brief.

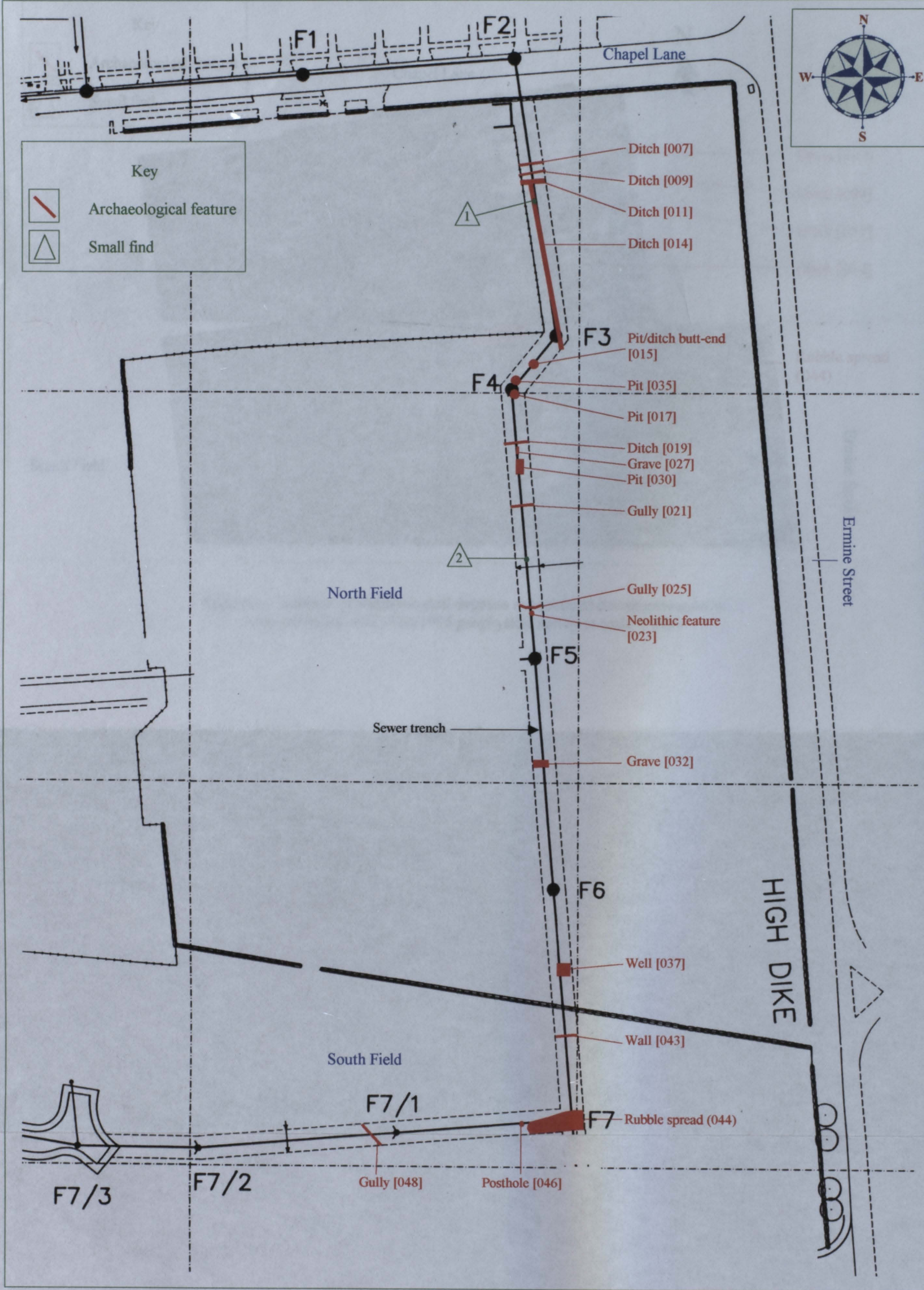


Figure 2: location of archaeological deposits encountered during groundworks for sewer trench at scale 1:1000

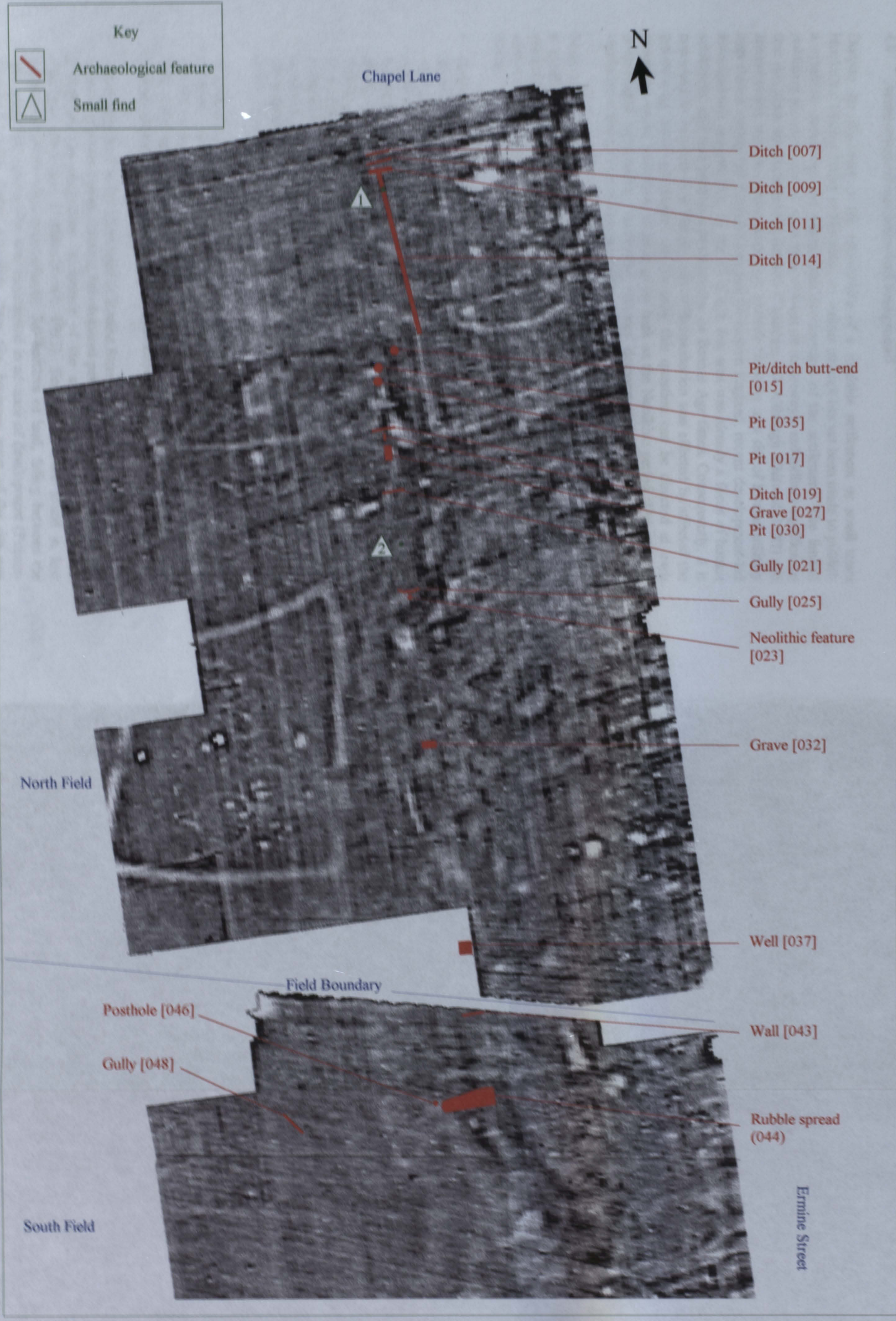


Figure 2a: Location of archaeological deposits encountered during groundworks superimposed over 1994/1996 geophysical survey at scale 1:1000

4.0 Archaeological and historical background

Despite the discovery in the mid-1960's of a roadside settlement or small town bracketing Ermine Street at Navenby, no serious attempt has yet been made to publish a synthesis describing the origins and development of the settlement. The limited published accounts that we have tend to focus on the strategic and military significance that this place may have held in the mid-1st century AD. Although Whitwell (1982) and Jones (1980) may be correct when they identify Navenby as a site of Roman military importance during the Roman Conquest of eastern England, recent development-led investigations suggest that, by the C1st AD, this area was already a focus of human settlement, and had been so from Neolithic or Bronze Age times. Consequently, it is necessary to consider how the process of Romanisation was affected by/affected the pre-existing social geography. At Navenby this question can be directed at each preceding social formation, at least as far back as the Neolithic period. The material assemblages representing successive cultures demonstrate that this area had a significance that resonated through millennia.

Since 1994, a number of investigations have taken place at Navenby: predominantly in a small area defined by Ermine Street, Grantham Road, and Chapel Lane. These projects were all development-led, and most have been funded by Ploughsound Ltd. in advance of / during development. The results of these investigations are summarized below.

- Approximately 3.7 hectares of land on the west side of Ermine Street, immediately south of Chapel Lane, was surveyed by gradiometry in 1994 (Lyll 1994), and trial excavations showed that Romano-British stone buildings lined the frontage in the C3rd/C4th AD (Palmer-Brown, 1994). The remains were well stratified, and sealed earlier phases of archaeology that were summarily investigated. An extremely well preserved native-type settlement enclosure (incorporating several circular buildings) was identified by geophysics and investigated by trial excavation. Other (e.g. elliptical) enclosures were not investigated due to the survival of well-preserved remains above them. The Romano-British occupation at the site appeared to have continued until the later C4th or early C5th AD, after which, there appears to be spatial discontinuity, the settlement shifting westwards, closer to the limestone edge. LI 1821
LI 1493
- A watching brief on the north part of the above identified a localised and unusual cemetery / ceremonial site containing a) Bronze Age cremation burials b) undated cremation burials c) a stone-capped pit containing butchered horse remains and high status scored pottery d) Romano-British cremation burials e) Anglo-Saxon inhumation burials with grave goods (Palmer-Brown & Albone 1999). LI 5685-6
- A watching brief some 350m west of Ermine Street identified a small group of pits containing charred plant remains, fire-shattered pebbles and post-Deverel-Rimbury pottery sherds, suggesting occupation of the area in the very Late Bronze Age/Early Iron Age (Palmer-Brown, 1995). Similar pits were found in low numbers in 1999 when approximately 3.0 hectares of land, falling between the above and the current site, was investigated in advance of development (Palmer-Brown & Rylatt 1999). Excluding these pits, however, most of the site was LI 5152
LI 1530
LI 7068-9

archaeologically sterile, with most of the activity associated with later periods occurring further to the east, closer to Ermine Street.

- In 2001, ten trenches were placed to the west of Ermine Street within the 'south' field to investigate anomalies highlighted by the 1996 geophysical survey (Allen 2001). These trenches confirmed the presence of well preserved Romano-British stone structures adjacent to Ermine Street and a minor road extending westwards from it. At the junction of Ermine Street and the minor road, an unusual polygonal structure was identified. The morphology of this structure suggests that it was not of domestic origin, and it could even represent the remains of a temple or shrine. A number of Romano-British inhumation burials were exposed to the west of the settlement. Earlier activity at the site is represented by low numbers of worked flints.

