Summary

Pre-Construct Archaeology (Lincoln) carried out an archaeological evaluation for J Derbyshire Design Partnership on land at 2 Church Lane, Bonby, North Lincolnshire (centred on NGR; TA 00295 15411).

A total of six evaluation trenches were excavated. Evidence that may represent settlement activity associated with the medieval village was recorded in three of the trenches.

A post-medieval ditch was identified and probably represents an element of garden design. A number of other features, including three linear features and a stone feature of unknown purpose, were identified but produced no dating evidence.

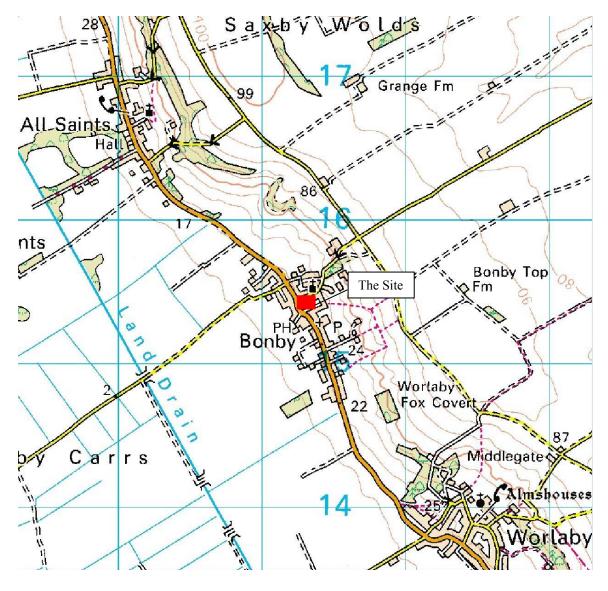


Figure 1 Site Location Plan (Scale 1:25,000) (O.S. Copyright Licence No. A1 515 21 A0001)

1.0 Introduction

In February 2008 Pre-Construct Archaeology (Lincoln) (PCA Lincoln) carried out an archaeological evaluation for J Derbyshire Design Partnership on land at 2 Church Lane, Bonby (centred on NGR; TA 00295 15411).

This work was undertaken on the recommendation of the North Lincolnshire Archaeological Advisor to determine the archaeological potential of the site in advance of a decision on planning application (Ref. PA/2008/0118).

The evaluation was carried out in accordance with a detailed Archaeological Specification prepared by PCA Lincoln in 2008, which was submitted to and approved by Alison Williams of the North Lincolnshire Sites and Monument Records (NLSMR) who acts as archaeological advisor to the local planning authority.

The scheme of investigation complies with the recommendations of *Archaeology & Planning: Planning Policy Guidance Note 16* (DoE 1990), *Management of Archaeological Projects* (EH 1991), *Standards and guidance for archaeological evaluations* (IFA 1999) and *A Brief for Archaeological Evaluation of 2 Church Lane, Bonby* (NLSMR 2008).

2.0 Site Location and Description (Figs. 1 and 2)

The site is located within the village of Bonby which lies approximately 10km to the north-west of Scunthorpe and approximately 6.5km south-east of Barton upon Humber

Bonby rests on the eastern edge of the Ancholme Valley, forming one of the 'Low Villages' running along a spring line at the foot of the Lincolnshire Wolds.

The Ancholme valley in general is relatively narrow and well-defined; its villages are typically located on the margin of the wetland, with the parishes elongated to incorporate some higher dry land in each (Van de Noort *et. al.* 1998). The village centres on the junction of the B1204 (Main Street), which links the Low Villages, with a minor road (Church Lane) running north to the parish church.

The eastern edges of the parishes of Bonby and the other Low Villages incorporate the track known as 'High Street', believed to be of prehistoric origin, which runs along the limestone ridge southwards from its northern end at South Ferriby.

The site lies within the core of the village. It comprises of a roughly rectangular unit of approximately 0.3ha, currently occupied by a 1970s house and mature gardens.

The site is bounded to the east and south by residential properties and by Church Lane to the north and Main Street to the west. It lies at approximately 24m AOD and is terraced down to the west.

The site lies on the border between two drift deposits, Sand and Gravel (including post-lacustrine levee sand) of the Vale of York Glacial Deposits and Blown Sand. The underlying solid geology is Ancholme Clay Group of the Upper Jurassic (BGS 1983).

