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ARCHAEOLOGICAL EVALUATION REPORT
LAND AT THE GREEN,
ORBY, LINCOLNSHIRE

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Report Prepared for P. Sharp
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May 2000

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Summary

- A programme of archaeological trial excavation took place on land situated at the centre of the village of Orby, Lincolnshire (TF 4911 6728).
- This intrusive fieldwork followed a detailed gradiometer survey, which produced results suggesting the presence of in-situ, sub-surface archaeological remains.
- Archaeological remains were identified and investigated in all five trenches. This suggests that similar remains, of variable density, exist right across the site and that the proposed development may have some impact upon these deposits.
- The archaeological remains relate to late-Anglo-Saxon and medieval settlement, the latter having developed on the periphery of a large manorial complex, the remains of which still exist some 75m to the south of the site.

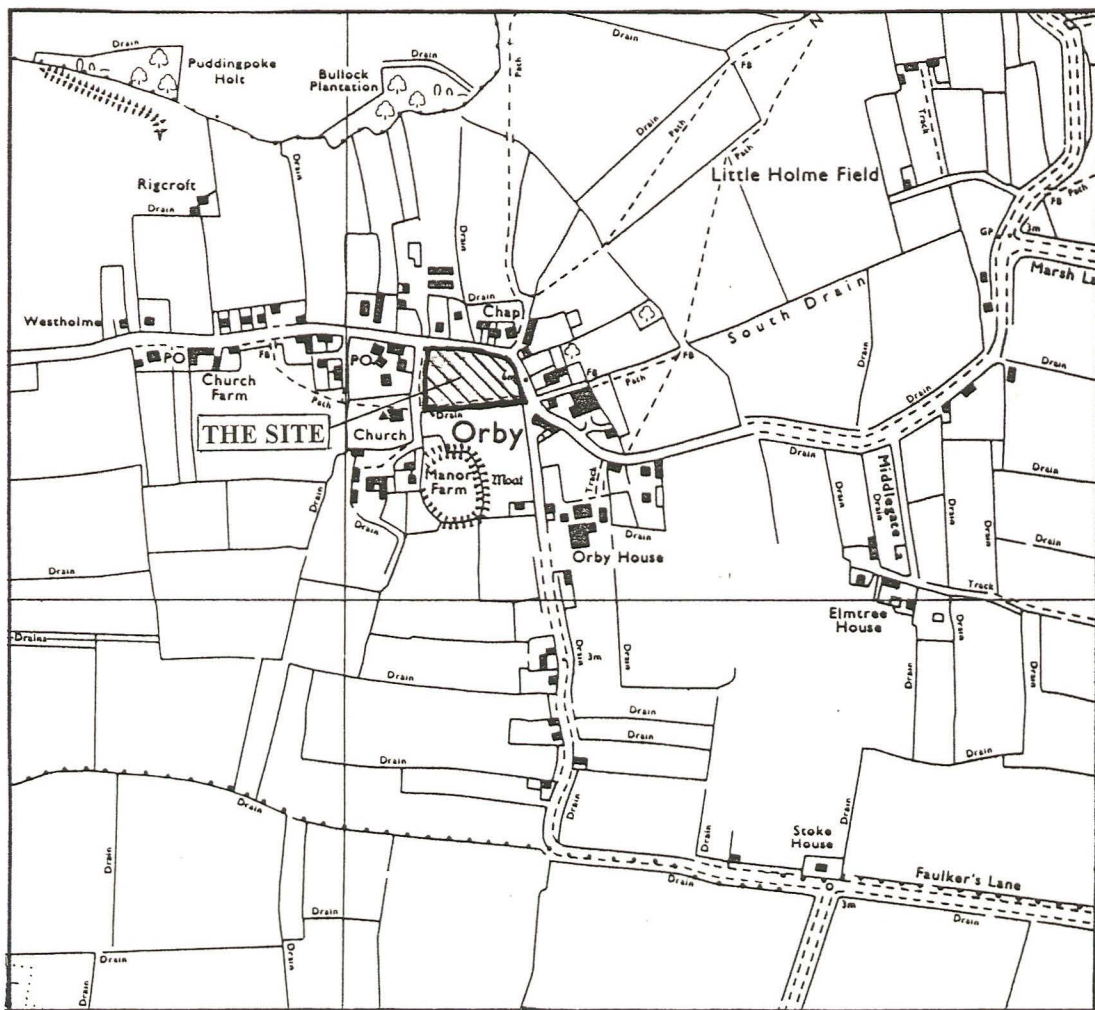


Figure 1: Site location at a scale of 1: 10,000
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1.0 Introduction

Mr P. Sharp commissioned Pre-Construct Archaeology (Lincoln) to undertake a programme of archaeological investigation on land, known as The Green, at Orby, Lincolnshire. These works were commissioned to fulfil a planning requirement in advance of residential development.

This report details the results of an archaeological evaluation that followed a geophysical survey of the site. It also incorporates a series of assessments by specialist researchers who studied the archaeological materials recovered during excavation. The text follows current national guidelines (IFA, 1994) and the local guidelines set out in the Lincolnshire County Council document *Lincolnshire Archaeological Handbook: A Manual of Archaeological Practice* (LCC, 1998).