LI 6714
LI 6715

The extent of the Romano-British roadside settlement has never been established, although current evidence suggests that its northern limit does not extend more than 200m north of Chapel Lane. A fluxgate gradiometer survey of 2.14 hectares to the north of Centurion Close did not identify anomalies of potential archaeological significance (Bunn & Hardwick 2000), and subsequent trial excavations exposed no evidence of the stone buildings that occur to the south (J Hockley, pers. com.).

LI 5712+
5714

The archaeology on the east side of Ermine Street remains relatively unexplored, although unquantified surface scatters of pottery, building debris and other remains strongly suggests a high level of activity that is probably comparable to what we know of the west frontage in the Chapel Lane area.

Navenby has never attracted the academic attention that has been awarded to other so-called 'small towns' of the region; for example, the settlement at Sapperton, and a discussion was notably absent in a recently published Oxbow monograph (Brown 1995).

5.0 Methodology

One experienced field archaeologist was present to monitor the groundworks associated with the current scheme; this occurred over eight days between the 20th and 29th June 2001.

The first 80m of trench extending southwards from Chapel Lane was excavated using a JCB with a 0.6m wide toothed bucket. This was excavated to a depth of 2.7m and required the use of shoring. Beyond this point, a 360^o machine with a 1.8m wide smooth ditching bucket was used to strip the topsoil and subsoil to assist the archaeological monitoring in advance of full excavation.

The archaeological fieldwork entailed the cleaning by hand of all exposed surfaces within the trench, followed by a thorough inspection. All archaeological deposits identified by this process were subjected to limited excavation to assess their nature, dimensions and to attempt to recover datable materials. These investigations resulted in the production of written descriptions on standard watching brief context recording

sheets. Colour photographs and scale drawings, in both plan and section, compliment these accounts.

6.0 Results

The topsoil that was common to the whole area, consisted of a 0.2 – 0.3m deep mid brown/grey silty sand with occasional small limestone and flint pebbles, (002). The topsoil sealed a mid brown silty sand horizon measuring 0.1 – 0.4m deep, (003), identified as a buried soil of probable prehistoric and/or Romano-British date. Pottery from (003) was of mid – late Iron Age to Roman date.

Adjacent to Chapel Lane the topsoil was covered by a horizon that was probably laid down during groundworks associated with previous development at the site (see fig. 3 below). The subsoil sealed natural orange sand (004), that lay above a 1.1m thick deposit of pink clay-sand and medium-sized gravel, (005). Limestone bedrock was exposed at approximately 2.6m below the modern ground surface (see fig. 3 below). As the pipe trench progressed southwards into the field, the sand and gravel (005) disappeared and the limestone bedrock became shallower.

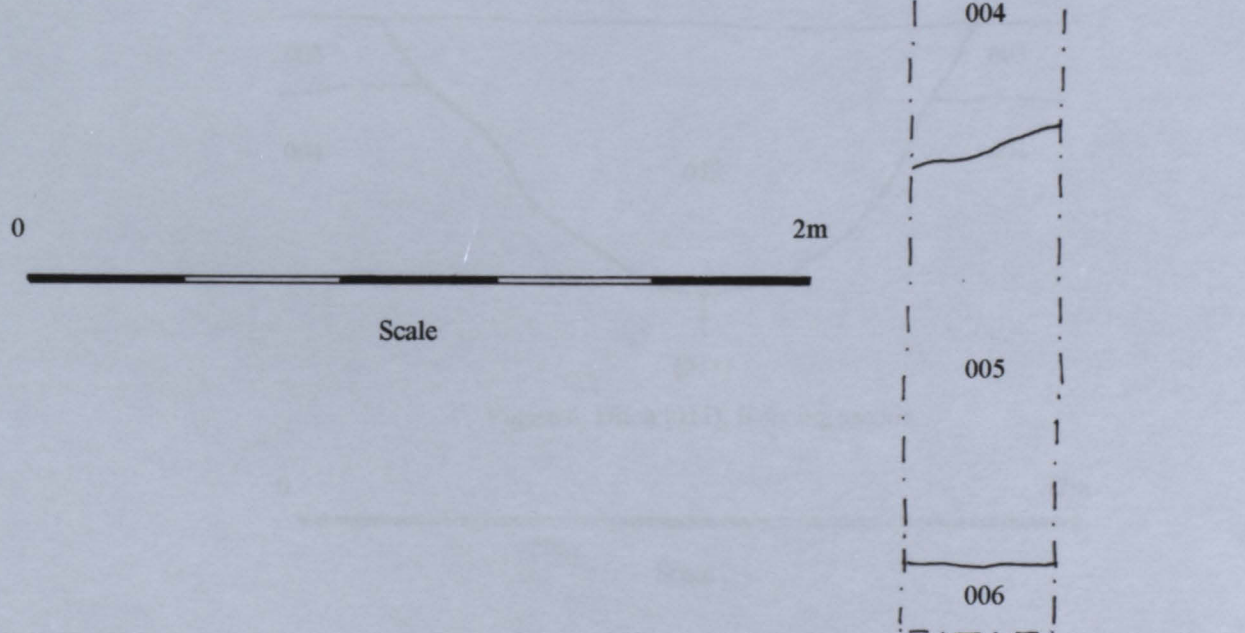


Figure 3: Geological profile

Approximately 15m south of Chapel Lane, three ditches orientated east – west were exposed. Ditch [007] was steep sided with a flat base (see fig. 4), whereas ditches [009] and [011] were more gradually sloping (see figs. 5 and 6). The fills of all three comprised a uniform dark grey silty sand, with a single abraded 3rd century (or later)

Roman pot rim coming from the fill of [009], (010). The ditches, which are located on the 1994 geophysical survey (see fig. 2a), were perpendicular to Ermine Street and probably relate to field or paddock boundaries to the rear of the Roman settlement.

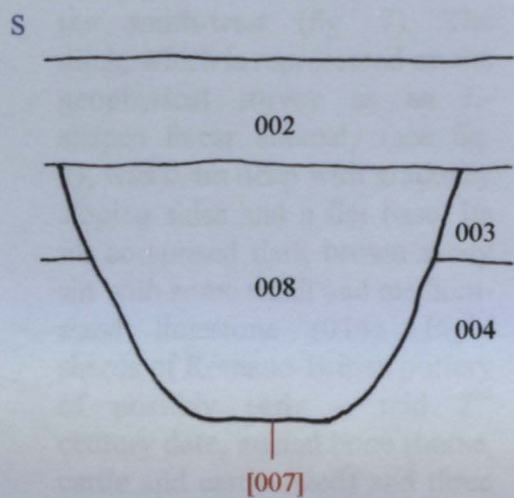


Figure 4: Ditch [007], E-facing section

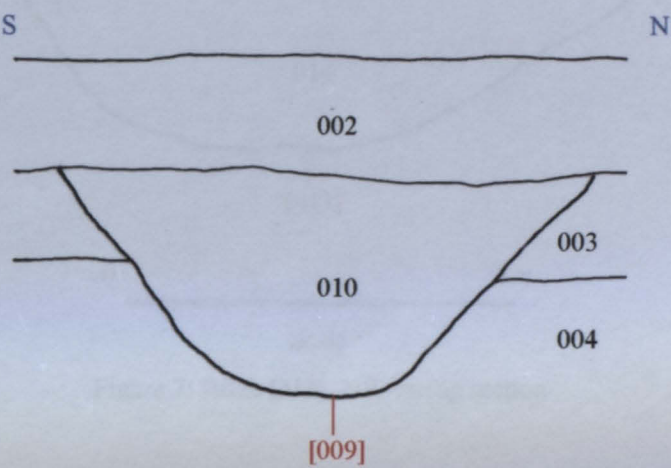


Figure 5: Ditch [009], E-facing section

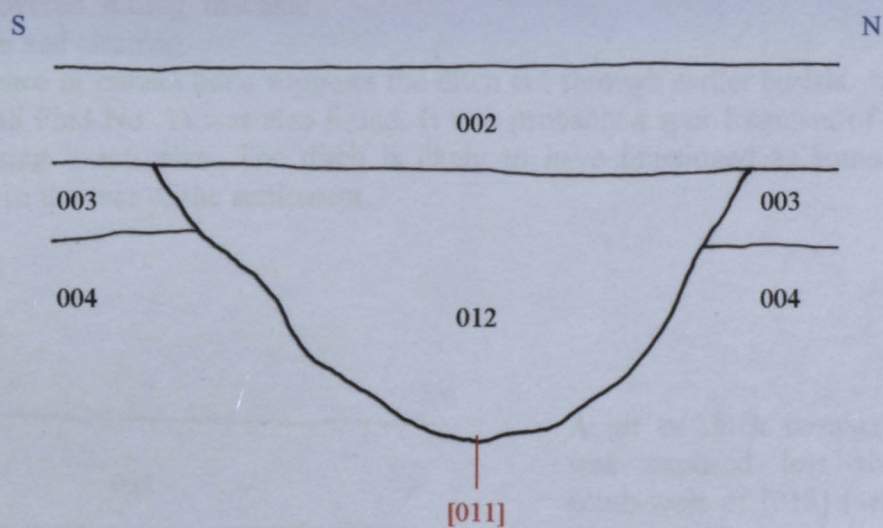
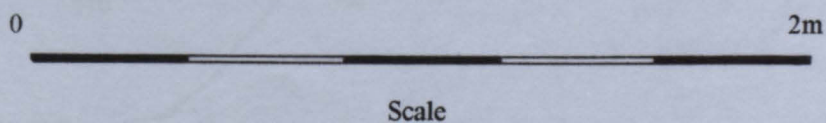


Figure 6: Ditch [011], E-facing section



Immediately beyond ditch [011], a further ditch, [013], ran north-south along the pipe trench. This was only visible in section where the pipe trench turned towards the south-west (fig. 7). The ditch, which is represented on the geophysical survey as an L-shaped linear anomaly (see fig. 2), was 0.4m deep with gradually sloping sides and a flat base. Its fill comprised dark brown sandy silt with some small and medium-sized limestone (014). Eight sherds of Romano-British pottery of possibly early - mid 2nd century date, animal bone (horse, cattle and cattle-sized) and three pieces of adult human bone (including two skull fragments) were recovered during machine excavation and cleaning.

The presence of human bone suggests the ditch cut through earlier burials. A piece of Iron (Small Find No. 1) was also found. It was probably a spur fragment of medieval date, making it intrusive. The ditch is likely to have functioned as some form of boundary to the rear of the settlement.