3.0 Planning Background

Planning permission is being sought for redevelopment on land at 2 Church Lane, Bonby (Ref. PA/2008/0118) and it was recommended by Alison Williams of NLSMR acting as advisor to the Local Planning Authority (LPA) that a programme of archaeological evaluation should be undertaken to inform any planning decision.

4.0 Archaeological and Historical Background

Evidence for occupation dating to the prehistoric and Romano-British periods has been identified around the village of Bonby.

In 2001 archaeological remains were revealed during construction adjacent to the site. A large storage pot of Iron Age date was recovered from the foundation trenches of the house nearest Main Street, while other archaeological features, including areas of burning, were observed across the rest of the site. It is likely that these remains are from a late prehistoric settlement (SMR ID 19711).

The High Street track is believed to have continued in use during the Roman period, connecting the settlement at South Ferriby, the most northerly of the Low Villages, to the major Roman settlements of Horncastle and Caistor. Roman villa sites have been excavated in Horkstow and Worlaby, two of the other Low Villages, to north and south of Bonby respectively, while an extensive Romano-British settlement lies to the east of Bonby village, and Roman pottery has been retrieved from within the village, close to the current development (SMR ID; 19707, 19714, 19964).

Saxon remains have been identified within the village, while the name itself is of Viking origin, from the Old Danish by, 'village', and either the Old Danish personal name Bondi or the term bondi or bunde, 'a peasant proprietor'. The place-name 'Bonby' first appears in the Domesday Survey of AD 1086 as Bundebi. (Cameron 1998).

At the time of the Domesday Survey, the Bonby estates had been consolidated from the landholdings of seven English *thegns* to the manors of two Norman nobles, Hugh fitz Baldric and Ralph de Mortimer. Land use at the time appears to have been exclusively as arable farmland, and was clearly profitable: the taxable value of Hugh fitz Baldric's estate had increased from £4 to £6 while Ralph de Mortimer's smaller estate was worth 20 shillings. The total population of Bonby is listed as 24 households, although the settlement itself would have been larger, as not all inhabitants would have been eligible for taxes, and so would not be registered (Morgan *et. al.* 1986).

The church of St. Andrew is not listed in Domesday Book; it was probably established soon afterwards as it has a Norman nave, with traces of a 13th century arcade. The church was heavily altered in the 18th century and was restored at the end of the 19th century (Pevsner 1989).

During the reign of King John (AD 1199-1216), an alien priory was founded in Bonby: a cell of the Benedictine abbey of St. Fromond in Normandy. The alien priories were suppressed by the Crown during the 14th century, and their possessions,

for the most part, granted to new religious foundations: Bonby passed into the keeping of the Carthusians; its location is now lost (SMR ID 1010).

The 1st edition Ordnance Survey map of 1889-1891 shows the village as occupying much the same area as it does today, but more sparsely populated.

5.0 Methodology

Six evaluation trenches were excavated, each measuring 10m long by 1.6m wide. Initial excavation was carried out using a JCB mechanical excavator fitted with a 1.60m wide toothless grading bucket. All overburden was mechanically removed until the first archaeologically significant horizon or natural substrate was encountered, all further excavation was by hand.

Archaeological features were sample excavated to establish depths and profiles and, where possible, date and function. Features were recorded in plan and in section at appropriate scales (1:50 and 1:20). Written accounts were prepared on pro forma context record sheets and samples taken as appropriate. A photographic record (colour and monochrome) was maintained throughout the project, and selected prints have been reproduced in this report.

The site was monitored by Alison Williams (NLSMR) during a visit on 27th February 2008. Trench 5 was relocated from its originally proposed location due to the presence of a brick outbuilding.

6.0 Results

6.1 Trench 1 (Fig 3)

No archaeological features or deposits were encountered.

The natural substrate (103) was 1.24m Below Present Ground Level (BPGL). This was sealed by a drift sand deposit (102) which in turn was sealed by subsoil (101). This was sealed by topsoil (100).

6.2 Trench 2 (Figs 3 and 4)

Two small gullies and a possible hearth structure were identified within the trench.

Wind-blown sand deposit (202) was encountered at 0.91m BPGL. Two small sherds of pottery were recovered from the top of this deposit, dating to the post-medieval period, and are probably intrusive.

Deposit (202) was cut by two small gullies (204 and 206 respectively) and a stone built feature [207].

Gully [204] was orientated north-east to south-west. Towards the south-western end it appeared to turn 90° to the south-east.

Gully [206] ran parallel with gully [204], it terminated prior to gully [204] changing orientation.

In section at the south-western end of the trench were a number of stones overlying oxidised sand. This possible structure [207] could not be investigated further as it lay beyond the trench. It may form part of a hearth structure.