2.0 Location and description

Orby lies approximately 7km north-west of Skegness and 26km east of Horncastle, within the administrative district of East Lindsey. It is situated within the Lindsey Marshes, near the southern tip of the Lincolnshire Wolds. The Green is located at the core of the village and is an irregularly shaped plot of c. 0.95 hectares (fig. 1).

The site is currently covered by rough pasture, which has developed over the last three years. Prior to this the field had been in cultivation for a period exceeding thirty years. It is therefore surprising that a number of earthworks are still visible as slight undulations, despite the depredations of years of ploughing; the most obvious of these appears to be a north – south orientated hollow-way in the north-west corner of the site. Generally, however, the site is relatively level, with the ground surface sloping very slightly from the highest point in the south-west corner (c. 5.85m OD) toward the east boundary (c. 5.50m). Dikes and hawthorn hedging bound the site to the west and north, with a further dike forming the boundary to the south and a hedge defining the eastern extent.

The local soils belong to the Holderness Association and are typically stagnogleys of restricted permeability (Hodge, *et al.*, 1984). These soils have developed upon chalky glacial tills and glacio-fluvial drift deposits, which contain frequent pebbles, including a variety of types of flint and ironstone. The solid geology underlying these deposits consists of Upper Cretaceous chalks.

Central National Grid Reference TF 4911 6728.