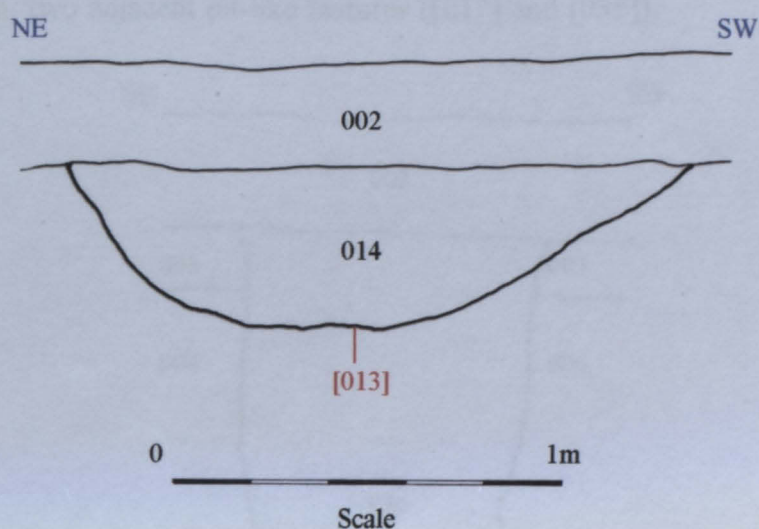


Figure 7: Ditch [013], NW-facing section

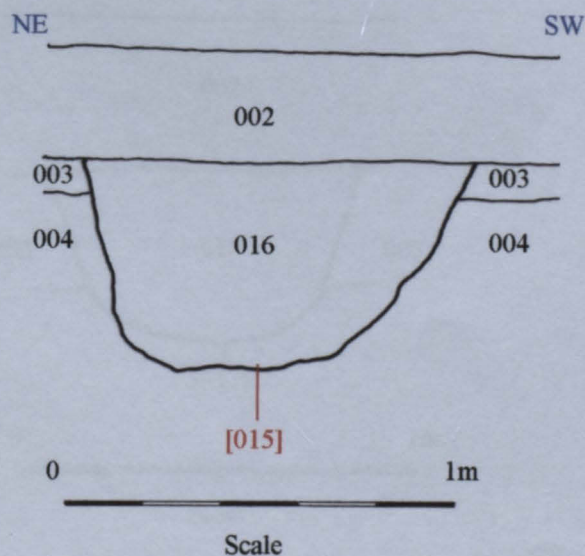


Figure 8: Pit/ditch terminal [015], NW-facing section

A pit or ditch terminal ([015]) was exposed less than 10m south-west of [013] (see fig. 8). This was filled with brown silty sand, (016), devoid of artefacts.

Where the trench turned south again, two adjacent pit-like features ([017] and [035]) were exposed in section (see fig. 2).

The most northerly of these, [035], was of unusual form. It was 1.7m deep and 0.7m wide (see fig. 9). Its vertical sides resembled those of a well shaft, although the depth of the feature compared to the local water table levels preclude this interpretation. No artefactual evidence was recovered.

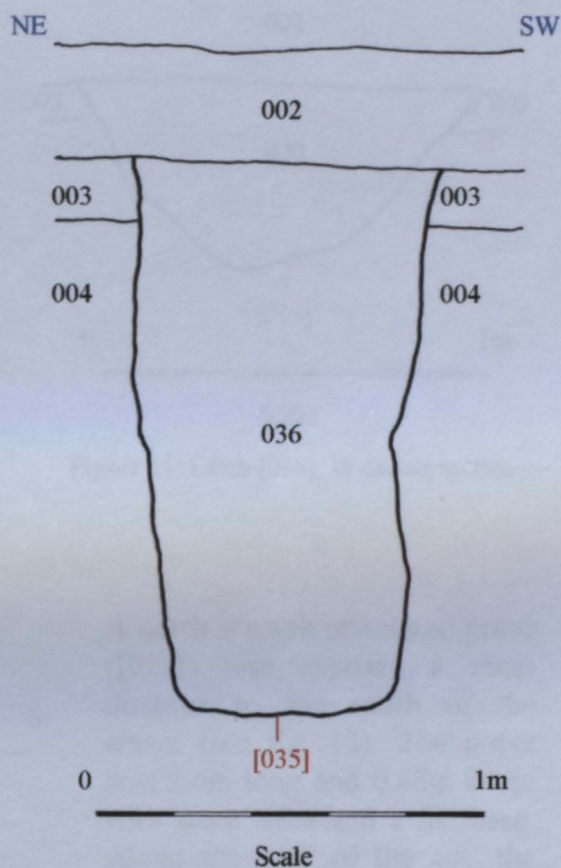


Figure 9: Feature [035], NW-facing section

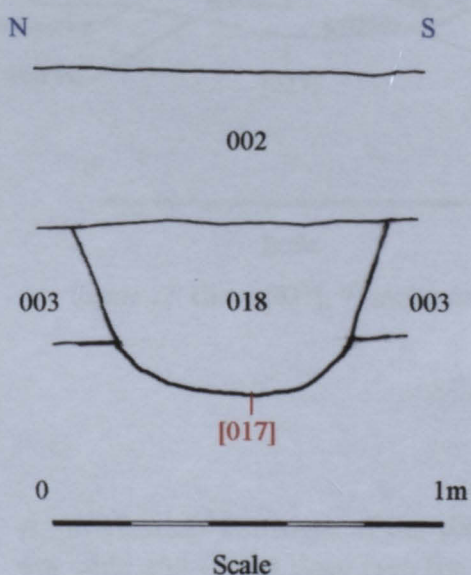


Figure 10: Pit [017], W-facing section

Pit [017] was filled with mid brown sandy silt, incorporating small and medium sized limestone pieces (018) (See fig. 10). A cattle bone and two cattle-sized bones were recovered from the fill, along with pottery (including the only piece of Nene Valley ware) of mid 3rd century date onwards.

Approximately 12m further south was ditch [019]. This had steep, concave sides and a slightly pointed base (See fig. 11). The ditch, which was visible as an east-north-east – west-south-west anomaly on the geophysical survey (See fig. 2a), was probably some form of boundary for a field or paddock to the rear of the Roman ribbon development. A single fragment of horse bone was recovered from the fill, (020).

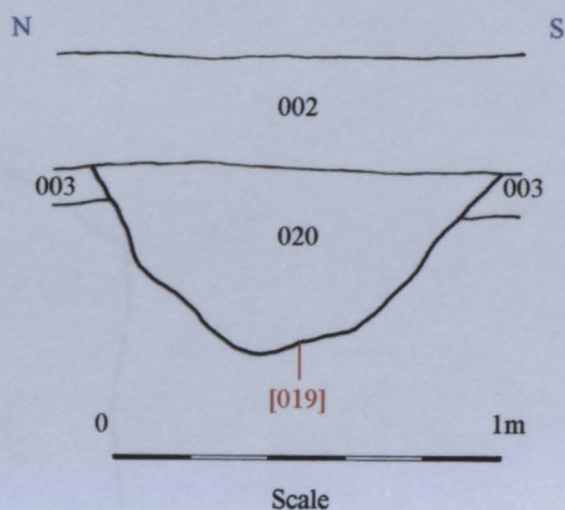


Figure 11: Ditch [019], W-facing section

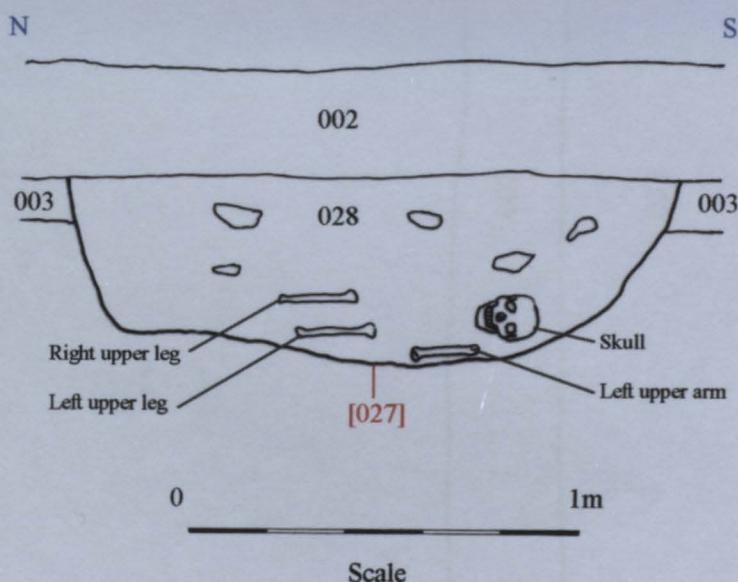


Figure 12: Grave [027], W-facing section

A north – south orientated grave ([027]) was exposed a short distance to the south of the above (see fig. 12). The grave was 1.6m long and 0.48m deep, with steep sides and a flat base. Along the base of the cut, the well-preserved remains of an adult human were partially exposed. The skeleton was lying in a crouched position with its knees drawn up into the chest, with the head at the south end of the cut, facing to the west. Pottery within the backfill (028) was of Roman date. This feature was not further excavated, as it was determined that the grave would remain predominantly unaffected by the groundworks (sand and soil was carefully placed against the burial during backfilling of the trench).

Approximately 2m south of the above was a large pit, [030], measuring approximately 4m wide and 0.66m deep (see fig. 13). Its fill, (031), was a uniform brown silty sand incorporating small to large limestone pieces. A single sheep-sized bone was recovered from the fill.

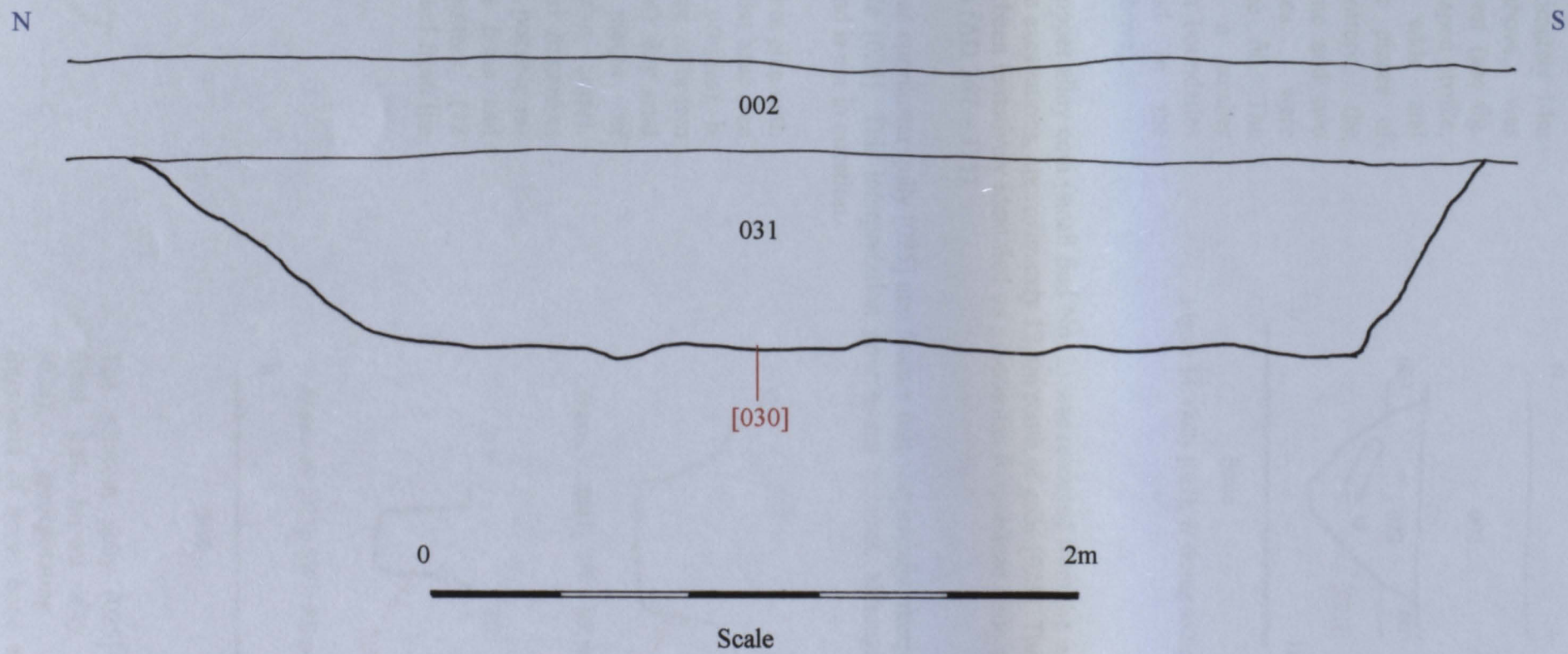


Figure 19: Pit [030], W-facing section

Gully [021], approximately 14m south of the above, was orientated east – west (see fig. 14). It had a V – shaped profile, measuring 0.65m wide and 0.34m deep. Three pieces of Romano-British pottery, the bone of a cow bone and two cattle-sized bones were recovered from the fill. The linear is probably a smaller version of the ditch boundaries already encountered in the watching brief (see above).