Features [204], [206] and [207] were sealed by subsoil (201), which was sealed by topsoil (200).

6.3 Trench 3 (Figs 3 and 5)

A pit, ditch and gully were identified within the trench.

The natural geology (311) was encountered at 1.65m BPGL. Cut into the natural gravel was a possible gully [310]. This feature was only exposed at the base of a large ditch [308]. Gully [310] was shallow with a 'u' shaped profile and contained a single fill.

This was sealed by sand deposit (302) which has been interpreted as wind blown sand. Further investigation of gully [310] was limited due to the depth at which it was encountered. A sample of fill (309) was taken from gully [310] and was found to contain only one fragment of snail shell and no further environmental remains were present.

Cut into deposit (302) was a ditch [308] and a small pit [304].

Pit [304] was only partially exposed; it was shallow with steep sides and flat base. It contained a single fill which incorporated pottery dating to the late 12th-14th century.

Ditch [308] contained three silting fills. Its steep sides suggest that its purpose may have been for drainage as well as acting as a boundary.

6.4 Trench 4 (Figs 3 and 6)

A ditch and possible cess pit structure were identified within the trench.

The natural geology (406) was encountered at 1.50m- 0.15m BPGL, the trench was situated on a steep slope which had been partially terraced.

Cutting the natural was ditch [408] and a possible cess pit structure [404].

Structure [404] was only visible in section. It consisted of two limestone walls with two deposits between them. It is of unknown purpose but may possibly be a cess pit. A single pot sherd recovered from the backfill, (402), within this structure has been dated to the mid 12th century.

Ditch [408] post-dated structure [404] as it was cut through the base of its construction.

Deposit (405) may have been redeposited as part of the terracing on site as it sealed ditch [408] and butted structure [404]. This suggests that the western wall of structure [404] may have been exposed at some point.

Sealing all deposits was topsoil (400).

6.5 *Trench 5 (Figs 3 and 7)*

Two substantial ditches were identified within the trench.

Wind blown sand deposit (502) was encountered at 0.80m BPGL. This was cut by two ditches, [504] and [507].

Ditch [504] had a similar profile to ditch [308] in Trench 3, with shallow, changing to steep, sides and a concave base. Pottery sherds from fill (503) have been dated to the mid 12thcentury, though a sherd of residual 5th-8th century pot was also found and indicates possible Anglo-Saxon activity in the vicinity. A sample of the fill was taken for environmental processing but only a small number of snail shell fragments were identified.

Ditch [507] was wide and shallow with two fills. Pottery sherds from both have been dated to the mid 17th- 18th century. A sample of fill (506) was taken for environmental processing but only a small number of snail shell fragments were identified and a single carbonised barley/wheat grain.

These features were sealed by subsoil (501), which in turn was sealed by topsoil (500).

6.6 Trench 6 (Fig 3)

No archaeological features or deposits were encountered.

The natural substrate (602) was encountered at 0.60m BPGL. This was sealed by subsoil (601) which in turn was sealed by topsoil (600).

7.0 Discussion and Conclusions

7.1 Discussion

The evaluation identified a number of archaeological features dated to the medieval period (pit [304], ditch [504] and possible cess pit [404]). Features dated to the post-medieval period (ditch [507]) were also identified. Several other features remain undated; these include three gullies ([204], [206] and [310]), ditch [308] and possible hearth [207].

7.2 Medieval

Ditch [504] produced well stratified material dating to the mid 12th century. As the site appears to be well drained it might be speculated that this ditch delineated property boundaries fronting on to Church Lane during the medieval period.

Ditch [308]) has the same distinctive profile as ditch [504] and although no finds were recovered from it in the evaluation it may be contemporary.

The stone built structure [404) produced a single sherd of pottery dated to the mid 12th century in the final fill. This structure was identified in the section of Trench 4 and therefore its full extent and function is unclear. It may possibly be a cess pit; this would be in an appropriate location for properties fronting on Church Lane or Main Street.

7.3 Post-Medieval

Ditch [507] appears to be the terminus for a large ditch. If this continues further to the south, then ditch [408], which remains undated, may be a part of the same feature. This ditch may be a post-medieval successor to the medieval ditch [504] which it runs parallel to.

7.4 Undated

Wind blown sand deposit (302) was cut by pit [304] giving a *terminus ante quem* of 12th-14th century for the creation of deposit (302).