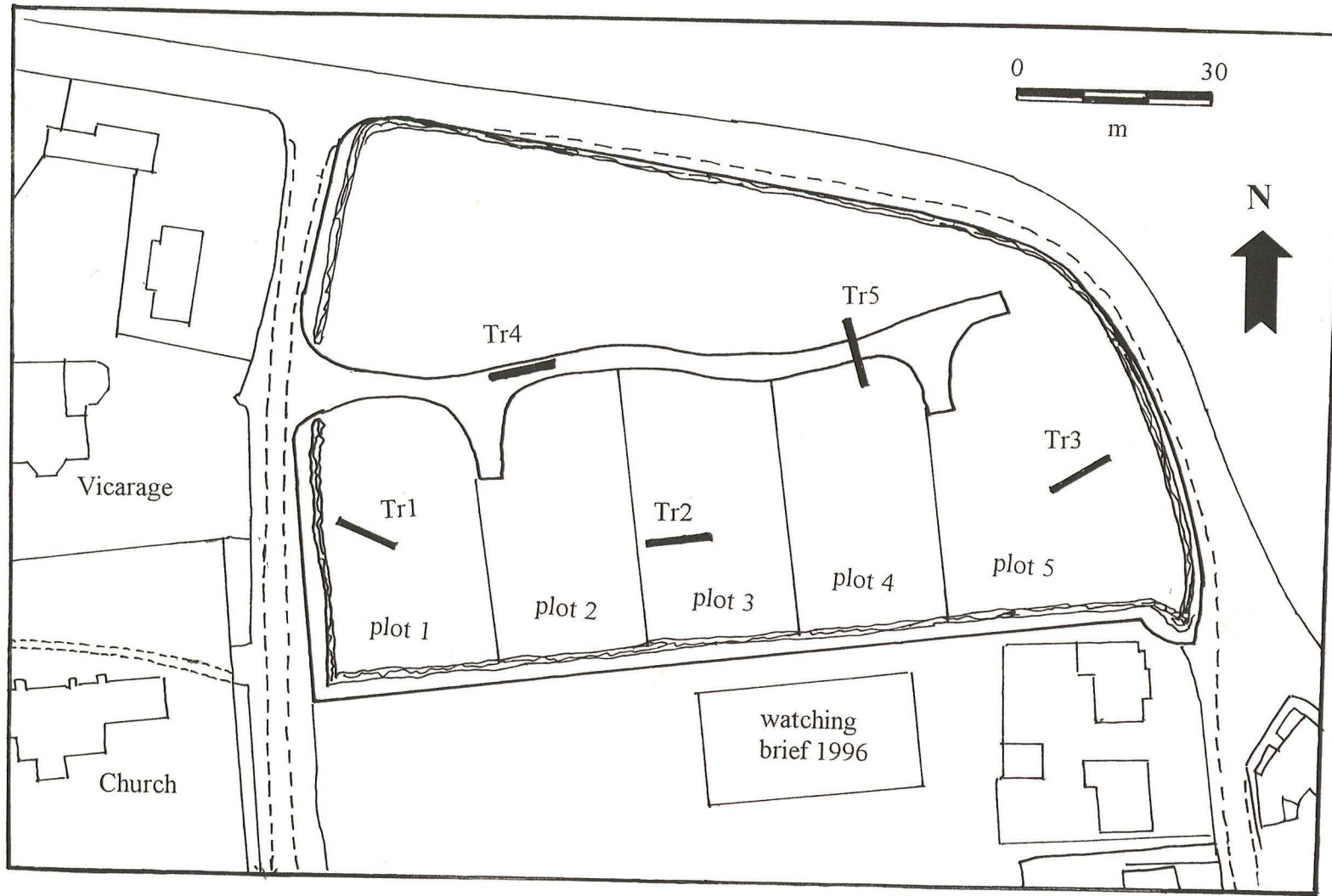


Figure 2: The location of the archaeological trenches

3.0 Planning background

Outline planning consent for the construction of five dwellings on the southern half of the site and an associated private access road was granted in December 1998 (fig. 2). It was also determined that the area to the north of the access road would remain as a 'green area', to be managed under a section 106 agreement (dated November 1998).

The archaeological works described in this document were commissioned as a component of the undertakings necessary to obtain full planning permission for the development of the site.

4.0 Archaeological and historical background

The oldest datable archaeological material recovered from Orby relates to Iron Age and Romano-British salt production. Pottery and briquetage associated with this industry has been recovered from the exposed faces of numerous drainage ditches, with reports of such finds in the parish dating back to 1870 (May, 1976). However, it should be noted that all such saltern sites recorded in the Lincolnshire SMR are located at least 2.5km to the east of the development forming the subject of this report.