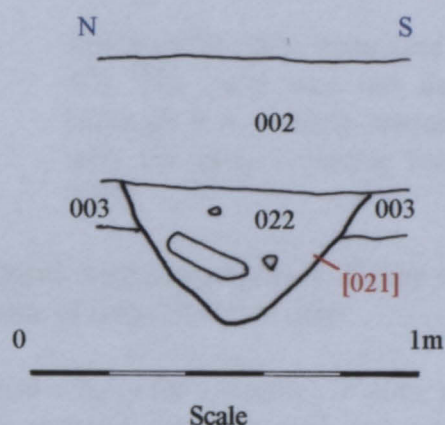


Figure 14: Gully [021], W-facing section

A Romano-British copper alloy coin (small find No. 2) was retrieved from the subsoil (003) during machine excavations, approximately 12.5m south of gully [021]. The coin is corroded, but has been tentatively identified as a *Securitas Reipublicae* issue of the House of Valentinian (AD 367 – 375).

11m further south was curvilinear gully [025] and feature that was initially interpreted as a double posthole [023]. This interpretation now seems dubious, although the significance of this find is not in question.

The feature was oval in plan with vertical sides and a flat base (see figs. 15 and 16 for profiles). It was filled with a mix of brown and bright red (burnt) silty sand with occasional pieces of limestone (some also burnt). Numerous flecks and fragments of charcoal indicate possible in-situ burning. Burnt bone and early Neolithic pottery (12 sherds) were recovered from the fill (024).

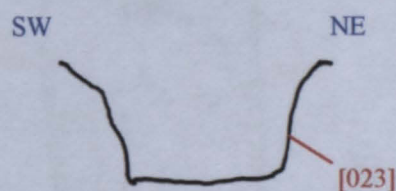


Figure 15: [023], SW – NE profile

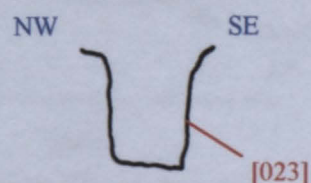


Figure 16: [023], SW – NE profile

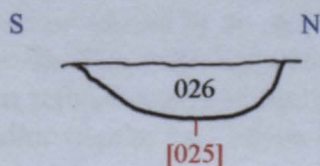
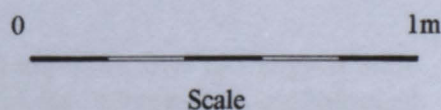


Figure 17: Gully [025], E-facing section



The adjacent gully [025] was filled with brown silty sand (026), incorporating two fragments of horse bone and a

single cattle-sized bone (see fig. 17). The gully was not dated, although it is possibly associated with the early Neolithic feature [023].

It is not possible to be certain that the above features were contemporary. If they were related, then they could represent structural features of early Neolithic date.

There appeared to be no evidence of archaeological activity for a distance of 40m, until a small east – west aligned grave, [032], was exposed during topsoil and subsoil stripping.

The grave was rectangular in plan, measuring 1.2m long and 0.6m wide (see fig. 18). The body was placed within a wooden coffin, with the head at the west end and the body, extended. Large limestones were placed between the coffin and the grave walls. Three copper alloy bracelets were placed over the chest of the body, one of which was possibly owned by the child. The other two may have been offerings from each parent. Decoration on two of the bracelets is suggestive of a late 3rd and 4th century date, based on similar finds from the late Roman cemetery at Lankhills (see Appendix 5). Pottery within the backfill, (033), is of an early – mid 2nd century date. This does not correlate with the bracelet dates, however, suggesting that the pottery is residual. A small piece of tap slag was also recovered from the backfill.

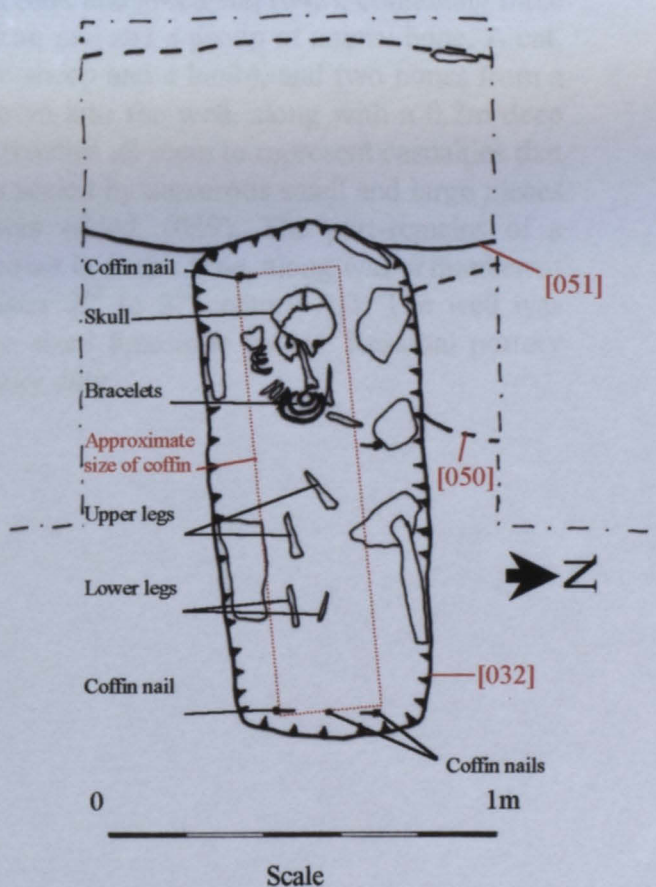


Figure 18: Plan of grave [032]

The child appears to have died aged 7 years old (± 24 months). Due to the poor state of the bones, it was not possible to ascertain the sex of the individual. A pathological assessment of the remains showed some soft tissue trauma on the right clavicle, possibly caused by an activity involving heavy use of the shoulder, although this is not certain. The teeth showed some wear, including two carious lesions. It is suggested that refined sugars and/or natural sugars (such as dates or honey) formed a significant and/or regular part of the child's diet (Appendix 5). Along with the child burial were

the part remains of a neo-natal – nine month old infant. This possible stillborn appears to have been placed on the chest of the child, with the bracelets in close-proximity.

Grave [032] cut through two earlier features that resembled further graves, and part of a human arm bone (upper right arm) was visible in the south-facing section of cut [050].

The concentration of burials here is surprising, as only one other burial was exposed in c. 400m of trenching (see [027] above). Its possible the group is part of a family plot to the rear of the settlement.

Approximately 55m south of the above was a large rectangular well, [037], measuring 2.4m wide and more than 2.6m deep (see fig. 19). The lowest deposits encountered comprised a series of lenses of light orange, pink and green silt, (042), containing three chunks of a Roman roof tile (*imbrex*), an iron nail and a group of animal bone. A cat, four sheep (including aged, adult, immature sheep and a lamb), and two bones from a terrier-like dog appeared to have been thrown into the well, along with a 0.2m deep soil of brown silty sand, (041). The animal remains all seem to represent casualties that died naturally, or were put down. This was sealed by numerous small and large pieces of limestone (040), before further soil was added, (039). The part-remains of a Romano-British jar appear to have been thrown in at this time, along with a number of sherds, providing a broad date range of later 2nd to 3rd century AD. The well was finally capped with 1.2m of small to large sized limestone pieces. Residual pottery from this layer was possibly of 1st – 2nd century date.