Gullies [206] and [204] were shallow and may possibly have been drainage gullies associated with structures, though no clear evidence to support it was encountered within the trench.

Stone built structure [207] was only identified in the section of Trench 2 and its full extent and function was not clear. The presence of oxidised sand beneath the stones suggests heating and may indicate that this feature was a hearth or oven.

7.5 Conclusions

The evaluation has identified archaeological remains within the boundary of the proposed development site which have been dated to the medieval and post-medieval periods. The features identified (ditches, gullies and two stone built structures) may be interpreted to reflect settlement activity. The soil samples taken for environmental assessment indicate that the preservation of environmental evidence on site is generally poor

The presence of gully [310] sealed beneath wind blown sand deposit (302) may indicate the presence of archaeological features pre-dating the medieval period.

8.0 Acknowledgements

Sincere thanks are expressed to the commissioning body J. Derbyshire Design Partnership.

9.0 Bibliography

B.G.S. 1983 British Geological Survey; England and Wales, Solid and Drift: Kingston upon Hull, Sheet **80**. Scale 1: 50 000

Cameron, K. 1998 *A Dictionary of Lincolnshire Place-Names* The English Place-Name Society

Morgan, P. and Thorn, C. 1986 Domesday Book: Lincolnshire Phillimore

Pevsner, N. 1989 The Buildings of England; Lincolnshire Penguin

Van de Noort, R. and Ellis, S. (eds) Wetland heritage of the Ancholme and lower Trent valleys; An Archaeological Survey University of Hull Press

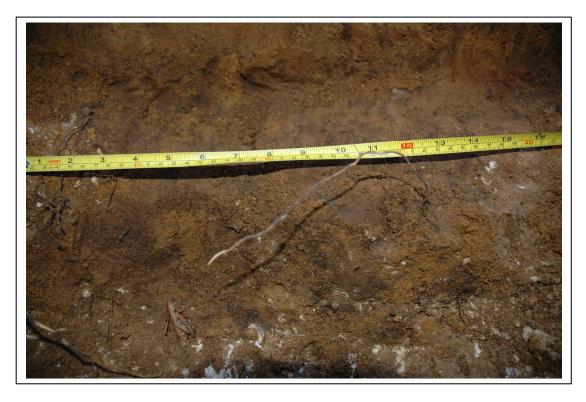
APPENDIX 1 Colour Plates



Trench 3, showing ditch 308 and pit 305, looking north-west



Ditch 308, looking south-west



South section of possible gully 310 at base of sondage, looking north



Structure 404, looking north



Possible structure 207, looking west



Ditch 504, looking north



Ditch 507, looking north-west

APPENDIX 2 Context List

| Trench 1 | |
|----------|---|
| Context | Description |
| 100 | Topsoil; dark black brown clay sand with rare small angular stones. 0.21m |
| | in depth |
| 101 | Subsoil; dark orange brown sandy clay, no inclusions. 0.72m in depth |
| 102 | Natural; mid yellow orange sand. 0.30m in depth |
| 103 | Natural; white limestone gravel moderate/small in size. Unexcavated |

| Trench 2 | | | | | | |
|----------|---|--|--|--|--|--|
| Context | Description | | | | | |
| 200 | Topsoil; dark black brown clay sand with rare small angular stones. 0.35m | | | | | |
| | in depth | | | | | |
| 201 | Subsoil; dark orange brown sandy clay, rare charcoal flecking. 0.35m in | | | | | |
| | depth | | | | | |
| 202 | Wind blown sand; mid yellow orange sand. | | | | | |
| 203 | Fill of ditch; mid orange brown clay sand. 0.16m in depth | | | | | |
| 204 | Cut of ditch; shallow sided with concave base. 0.56m in width, 0.16m in | | | | | |
| | depth | | | | | |
| 205 | Fill of gully; mid orange brown clay sand. 0.04m in depth | | | | | |
| 206 | Cut of gully; shallow sloped sides and concave base. 0.52m in width, | | | | | |
| | 0.09m in depth | | | | | |
| 207 | Structure; limestones with oxidised sands beneath set into a construction | | | | | |
| | cut. Unknown date and purpose as only in section. | | | | | |