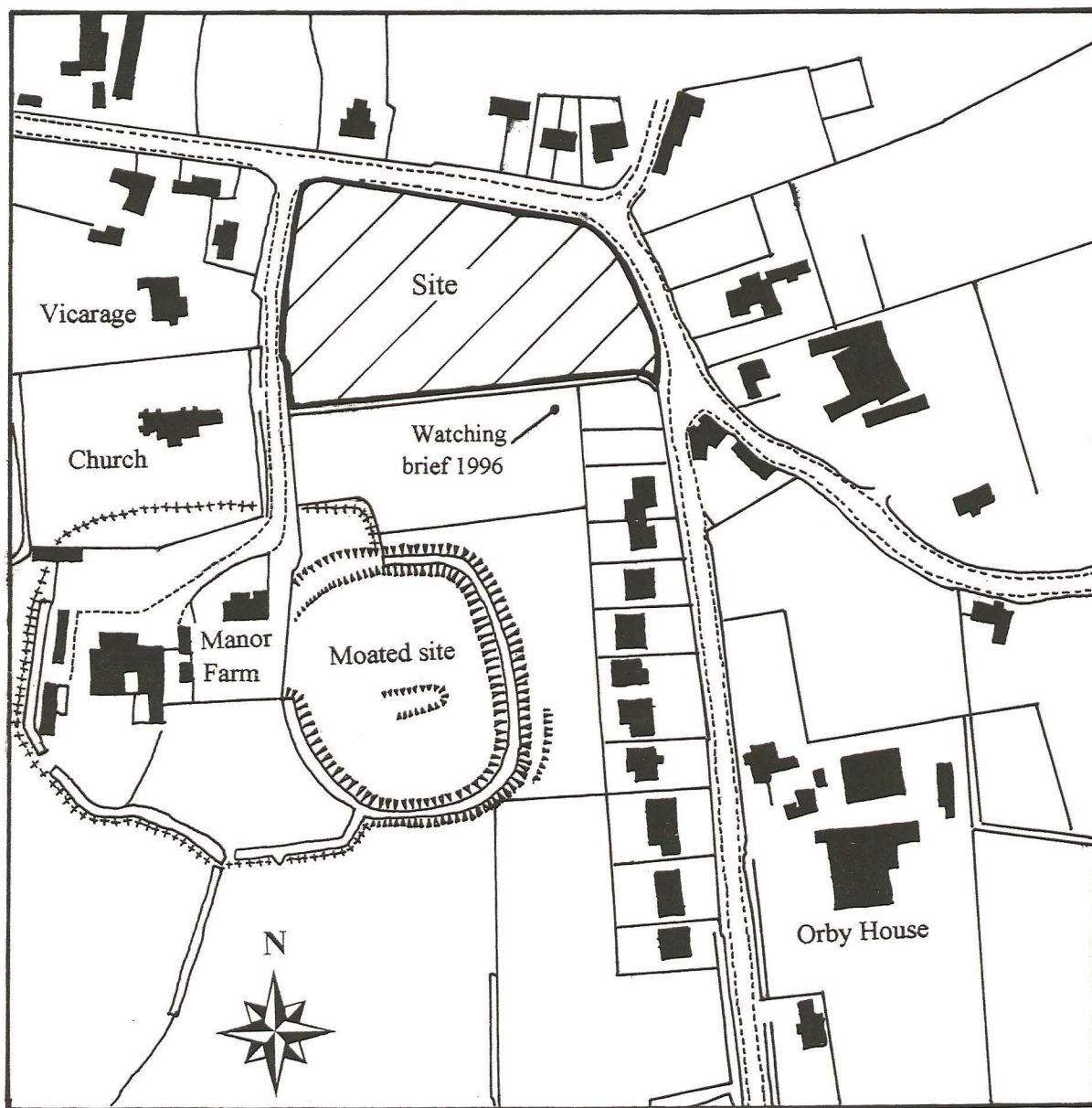
A Roman road runs north-westward from Skegness and skims the south-western edge of Orby parish; it comes no closer to The Green than c. 1km.