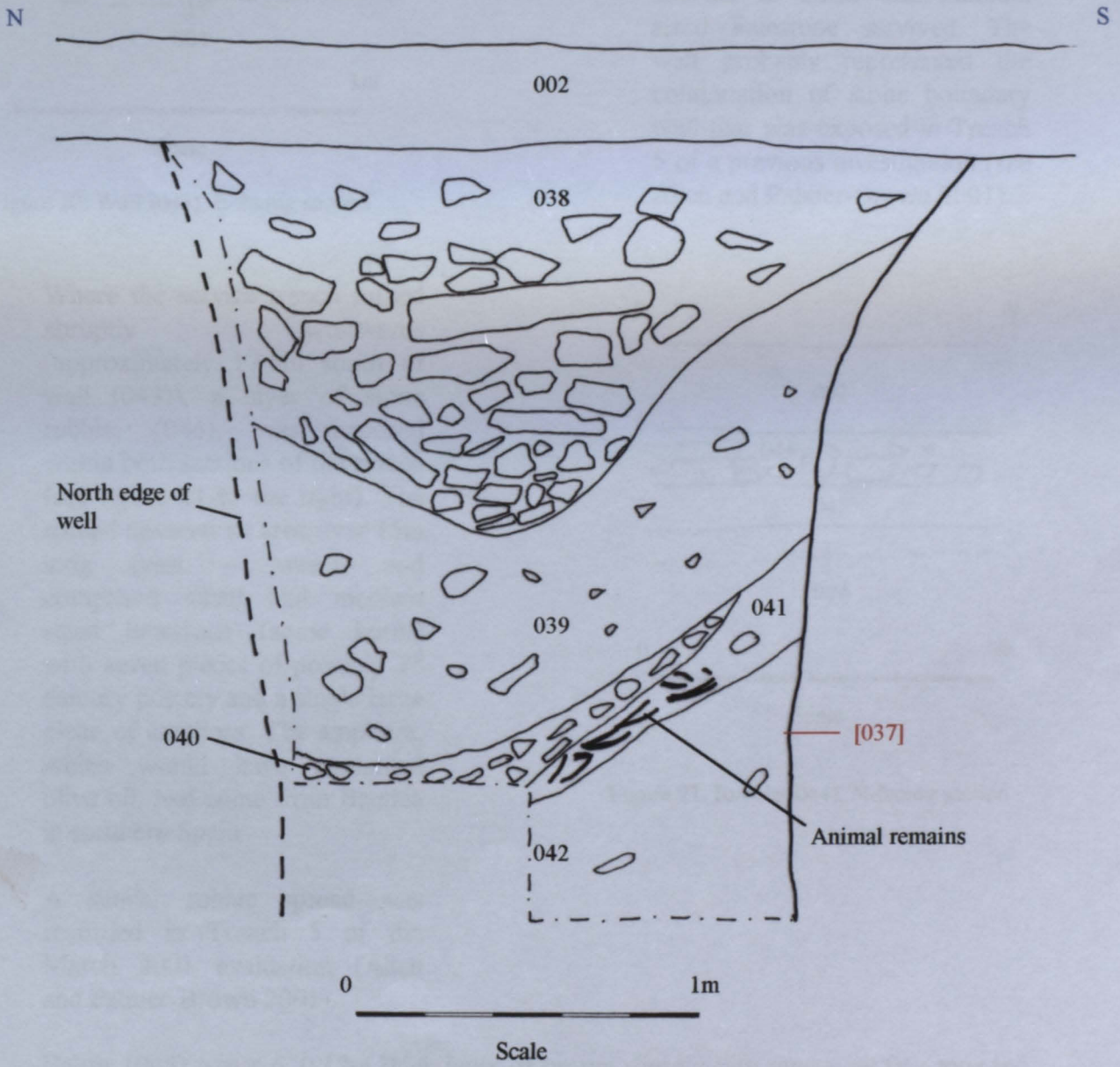


Figure 19: Well [037], W-facing section

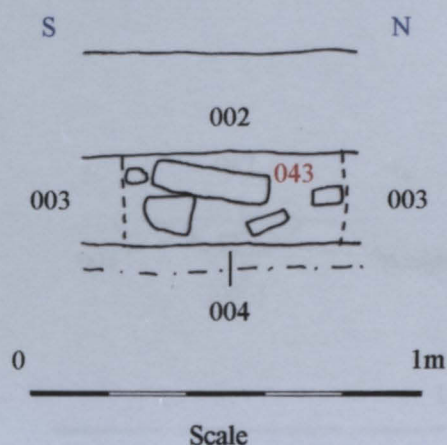


Figure 20: Wall (043), E-facing section

Where the service trench turned abruptly westwards (approximately 17.5m south of wall (043)), a layer of stone rubble, (044), was exposed within both sections of the trench (see figure 21 to the right). The spread covered an area over 15m long (east - west), and comprised small and medium sized limestone (some burnt) with seven pieces of possibly 3rd century pottery and a single large piece of amphora. The amphora, which would have contained olive oil, had come from Baetica in southern Spain.

A similar rubble spread was recorded in Trench 5 of the March 2001 evaluation (Allen and Palmer-Brown 2001).

Below (044) was a c. 0.12m thick layer of brown slightly silty sand with few rounded pebbles, (045). It was felt the layer was the same as buried soil (003).

Approximately 11.5m into the 'south field' was the fragmentary remains of an east-west dry stone foundation, (043), c. 0.26m below the modern ground surface (see fig. 20). Up to two courses of small and medium sized limestone survived. The wall probably represented the continuation of stone boundary wall that was exposed in Trench 5 of a previous investigation (see Allen and Palmer-Brown 2001).

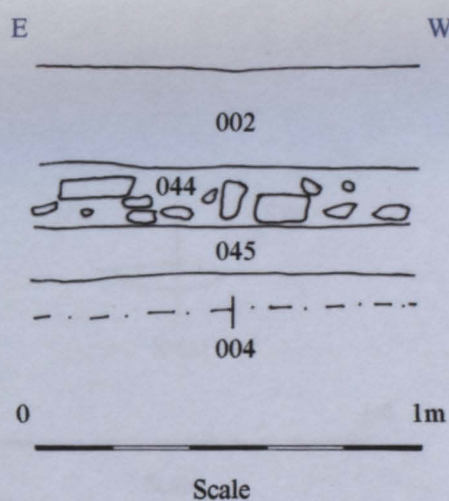


Figure 21: Rubble (044), N-facing section

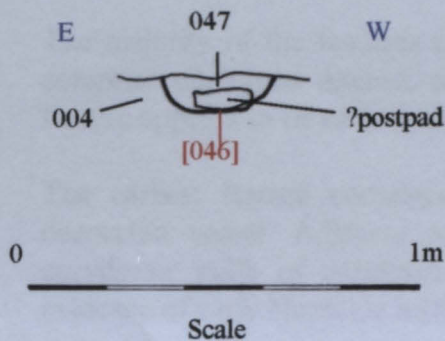


Figure 22: Posthole (046), N-facing section

Less than 2m to the west was an undated posthole-like feature ([046]). This was shallow, with steep sides and a flat base (see fig. 22). Its fill comprised light brown silty sand, devoid of finds (047). A large flat piece of limestone in the base of the cut may have functioned as a postpad to support a wooden post.

No archaeological deposits were encountered for a further 36m, when a shallow gully was exposed, running north-west – south-east ([048]) (see figure 23). The gully was c. 0.24m wide and 0.06m deep, with shallow sides and a flattish base.

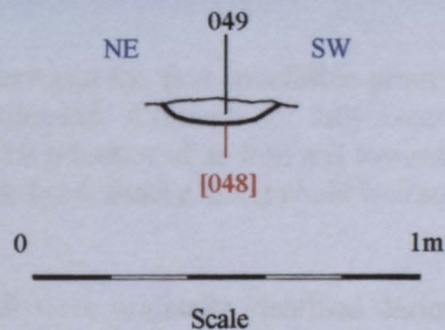


Figure 23: Gully (048), NW-facing section

The last 40m of trenching revealed that the buried soil horizon (003) shallowed to just 0.05m deep. Beneath this was limestone brash (006) at approximately 0.3m below the modern ground surface.

7.0 Summary and conclusions

The watching brief has confirmed expectations that numerous archaeological features are present to the west of the Roman ribbon development.

The majority of the features encountered appear to be of Romano-British date, and comprise numerous ditches, pits, several graves, a drystone wall, and a well. One feature appears to be early prehistoric.

The earliest feature contained several sherds of pottery from an early Neolithic decorated vessel. Adjacent to (and possibly associated with) this feature was a curvilinear gully of unknown date. Collectively, this could conceivably constitute evidence of early Neolithic settlement, although this is a tentative interpretation.

The Romano-British ditches were, for the most part, orientated east – west, perpendicular to Ermine Street (and the ribbon development). These are likely to be boundaries associated with the settlement, perhaps forming garden plots behind the buildings centred on Ermine Street.

Pits associated with the Romano-British activities were possibly refuse pits, although alternative explanations are possible.

The well at the south end of the north field provides the first conclusive proof for a local water supply for the Romano-British settlement. Although not fully excavated, the well is likely to be of considerable depth. The presence of an iron nail towards one side of the well may indicate the shaft was plank-lined. Such a lining could well survive closer to the water table.

The dry stone foundation and a rubble deposit were originally identified during the archaeological evaluation in 2001 (Allen 2001). The wall was probably a boundary to the rear of the ribbon development. The rubble spread may form a demolition deposit associated with an unknown structure to the south-east of the current investigation.

At least three burials were exposed by the groundworks within the north field. The child burial that was investigated in detail appears to have been placed in a supine position, with a neo-natal or young infant placed on its chest. Three copper alloy bracelets were added, and these may represent offerings from each of the parents, with the smallest bracelet possibly belonging to the child itself.

The child burial cuts two other possibly grave-shaped features. Although these were not excavated, a human upper right arm bone was exposed. The apparent concentration of burials may be indicative of a family plot to the rear of the settlement, and this is consistent with evidence from elsewhere.

8.0 Acknowledgements

The authors would like to thank the commissioning client, Ploughsound Ltd. They would also like to thank the North Kesteven Heritage Officer, Jo Hambley, for her

assistance throughout the course of this investigation. David Knight and Blaise Vyner are both thanked for examining the early prehistoric pottery at short notice, and Mouli Start is thanked for her report on the human remains.

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10.0 Site Archive

The site archive (documentary and physical) is in preparation, and will be submitted to Lincoln City & County Museum within 6 months. Access may be granted by quoting the site code (ESNA01) and the global accession number (2001.66).

Appendix 1: Colour Photographs



PI 1. Sewer trench excavations in north field. Looking north. Ditch [014] can be seen running along the east – facing section of the trench.



PI 2. Pit [035], north-west – facing section, looking south-east.



PI 3. Crouched burial [027] in west – facing section of trench, looking east.



PI 4. Early Neolithic possible double posthole [023] and curvilinear gully [025]. Looking west.

PI 6. Close-up of handbits and upper body area of child in grave [027]. Looking west.



PI 5. Child and possible still-born burial (034) in grave [032]. Looking south.
Note grave goods (bracelets) on chest area of child.



PI 6. Close-up of bracelets and upper body area of child in grave [032]. Looking west.



PI 7. Well [038] after part-excavation, west-facing section, looking east.



PI 8. Sewer trench in south field after initial excavation, looking west-south-west. Note rubble spread (044) in north-facing section. Vertical 1m scale shows westernmost extent of (044).

CHAPEL LANE, NAVENBY, ESNA01 ARCHAEOLOGICAL WATCHING BRIEF

for PRE-CONSTRUCT ARCHAEOLOGY

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

10 September 2001

QUANTITY AND CONDITION

The pottery came from 11 contexts (one, 003, sub-divided for context information, from F2-3 and F3-4), and amounted to 83 sherds weighing 1.719 kg, and five fragments of tile, weighing 0.786 kg. The condition is generally good although variable, with some abrasion (contexts 010, 014 and 033, ditches 009 and 013, grave 032), while particularly large fresh sherds came from contexts 039, 042 and 044 (the well 037 and demolition deposit). No problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*. A copy of the relevant fields of the database is below (and can be supplied on disk), and will be curated for future study.

A copy of the database is attached (and can be supplied on disk), and will be curated for future study.

The pottery quantities and dating by context is shown on Table 1.

Table 1 Quantities and dating by context

Cut	Type	Cxt	Sherds	Weight	Date	Comments
	Buried soil	003A	16	123	ROM;MLIA	From F3-F4
	Buried soil	003B	2	20	EM2?	From F2-F3
009	Ditch	010	1	51	3C OR LATER	Abraded
013	Ditch	014	8	79	EM2?	Some abrasion
017	Pit	018	5	29	M3+	Incls prob earlier shs
021	Gully	022	3	24	ROM	
023	Posthole?	024	12	46	PREHIST;LNEO or EBA	V fragile
032	Grave	033	8	39	EM2?	Some abrasion
037	Well; top	038	1	12	1-2C?	Not closely datable
037	Well; mid	039	21	779	2-3C	Fresh shs; not closely datable
037	Well; bottom	042	4	767	ROM	Fresh shs; tile only
	Demolition	044	7	536	3C POSS	Fresh shs;not closely datable
	Total		88	2505		

No sherd links were noted between deposits.

OVERVIEW OF FABRICS AND VESSEL TYPES

The fabrics represented are shown in Table 2.