| Trench 3 | | | | | | |
|----------|---|--|--|--|--|--|
| Context | Description | | | | | |
| 300 | Topsoil; dark black brown clay sand with rare small angular stones. 0.25 | | | | | |
| | in depth | | | | | |
| 301 | Subsoil; dark orange brown sandy clay, rare charcoal flecking. 0.45m in | | | | | |
| | depth | | | | | |
| 302 | Wind blown sand; mid yellow orange sand. | | | | | |
| 303 | Primary fill of ditch; mid orange brown silty sand. 0.30m in depth | | | | | |
| 304 | Cut of pit; steep sided with concave base. 1.05m in width, 0.45m in depth | | | | | |
| 305 | Primary fill of pit; mid orange brown sandy silt. 0.20m in depth | | | | | |
| 306 | Final fill of ditch; mid yellow brown sandy silt. 0.05m in depth | | | | | |
| 307 | Secondary fill of ditch; mid grey brown sandy silt. 0.55m in depth | | | | | |
| 308 | Cut of ditch; shallow to steep sided with concave base. 1.85m in width, | | | | | |
| | 0.95m in depth | | | | | |
| 309 | Primary fill of gully; dark grey brown silty sand. 0.10m in depth | | | | | |
| 310 | Cut of gully; steep sided with concave base. 0.40m in width and 0.10m in | | | | | |
| | depth | | | | | |
| 311 | Natural; white limestone gravel moderate/small in size. Unexcavated | | | | | |

| Trench 4 | | | | | | | |
|----------|---|--|--|--|--|--|--|
| Context | Description | | | | | | |
| 400 | Topsoil; dark black brown clay sand with rare small angular stones. 0.30m | | | | | | |
| | in depth | | | | | | |
| 401 | Tarmac; modern tennis court surface. 0.15m in depth | | | | | | |
| 402 | Final fill of structure; dark grey brown sandy clay. 0.82m in depth | | | | | | |
| 403 | Primary fill of structure; mid yellow brown with dark grey brown lenses | | | | | | |
| | silty clay. 0.11m in depth | | | | | | |
| 404 | Structure; Pair of roughly hewn limestone walls, possibly forming a | | | | | | |
| | structure. Only visible in section. Possible cess tank? 1.80m in width, | | | | | | |
| | 1.20m in depth | | | | | | |
| 405 | Subsoil; dark orange brown sandy clay, no inclusions. 0.80m in depth | | | | | | |
| 406 | Natural; white limestone moderate to small gravel with sandy lenses. | | | | | | |
| 407 | Primary fill of ditch; dark orange brown clay sand. 0.45m in depth | | | | | | |
| 408 | Cut of ditch; moderate sided with concave base. 1.20m in width, 0.45m in | | | | | | |
| | depth | | | | | | |

| Trench 5 | | | | | | |
|----------|---|--|--|--|--|--|
| Context | Description | | | | | |
| 500 | Topsoil; dark black brown clay sand with rare small angular stones. 0.30m | | | | | |
| | in depth | | | | | |
| 501 | Subsoil; dark orange brown sandy clay, no inclusions. 1.00m in depth | | | | | |
| 502 | Wind blown sand; mid yellow orange sand. | | | | | |
| 503 | Primary fill of ditch; mid grey brown sandy silt. 0.90m in depth | | | | | |
| 504 | Cut of ditch; moderate to steep sided with concave base. 2.30m in width, | | | | | |
| | 0.90m in depth | | | | | |
| 505 | Final fill of ditch; dark grey brown sandy clay. 0.12m in depth | | | | | |
| 506 | Primary fill of ditch; light white grey clay. 0.15m in depth | | | | | |
| 507 | Cut of ditch; moderate sided with flat base. 2.60m in width, 0.40m in | | | | | |
| | depth | | | | | |

| Trench 6 | |
|----------|---|
| Context | Description |
| 600 | Topsoil; dark black brown clay sand with rare small angular stones. 0.30m |
| | in depth |
| 601 | Subsoil; dark orange brown sandy clay, no inclusions. 1.00m in depth |
| 602 | Natural; mid yellow orange sand and gravel. |

APPENDIX 3 Faunal Remains Report

2 Church Lane, Bonby, North Lincolnshire (TCBL 08) The Faunal Remains By Jennifer Wood

Introduction

A total of 30 (1163g) fragments of animal bone were recovered by hand during trial trench excavation undertaken by Pre-Construct Archaeology Lincoln.

The remains were recovered from features and deposits dated from the Medieval, Post-Medieval and modern periods. These include modern topsoil (500), and subsoil (405) and (501), undated pit [304] and ditch [308] and medieval ditch [504] and post-medieval ditch [507].

Methodology

The entire assemblage has been fully recorded into a database archive. Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986) in addition to the use of the reference material. Where distinctions could not be made the bone was recorded as sheep/goat (S/G).