Table 2 Fabric quantities

Fabric	Code	Sherds	%	Weight	%
Dressel 20 amphora	DR20	1	1.14	411	16.41
Grey	GREY	54	61.36	1135	45.31
Grey fairly fine	GRFF	2	2.27	22	0.88
Nene Valley colour-coated	NVCC	1	1.14	1	0.04
Shell-gritted; common medium shell	SHCM	13	14.77	104	4.15
Shell-gritted	SHEL	2	2.27	3	0.12
Shell-gritted; sparse fine shell	SHSF	2	2.27	12	0.48
Shell-gritted; sparse medium shell	SHSM	7	7.95	28	1.12
Fired clay	FCLAY?	1	1.14	3	0.12
Bldg. tile	TILE	5	5.68	786	31.38
Total		88	100	2505	100

The fabrics represented are unexceptional for pottery from the earlier part of the Roman period, dominated by grey. The shell-gritted fabrics include 13 sherds from a single jar or bowl, probably of mid-late Iron Age date, from the buried soil 003, and 12 sherds from the possible post-hole 023 (one being a fragment of fired clay). The latter include seven sherds from a single hand-made thin-walled vessel with stabbed decoration. The date of this unusual vessel is likely to fall within the period of the early Neolithic, and requires further research to define the date more closely. This would be consistent with earlier finds from Navenby, indicating activity in the area back into the Neolithic period, but provides perhaps the best evidence to date. The other sherds in this feature 023 are very fragmentary, and not closely datable, but are more likely to be prehistoric than Roman.

Only a single sherd of Nene Valley colour-coated ware occurred, from the pit 017, the dating to the latter part of the 3rd century being based on the fabric type and folded beaker vessel type. The only other import from outside the area is a single large fresh body sherd from an olive-oil amphora from Baetica in South Spain, the fabric being consistent with a 2nd to 3rd century date (from the demolition deposit 044).

DISCUSSION

Only seven vessels are represented by rims, and apart from the early Neolithic vessel, most are from jars of long-lived types, severely limiting the dating evidence. A flanged bowl from the buried soil 003 is likely to be an earlier 2nd century type, and a rusticated jar of similar date came from ditch 013. The fabrics from the grave 032 also appear to date to the earlier Roman period; these are very fragmented (average weight below 5g), and are abraded, suggesting these are from the grave fill rather than an deliberate burial deposit. The only vessel from the ditch 09 is a fragment from a probable copy of a samian bowl form 38, with rouletting below the flange, a feature often seen on such vessels made in the fine Parisian fabric. The dating may be later than the currency of the samian form, and is probably 3rd century; this sherd is quite abraded, and provides only a *terminus post quem* for the fill of the ditch. The other ditch, 013, produced the rusticated jar, and the jar rim could be from the same vessel; there are no sherds that need to be later than the early to mid 2nd century but, as with the grave, the abrasion levels suggest that this date can only be treated as a *terminus post quem*. The well 037 unfortunately closed with only tile fragments from the lowest layer, with most of the pottery coming from the middle fill, context 039. Of the 21 sherds, 19 came from a single

vessel, a large jar represented by body sherds only, giving the vessel from neck to base, provided no secure evidence for dating. Only a broad range of later 2nd to 3rd century is feasible.

The emphasis of the Roman pottery is earlier than seen in several other recent interventions into Navenby. The dating for the demolition deposit 004 cannot be closely defined, but probably lies within the range of the later 2nd to 3rd century. There are no sherds for which a 4th century date is applicable. The most important evidence lies with the fragments of an early Neolithic vessel.

RECOMMENDATIONS

The early Neolithic vessel from the possible post-hole 023 needs further research, currently in hand, and should be drawn for publication.

© M.J. Darling

	Ditch 00	Fa 001	Ditch 003	Ditch 004	Ditch 005	Fa 006	Well 007	Well 008	Well 009	Well 010
Horse	1		1		2		1			
Cattle	1	1		1						
Curly star	4	2		2	1					
Sheep/goat							2		3	4
Sheep skeleton*									4	
Sheep									1	
Sheep rib						1				2
Dog									2	1
Cat skeleton*									1	
Cat										2

* partial skeletons

The collection includes bones of human, horse, cattle, sheep, sheep/goat, dog and cat. A single ulna from an adult human was identified in context 014.

The most interesting feature is well 017. This feature has been a receptacle for a number of corpses. The assemblage from various layers in the well fills includes a cat skeleton, at least four partial skeletons of sheep, including aged, adult and immature sheep and a lamb; and two bones from a small robust dog of terrier proportions. Unfortunately it is very difficult to separate all the bones of the sheep carcasses into their correct skeletons so the fragments which have been allocated to each animal may include errors. All these animals appear to represent casualties that died naturally or were put down.

The bone fragments in the collection are in good condition, although with several modern breaks.

© D. James Rackham
9th September 2007

Appendix 3: Animal bone report by J. Rackham

A small collection of 39 bones and five partial skeletons were recovered by PreConstruct Archaeology during a watching brief at Chapel Lane, Navenby. These bones have been identified and recorded following the procedures of the Environmental Archaeology Consultancy (see attached Key) and the catalogue is attached to this report. The material is summarised in Table 1 by context. The dating of the deposits was unavailable at the time of writing this report.

Table 1: Frequency of animal bones from contexts at Chapel Lane, Navenby

species	014	018	020	022	026	031	039	040	041	042
	Ditch fill	Pit fill	Ditch fill	Gully fill	Gully fill	Pit fill	Well 37	Well 37	Well 37	Well 37
Human	1									
Horse	1		1		2		1			
Cattle	1	1		1						
Cattle size	4	2		2	1					
Sheep/goat							2		3	6
Sheep skeleton*									4	
Sheep									1	
Sheep size						1				2
Dog								1	2	1
Cat skeleton*									1	
Cat										2

* partial skeletons

The collection includes bones of human, horse, cattle, sheep, sheep/goat, dog and cat. A single ulna from an adult human was identified in context 014.

The most interesting feature is well 037. This feature has been a receptacle for a number of corpses. The assemblage from various layers in the well fills includes a cat skeleton, at least four partial skeletons of sheep, including aged, adult and immature sheep and a lamb; and two bones from a small robust dog of terrier proportions. Unfortunately it is very difficult to separate all the bones of the sheep carcasses into their correct skeletons so the fragments which have been allocated to each animal may include errors. All these animals appear to represent casualties that died naturally or were put down.

The bone fragments in the collection are in good condition, although with several modern breaks.

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9th September 2001

Archive Catalogue of Animal Bone from Chapel Lane, Navenby - ESNA01 , Watching Brief

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
ESNA01	014	BOS	LMV	1	F	CNAN	45						CENTRUM AND ARCH - 2 PIECES	4
ESNA01	014	CSZ	LMV	1	F	CFAC	234						CENTRUM	4
ESNA01	014	CSZ	LMV	2	F								PART TRANSVERSE PROCESS	4
ESNA01	014	CSZ	VER	1	F								INDET	4
ESNA01	014	EQU	INN	1	R		23						ILIUM- 3 PIECES-DORSAL SURFACE SCRATCHED	4
ESNA01	014	MAN	ULN	1	R	PF	123						PROX END AND SHAFT	4
ESNA01	018	BOS	CPI	1	W		1						FRAGMENT LOST	4
ESNA01	018	CSZ	LBF	1	F								SHAFT FRAGMENT	4
ESNA01	018	CSZ	UNI	1	F								INDET	4
ESNA01	020	EQU	MAN	1	L		45						POST PART ASC RAMUS- 4 PIECES	4
ESNA01	022	BOS	LMV	1	F	CJAN	245						CENTRUM AND ARCH	4
ESNA01	022	CSZ	LMV	1	F		5						NEURAL ARCH-FRAGMENTED- 5 PIECES	4
ESNA01	022	CSZ	TRV	1	F	AN							PART SPINE AND FRAG CENTRUM - 6 PIECES	4
ESNA01	026	CSZ	UNI	1	F								INDET-CALCINED - 2 PIECES	4
ESNA01	026	EQU	PH1	1	F	PF							FRAGMENT OF PROX END	4
ESNA01	026	EQU	TAR	1	W		1						COMPLETE-SLIGHT PERIPHERAL DAMAGE	4
ESNA01	031	SSZ	RIB	1	F								PROX SHAFT FRAGMENT- 3 PIECES	4
ESNA01	039	EQU	LBF	1	F								SHAFT FRAGMENT-PROBABLY RADIUS	4
ESNA01	039	OVCA	MTC	1	R	DN	125						OLDER LAMB- SAME ANIMAL AS MTT	4
ESNA01	039	OVCA	MTT	1	L	DN	125						OLDER LAMB-SAME ANIMAL AS MTC	4
ESNA01	040	CAN	SKL	1	F								PARIETAL- 2 PIECES	4
ESNA01	041	CAN	HUM	1	L	DF	567890						PROX EPI LOST-VERY BROAD-SHORT AND ROBUST-DACHSHUND/TERRIER TYPE	4
ESNA01	041	CAN	RAD	1	L	PFDf	123456				GL-72 Bp-13.2 Bd-16		COMPLETE-VERY BROAD-SHORT AND ROBUST	4
ESNA01	041	FEL	SKEL	1	P								ADULT- FEMS-TIB-ULN-MANS-SKL-SCP-RAD-RIB-14 BONES	4
ESNA01	041	OVCA	PH1	1	L	PF	12						COMPLETE	4
ESNA01	041	OVCA	SAC	1	W	COAO	12345						CENTRUM OFF IMMATURE	4
ESNA01	041	OVCA	SKL	1	L		56						BASE HORN STUB-VERY POROUS-LAMB	4
ESNA01	041	OVI	INN	1	R	EF	23						ILIUM SHAFT-ADULT-GROWTH ON ANT ILIUM	4
ESNA01	041	OVI	SKEL	1	P							GH14I16J13K13	ADULT-SKL-FEMS-TIB-MTTS-INNS-SCP-MANS-VER-SKL HORNLESS-AT LEAST 14 BONES	4
ESNA01	041	OVI	SKEL	1	P							H16I18J17K16	AGED ADULT-SKL-MAN-HUM-FEM-TIB-MTT-SCP-SAC-INN-VER-RIB-LOT CALC ON TTH- 18 BONES	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
ESNA01	041	OVI	SKEL	1	P								IMMATURE-MTT-MTC-FEM-HUM-TIB-INN-ULN-VER- AT LEAST 10 BONES	4
ESNA01	041	OVI	SKEL	1	P								LAMB- MTTs-MTC-MANS-SKL- AT LEAST 7 BONES	4
ESNA01	042	CAN	FIB	1	F								DISTAL END-PROB PART OF SMALL ROBUST DOG	#
ESNA01	042	FEL	INN	1	L	EF	12345678						COMPLETE	4
ESNA01	042	FEL	RIB	1	F								DISTAL HALF	4
ESNA01	042	OVCA	MTC	1	R	DN	125						IMMATURE-PROX END AND SHAFT	4
ESNA01	042	OVCA	MTT	1	R	DN	125						LAMB-PROX END AND SHAFT	4
ESNA01	042	OVCA	RAD	1	L	PFDN	1236						IMMATURE-PROX END AND SHAFT-POSS SAME	4
ESNA01	042	OVCA	RAD	1	R	PFDN	1236						IMMATURE- PROX END AND SHAFT-POSS SAME	4
ESNA01	042	OVCA	TIB	1	L	PNDN	47						WHOLE OF SHAFT	4
ESNA01	042	OVCA	FEM	1	L	PN	3						PROX SHAFT	4
ESNA01	042	SSZ	CC	1	F								FRAGMENT	4
ESNA01	042	SSZ	RIB	1	F								SHAFT FRAGMENT	4

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SEPTEMBER 2001

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The first inhumation was also exposed, again of Romano-British date. The first of these was a north-south orientated grave cut (027) of an adult in a crouched position. Since this burial was exposed in section it was not removed and therefore is not included in this report.

The second inhumation (034) of a child was recovered from an east-west orientated grave (033) that cut through two earlier grave cuts (051) and (050). The child lay in a supine position within a wooden coffin, represented by coffin nails, and three copper alloy bracelets were recovered from the lower chest area. On-site photographic records show animal disturbance within the grave, for example the right humerus was recovered protruding from the right eye socket. Given that this was a watching brief rather than a full excavation, it is a testament to the archaeologist that so much material was recovered in such a reasonable state. Unfortunately, the animal and machine damage suffered during the brief made it impossible to ascertain the original position of any of the individual. This inhumation was removed because it lay directly in the line of the trench and would have been machined through had it been left in-situ.

To the north of these inhumations a shallow north-south running ditch with gradually sloping sides (013) was exposed. The fill of this ditch (014) contained Roman pottery and animal as well as human bone. The human remains from contexts (014) and (034) form the basis of the report.

1. INTRODUCTION

This is a brief specialist osteological report commissioned by Pre-Construct Archaeology, Lincoln (PCA Lincs) in August 2001. It is based on human skeletal material recovered during the course of a watching brief during the ground-works for a sewer trench to the south of Chapel Lane and west of Ermine Street at Navenby in Lincolnshire (Allen, 2001).

2. BACKGROUND INFORMATION

Presented here is a brief summary of the results of the watching brief carried out in 2001 and the archaeological significance of the Navenby area. It is included in order to place the human remains that form the basis of this report into context for the reader. For a full archaeological interpretation of the archaeological significance of Navenby, Lincolnshire, please refer to PCA Lincs.

During the last decade several archaeological investigations have taken place at Navenby (see PCA Lincs). The material recovered spans prehistory from at least the early Neolithic and continues into the Romano-British period and beyond. Examples of the continued significance that Navenby held for its inhabitants include Bronze Age Cremations and late Bronze Age/early Iron Age settlement evidence; Romano-British and Anglo-Saxon inhumations; Romano-British stone buildings running along the course of Chapel Lane and Ermine Street and a possible Romano-British temple (Allen, 2001).

In June 2001 PCA Lincs undertook a watching brief on behalf of Ploughsand Ltd during the ground-works for a sewer trench. These works had been recommended as a condition of planning due to the previously recovered archaeological evidence outlined above. The sewer trench stretched over more than 80m and was dug with a narrow (0.6m) JCB bucket. Several features of Romano-British date were exposed over the course of the sewer trench including a substantial well and numerous boundary ditches. Two inhumations were also exposed, again of Romano-British date. The first of these was a north-south orientated grave cut [027] of an adult in a crouched position. Since this burial was exposed in section it was not removed and therefore is not included in this report.

The second inhumation {034} of a child was recovered from an east-west orientated grave [033] that cut through two earlier grave cuts ([051] and [050]). The child lay in a supine position within a wooden coffin, represented by coffin nails, and three copper alloy bracelets were recovered from the lower chest area. On-site photographic records show animal disturbance within the grave, for example the right humerus was recovered protruding from the right eye socket. Given that this was a watching brief rather than a full excavation, it is a testament to the archaeologist that so much material was recovered in such a reasonable state. Unfortunately, the animal and machine damage suffered during the brief made it impossible to ascertain the original position of the arms of this individual. This inhumation was removed because it lay directly in the line of the trench and would have been machined through had it been left in-situ.

To the north of these inhumations a shallow north-south running ditch with gradually sloping sides [013] was exposed. The fill of this ditch {014} contained Roman pottery and animal as well as human bone. The human remains from contexts {014} and {034} form the basis of this report.

3. MATERIALS & METHODOLOGIES

3.1. MATERIALS

In September 2001 PCA Lincs delivered a small box of human remains to the author for analysis. Three bone fragments from {014} were bagged together. All remaining material came from within cut [033] and was presumed to all have originated from the child burial {034} contained within this grave cut. The bones had been dried and brushed clean, and the skull of {034} arrived with the earth that had held it together as a whole still in place. The author carefully removed all remaining earth from this skull in order to be able to analyse it properly.

During the course of laying out the remains of {034} in order to inventory them the author discovered bone fragments that could not possibly originate from the young child {034}. These additional bones were those of another much younger individual that shall hereafter be referred to as {034a} in the absence of a discrete context number.

3.1.1. CONDITION OF MATERIALS: COMPLETENESS AND PRESERVATION

The only context under study that could be considered anywhere near complete is {034}. Fortunately the cranium of {034} is intact, including a full dentition, but not a single long bone was complete enough to allow metric analysis. Context {034a} is considered to be a discrete single individual, yet only consists of a few rib fragments and a single cranial fragment. Context {014} comprises a single adult rib fragment, and two adult cranial fragments.

The cortical integrity of all bones under study was poor having suffered considerable root damage, as well as animal disturbance post-depositionally and machine disturbance during excavation. The poor standard of preservation and incomplete nature of the sample has implications for the quality of analysis possible. For example, a metric analysis cannot be undertaken since all bones were too incomplete to be measured. The preservation of pathological changes to the surface of bones would also be compromised.

3.2. METHODOLOGIES

Treatment of each context differed slightly in line with the quantity and quality of the skeletal remains. The largely complete child {034} was analysed and recorded in a conventional way using the skeletal recording form. Both {014} and {034a} consisted of very small numbers of bone fragments, three and fourteen respectively, and were both therefore analysed and recorded on a brief osteological recording forms. Copies of the recording forms used for all three contexts can be found in Appendix 2. The methodologies applied to all three contexts are outlined below.

3.2.1. OSTEOLOGICAL INVENTORY

Osteological analysis was begun with a thorough inventory of all bones present for each context. For individual {034} both a pictorial and written inventory was completed to ensure accuracy and completeness of recording. The written inventory employed a coding system that records details of the completeness of each bone (a one letter code), and the state of fusion (two number codes). This coding system is presented as part of Appendix 1.

3.2.5. METRIC ANALYSIS

As outlined in 3.1.1 above, the bones under study were in all cases too fragmentary to allow metric analysis. However, it was possible to take dental measurements, and these were done after Lukacs (1989). These data are employed at the population level and are meaningful only when used in this way. Therefore, no interpretation or discussion of these results will be undertaken in this report. For the interested reader, these measurements can be found within Appendix 2 on the relevant skeletal recording forms.

3.2.6. NON-METRIC ANALYSIS

Non-metric traits are minor morphological variations in the human skeleton (Berry and Berry 1967). They are recorded as standard as part of a thorough osteological analysis of adult human skeletal remains to examine relatedness. Given that all but three of the bones under study are subadult, no non-metric trait analysis has been undertaken.

4. RESULTS & DISCUSSION: BIOGRAPHIES

Given that this report is based only on one relatively complete child burial {034}, one very incomplete infant {034a}, and three possibly unrelated adult bone fragments {014}, it is not possible to present quantities of data and then tease population patterns from these. Therefore the results and discussion for each of the three contexts under study are combined and presented here. Necessarily the depth of interpretation varies a great deal from one context to another dependant on the quality of the remains in each case.

4.1. CONTEXT {034}: CHILD BURIAL; (7 YEARS \pm 24 MONTHS)

Condition: The completeness and preservation of this burial varied over the whole body. The cranium was very well preserved, the right arm was almost complete, but only the upper left arm (humerus) was present and only small fragments of bone represented the legs. No hand or feet bones were recovered. The cortical integrity of the bone was poor overall, and this could hamper the recovery of surface pathologies. Having said this, surface pathology was in fact recovered and is discussed below.

Age-at-Death: This individual had a mixed deciduous (milk) and permanent (adult) dentition. Only one tooth had been lost post-mortem (i.e. during the depositional or excavation processes) and this is a testament to the skill of the excavator. Five deciduous teeth had been lost ante-mortem (i.e. while the child was alive) as a normal part of the replacement of milk with permanent teeth. All four first permanent molars were fully erupted and present in the jaws, giving an age of six or older, but maxillary central incisors were only just starting to erupt. Overall, following Smith's (1991) eruption sequence the age-at-death estimate for this child is seven years (\pm 24 months).

The fragmentary nature of the long bones of this individual meant that no estimate of age-at-death could be made from their measurement. Since dental eruption ageing techniques are the most accurate for subadult skeletal remains this is no loss in terms of an age-at-death estimate. The pattern of epiphyseal fusion gave an age range of >1 - <15 years, clearly a less precise estimate than that possible from the dentition.

Sex: Given the subadult age of this individual no attempt to determine its sex was made.

Skeletal Pathology: Despite the poor cortical integrity of the bones recovered for this individual, some soft tissue trauma was observed on the superior anterior surface of the lateral right clavicle. Soft tissue trauma, at the sites of the insertions of muscles, tendons and ligaments, manifests on bone as characteristic well-ordered growths of new bone

called enthesopathies (Roberts and Manchester 1995). The lesion observed on the right clavicle of {034} corresponds to the attachment site of the deltoid muscle which is a powerful muscle used in many shoulder movements. Unfortunately the corresponding attachment site on the right humerus of the deltoid muscle was badly damaged and observation was inconclusive as to whether a similar lesion was present.

Unfortunately, the causes of enthesopathies are multiple and argued over in the osteological world. Some specific pathological conditions cause them, although the age of this individual rules these out in this case. There is a suggestion that some people are quite normally 'bone formers' (Rogers & Waldron 1995). It is also thought that enthesopathies can represent occupational stresses and strains, and it is possible that this child was regularly engaged in some activity that made heavy use of its right shoulder. To add even more confusion, a growing child is by definition, laying down new bone constantly, although not normally at the site of muscle attachments.

Dental Pathology: Two deciduous teeth in the upper jaw, the left and right first deciduous maxillary molars, presented carious lesions. Both were located in the same place on the distal edge of the tooth at the junction between the first and second deciduous molars, probably one of the hardest places to clean in a child's mouth. This site, between the distal surface of one and mesial surface of another tooth, is referred to as approximal, and as a general trend, approximal caries lesions particularly in children become more common specifically with the introduction of sugars, either refined or natural, into the diet (Lukacs 1991). In contrast, cereal based diets without refined sugars or high levels of natural sugars tend to be associated with caries at the crown surface or at the junction between the root and crown in *adult* teeth. The presence of two approximal carious lesions, both at grade II on a I – IV scale, in a child of about seven suggests that refined sugars and/or high levels of natural sugars (such as dates or honey) formed a significant and/or regular part of this child's diet. It is worth considering in the Romano-British period how many seven year-old children would have regularly had access to such sources of sugar.

Notable in its absence on the teeth of this child was any evidence of enamel hypoplasia. These are lines of disrupted and then resumed growth in the developing teeth that occur during childhood as the teeth are forming. Episodes of stress, for example malnourishment, infection or even emotional stress, can result in a period of arrested growth. Their absence in this child might suggest that until the point of its death, no period of arrested and resumed growth occurred. This could imply a relatively comfortable life that had not included serious periods of malnourishment or illness. Obviously, resumed growth has to occur for a line to appear in the teeth, and this child did not survive whatever form of stress killed it at age seven.