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one. The data produced the basic NISP (Number of Identified Specimen) counts.

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982), Levine (1982) and Payne (1973), and fusion data was analysed according to Silver (1969). Measurements of adult, that is, fully fused bones were taken according to the methods of von den Driesch (1976), with asterisked (*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

Results

The remains were generally of a moderate- good overall condition, averaging at grades 2 - 3 on the Lyman criteria (1996).

Three fragments of bone recovered from pit [304], ditch [507] and subsoil (501) displayed evidence of butchery, possibly associated with jointing/disarticulation of the carcass.

A single large mammal sized tibia fragment recovered from ditch [507] displayed evidence of carnivore gnawing. No evidence of burning, or pathology were noted on any of the remains.

Table 1, Summary of Identified Bone (NISP)

| Trench | | | | | | | | | |
|-------------|-------------------------|---------|---------|---------|---------|----------------------|---------------------------|-----|-------|
| No. | 3 | | 4 | 5 | | | 6 | | |
| | Late 12 th - | | | | | | Mid 17 th - | | |
| | 14 th C | Undated | Modern | Modern | Modern | Mid 12 th | 18 th C | | |
| | Pit | Ditch | Subsoil | Topsoil | Subsoil | C ditch | ditch | | |
| Taxon | [304] | [308] | (405) | (500) | (501) | [504] | [507] | U/S | Total |
| Equid | | | | | | | | | |
| (Horse | | | | | | | | | |
| Family) | | 1 | | | | | | | 1 |
| Cattle | 1 | | 1 | 1 | 1 | 1 | 2 | | 7 |
| Sheep/Goat | | 1 | | | | 1 | 2 | 3 | 7 |
| Pig | | | | | | 1 | 1 | | 2 |
| Dog (Canis | | | | | | | | | |
| Familiaris) | | | | | | 1 | | | 1 |
| Large | | | | | | | | | |
| Mammal | | | | 2 | | 2 | 3 | 2 | 9 |
| Medium | | | | | | | | | |
| Mammal | | | | | | 3 | | | 3 |
| Total | 1 | 2 | 1 | 3 | 1 | 9 | 8 | 5 | 30 |

As can be seen from table 1, the majority of the remains were identified as sheep/goat and cattle in equal numbers, with pig, dog and *equid* remains also identified. The assemblage was relatively small and possibly suggests that the features were located away from the main settlement activity.

The assemblage is too small to provide meaningful information on animal husbandry and utilisation on site, save the presence of the animals on site. The skeletal elements represented suggest the remains were probably from butchery waste.

In the possible event of further archaeological works, the site would be liable to produce further remains of a similar condition and nature, with good/moderate potential to provide further information on dietary economies and underlying husbandry practices for the site.

References

Baker, J, and Brothwell, D, 1980 Animal Diseases in Archaeology, Academic Press

Binford, L., 1981, Ancient Men and Modern Myths, New York: Academic Press.

- Boessneck, J, 1969 Osteological Differences in Sheep (*Ovis aries* Linné) and Goat (*Capra hircus* Linné), in D Brothwell and E Higgs (eds) *Science in Archaeology*, Thames and Hudson, 331-358
- von den Driesch, A, 1976 A Guide to the Measurement of Animal Bones from Archaeological Sites, Peabody Museum
- Grant, A, 1982 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in B Wilson et al. Ageing and Sexing Animal Bones from Archaeological Sites, BAR British Series 109, 91-108, Oxford
- Halstead, P, 1985 A Study of Mandibular Teeth from Romano-British Contexts at Maxey, in F Pryor, *Archaeology and Environment in the Lower Welland Valley*, East Anglian Archaeology Report 27:219-224
- Levine, M A, 1982 The Use of Crown Height Measurements and Eruption-Wear Sequences to Age Horse Teeth. In Wilson, B et al. *Ageing and Sexing Animal Bones from Archaeological Sites*. BAR British Series 109. 223 250
- Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge
- Prummel, W and Frisch, H-J, 1986 A Guide for the distinction of species, sex and body size in bones of sheep and goat, *Journal of Archaeological Science* XIII., 567–77
- Serjeantson, D, 1996 The Animal Bones, in *Refuse and Disposal at Area 16, East Runnymede: Runnymede Bridge Research Excavations*, Vol. 2, (eds) E S Needham and T Spence, British Museum Press, London
- Silver, I, A, 1969, The Ageing of Domestic Animals, in D. Brothwell and E.S. Higgs, *Science in Archaeology*, Thames and Hudson.