The front deciduous teeth, incisors and canines, showed considerable attrition, or wear, with secondary dentine exposed in some cases. There are no standards relating types of diet to attrition rates and patterns throughout different periods for deciduous dentition making it difficult to draw any conclusions from this finding. All that can be said is that the diet of this child was sufficiently coarse to cause attrition in deciduous teeth over the six years they were present in this child's mouth.

Comment: The dental health of this individual suggests a life up to its death without serious periods of malnourishment or severe illness, and a diet with sufficiently high and/or regular sources of sugar to produce two carious lesions in milk teeth present in the mouth only six years or so at the time of death. Obviously, a direct correlation between the three

copper bracelets in this grave, and 'high status' is too simplistic a supposition, but the dental health of {34} would suggest a comfortable life.

4.2. CONTEXT {034a}: REMAINS OF NEONATE – 9-MONTH-OLD INFANT

Identification: The author identified this individual during the analysis of the child burial {034} discussed above, it was not recognised on-site as a discrete context. Fourteen bones in total were recovered that, due to their extremely small dimensions, could not have originated from the seven year-old child {034} that was the principal occupant of grave cut [033].

Condition: Only thirteen rib fragments and a single cranial fragment represent this individual. Due to their small size it could not be accurately determined which side of the body any of the thirteen rib fragments originated from. Four of the thirteen rib fragments were copper stained, and three of these had small pieces of corroded copper adhering to them. The single cranial fragment originated from either the left or right temporal bone and included a section of the squamosal suture. In life this part of the temporal bone makes up part of the skull just above and behind the ear.

Age: There are no formal published ageing methods for infant bones based on rib or small cranial fragments alone. The most reliable methods rely on the dentition or long bones and since none of these were preserved, or recovered, the author could not apply them. The only possible way to establish an age-at-death for this individual was to compare these remains to the infant reference collection held at Department of Archaeology and Prehistory at the University of Sheffield. This was done with the kind permission of Dr Chamberlain and Dr Nystrom. The size and overall morphology of the remains of {034a} were compared to the available reference skeletons.

The author determined that they represented the remains of an individual that had survived beyond the 32nd week of gestation, but had not survived to be as old as a year. The closest correlation in terms of morphology was to an infant aged as 0-3 months old. However, a more precise age-at-death estimate than neonate – 9-month-old infant cannot be securely offered on the basis of thirteen pieces of rib and a single cranial fragment. Unfortunately it cannot even be stated whether these remains came from a neonate (a term that means *around* the time of birth, often taken represent either still births or infants that did not survive more than 24 hours) or an infant.

Minimum Number of Individuals (MNI): The author considers that these remains come from one infant. It is possible that more than one infant is represented by these remains, but since there are no doubled bone elements and in total only fourteen pieces of bone survive, the minimum number of individuals represented is one.

Comment: The presence of copper on these remains strongly suggests that they were recovered in close proximity to the three copper alloy bracelets recovered in the chest area of {034}. It could then be suggested that the neonate/infant {034a} was placed on the chest of the child {034} and that they were buried at the same time. There was no archaeological evidence recovered that suggested a separate, later grave cut had been made for {034a}.

Much has been made of the deposition of foetal, neonatal and young infant remains in Romano-British contexts outside of defined cemeteries (Mays 1993; Smith and Kahila 1992). Our present sensibilities are appalled by the seemingly casual discarding of the remains of at or near birth infants in ditches, within building foundations or even within

sewers. In this case {034a} was not treated in this manner and instead placed in a grave with another older child {034}.

Presented with this evidence several questions instantly spring to mind. Were the child {034} and the neonate/infant related {034a}, making this family doubly bereaved? Was this a planned double burial or was {034a} simply placed within an already cut grave intended for an older child because it was convenient? No doubt more sinister questions could also be asked. One final question that is worth considering given that there were two occupants in grave cut [033] is, whom the copper alloy bracelets were intended for.

4.3. CONTEXT {014}: THREE PIECES OF ADULT BONE

Condition: The human remains from this context consisted only of three pieces of adult bone, two cranial and one post-cranial. They originate from a boundary ditch [013] and the most likely explanation for their recovery is that this ditch cut through earlier burials. The cortical integrity of the bones was rather poor showing considerable root damage.

Comment: It is not possible to determine whether these bones came from the same individual or not. The first fragment consists of about 75% of an adult rib shaft that can only be given an age estimate (based on size) of 15+. The second fragment was from a right adult parietal, from the right side of the head. The third fragment was from an adult occipital bone, from the back of the head. The nuchal area of this bone is used in sex determination when a complete skull is available, and this appears to be probably male. It is necessary to stress however that a secure estimation of sex cannot be made on an isolated single feature alone. Both cranial fragments again can only be given an age estimate of 15+.

5. SUMMARY & CONCLUSIONS

- Individual {034} from cut [033] was a seven year-old child (\pm months) of unknown sex. Dental health suggested a childhood with no periods of undue stress and regular access to levels of sugary foods sufficient to cause two carious lesions of medium size. Soft tissue pathology on the right shoulder could suggest repeated activity of some kind.
- Individual {034a} was a neonate – 9-month-old infant placed in the chest area of {034} close to three copper alloy bracelets. The two appear to have been buried at the same time together.
- The bones from context {034} were adult and probably are present because of ditch [013] disturbing earlier burials. No age other than adult and no sex can be determined for these three bones.

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E	Pubis absent
F	Pubis present
G	Isthmus present
H	Pubis present

FUSION CODES	
0	Absent
1	Fused
2	Unfused: epiphysis present
3	Unfused: epiphysis absent
4	Fusion line visible

7. APPENDIX 1: CODES USED DURING OSTEOLOGICAL ANALYSIS

COMPLETENESS OF LONG BONE/RIB CODES	
0	Absent
A	Complete
B	Complete except proximal/medial/vertebral end
C	Complete except distal/lateral/sternal end
D	Shaft only
E	Proximal/medial/vertebral end only
F	Distal/lateral/sternal end only
G	Proximal/medial/vertebral + distal/lateral/sternal ends - shaft incomplete
H	Epiphysis only
J	Juvenile (loose bones only)

COMPLETENESS OF SCAPULA CODES	
0	Absent
A	Complete
B	Fragment
C	Acromion absent
D	Coracoid absent
E	Glenoid absent
F	Acromion present
G	Coracoid present
H	Glenoid present

COMPLETENESS OF PELVIS CODES	
0	Absent
A	Complete
B	Fragment
C	Ilium absent
D	Ischium absent
E	Pubis absent
F	Ilium present
G	Ischium present
H	Pubis present

FUSION CODES	
0	Absent
1	Fused
2	Unfused: epiphysis present
3	Unfused: epiphysis absent
4	Fusion line visible

Appendix 5: Registered small finds

Introduction

Six registered finds and a group of iron nails were submitted for examination following X-radiography and remedial treatment by the Lincolnshire County Council Heritage Service Conservation Department. These were examined in conjunction with the X-ray plates, and recorded and sketched (at 1:1) on standard finds cards to basic archive level. All of the finds are of iron or copper alloy and all are heavily corroded.

Finds List

Finds No.	Context	Material	Object	Date/Comments
1	014	Iron	Spur	Fragment
2	003	Copper alloy	Coin	Late Roman; 4th C (467-75?)
3	033	Copper alloy	Bracelet	Late Roman. Decorated; complete
4	033	Copper alloy	Bracelet	Late Roman. Decorated; complete
4	033	Copper alloy	Bracelet	Late Roman. Decorated; complete
6	042	Iron	-	Nail/staple?
-	033	Iron	Nails	6

The Finds from Grave 032

A small but interesting group of finds was recovered from the fill (033) of grave 032: three complete copper alloy bracelets, found on the chest of the skeleton. Two of these are considerably larger than the other, with internal diameters of between 52 and 61mm; both are plano-convex in section and bear linear ornament. One <4> bears groups of three or four transverse grooves around its circumference, while the other <5> has panels of transverse or oblique grooves, the latter giving a 'cabled' effect. The third piece <3> is much smaller, at between 40 and 42mm in internal diameter, and is a slender rectangular-sectioned strip ornamented with a continuous band of single ring and dot motifs, flanked by shallow notches along the edges of the strip. All of these forms of ornament occur commonly on bracelets of late 3rd- and 4th-century date; similar decoration, for example, can be seen on the bracelets from the Late Roman cemetery at Lankhills (Clarke 1979). One terminal of both <3> and <4> is shaped into a simple hook, with the opposing terminal having a circular perforation to receive it; the simple tapered terminals of <5> bear no evidence of a clasp and probably just butted together.

The bracelets were found together as a group, apparently deposited on top of the body rather than being worn; interestingly, a recent survey of burial practices in Roman Britain (Philpott 1991, 147) noted the occurrence of the majority of unworn personal ornaments in the graves of young girls. The only other finds from this grave were six (coffin-) nails, all of standard Roman types with either a rounded/rectangular or a T-shaped head.

Other Finds

The coin <2> is fragmentary and corroded but the little detail that survives suggests that this, too, is a Late Roman piece; it is tentatively identified as a *Securitas Reipublicae* issue of the House of Valentinian (A.D. 367-75).

The only other item of note is a heavily corroded iron fragment <1> which appears to be part of the heel of a spur; both arms are broken and only the stump of its neck survives, so it is impossible to

determine whether this is the remains of a prick- or a rowel-spur. The breadth of the heel-piece and the remains of the arms, however, suggest that this may be of medieval date.

Recommendations

All finds should be retained. The bracelets from grave 032 should be drawn (prior cleaning and/or further X-ray is recommended in order to elucidate details of the ornament that are currently obscured by corrosion), and merit publication as a short note in a local journal.

References

Clarke, G, 1979 *The Roman Cemetery at Lankhills, Winchester Studies, 3, part 2*

Philpott, R, 1991 *Burial Practices in Roman Britain, A survey of grave treatments and furnishing A.D. 43 - 410, BAR, 219*

Appendix 6: List of Archaeological Contexts

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
001	layer	topsoil
002	layer	topsoil
003	layer	buried soil
004	layer	natural sand
005	layer	natural clayey sand
006	layer	limestone bedrock
007	cut	ditch
008	fill	fill of [007]
009	cut	ditch
010	fill	fill of [009]
011	cut	ditch
012	fill	fill of [011]
013	cut	ditch
014	fill	fill of [013]
015	cut	?pit/ditch butt-end
016	fill	fill of [015]
017	cut	pit
018	fill	fill of [017]
019	cut	ditch
020	fill	fill of [019]
021	cut	gully
022	fill	fill of [021]
023	cut	Neolithic feature
024	fill	fill of [023]
025	cut	gully
026	fill	fill of [025]
027	cut	grave
028	fill	fill of [027]
029	skeleton	within grave [027]
030	cut	pit
031	fill	fill of [030]
032	cut	grave
033	fill	fill of [032]
034	skeleton	within grave [032]
035	cut	?pit
036	fill	fill of [035]
037	cut	well
038	fill	fill of [037], above (039)
039	fill	fill of [037], above (040)
040	fill	fill of [037], above (041)
041	fill	fill of [037], above (042)
042	fill	fill of [037], below (041)
043	stone	wall
044	stone	demolition layer
045	layer	below (044)
046	cut	posthole
047	fill	fill of [046]
048	cut	gully
049	fill	fill of [048]
050	cut	possible grave (unexcavated)
051	cut	possible grave (unexcavated)