Orby is first mentioned in the Domesday Book of 1086 as *Heresbi*. However, this is a rather unusual citation, as it does not relate to any property within the parish itself, rather the settlement is used as a reference point to help locate lands held by the Bishop of Durham in neighbouring Addlethorpe (Foster & Longley, 1924). Why an assessment of holdings in and around the settlement was not included, in the otherwise relatively comprehensive Domesday survey, must remain a mystery.

By c. 1115, the village name is recorded as *Orreby*, which appears to mean the farmstead or village of *Orri*; *Orri* is an Old Scandinavian masculine personal name meaning 'black cock' (Mills, 1993).

The western edge of the site lies only 35m east-north-east of All Saints parish church, a grade II* listed building (fig. 3). This building is predominantly constructed of Greenstone, erosion of which has led to sizeable areas being repaired in red brick. The majority of the current structure was built in the Perpendicular style during the 14th century, but there are a number of older elements (Pevsner & Harris, 1989). The earliest of these is a Norman capital, reused in the fabric and probably signifying the prior existence of a much older structure. The presence of such 'antique' elements would also seem to contradict an anecdotal note in *White's Directory* (1856) which states that the church was initially constructed in 1297, at the behest of a prior of Thornholm Abbey, the possessors of the living at Orby.

The development site also lies in close proximity to Manor Farm, some 75m to the south. The core of the present farmhouse was constructed in brick in c. 1660, but there have been a number of subsequent alterations and extensions to this grade II listed



+++++ Suggested boundary of 'home farm' associated with medieval manor

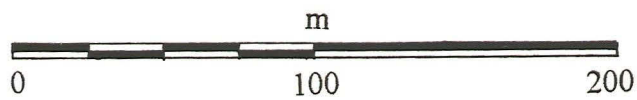


Figure 3: The position of the site in relation to the medieval church and manor

building (DoE, 1987). Part of this building is situated over the back-filled north-western corner of a large moat. The other three quadrants of this moat survive as well preserved earthworks up to 15m wide and 3m deep, which define a slightly raised sub-oval island, c. 70 x 80m in extent (fig. 3). Superimposed upon the 'island' are three large sub-rectangular platforms, which probably represent the remains of buildings or associated garden features. This complex of earthworks is a scheduled ancient monument (National Monument no. 30211).

The close spatial relationship between this substantial moated site, the church and 'Manor Farm House' strongly suggests that it is the site of the medieval manor of Orby. A will of March 1317 indicates that the latter was a sizeable and prestigious seigneurial residence, with an impressive array of buildings. It appears that within the moat was the great hall, aligned east-west, with a great and small chamber attached to its eastern end (Owen, 1996a/b). A chapel and structures referred to as the *presthouses* also appear to be attached to this end of the hall. On the south side of the hall was a *turnehous*, a tower-like porch containing a garderobe. A kitchen, brewhouse and bakehouse were located to the south of the hall, as was the walled 'great garden'. A steward's chamber was located at the north-west corner of the hall and adjacent to this lay another, smaller garden. Entry to this manorial complex appears to have been through a door in the north wall of the hall, which gave access to a bridge over the northern section of the moat. Associated with this bridge was a two-storey gatehouse.

The manor had an adjacent 'home farm', but the precise location of this remains uncertain. Within this ancillary complex was situated a great stable, two cattle sheds, a dovecote, four barns, a lesser stable and a pigsty (*ibid.*). There was also a little chamber and buildings referred to as the 'Ladyhouses'. There were a number of small garden plots and four larger yards, the *Gervoysgarth*, *Douuecotegarth*, *Neugarth* and the great yard. The latter contained a malt-kiln and a 'press' – possibly used for manufacturing cheese.

It is probable that a large number of peasants lived in close proximity to the manorial complex, as they would have provided the labour necessary to ensure that it functioned efficiently. Therefore, while it is unlikely that any of the buildings listed above were situated upon the current development site, it is possible that more humble, rustic dwellings may be located there, in the shadow of both secular and ecclesiastical authority.

A gradiometer survey undertaken by Pre-Construct Geophysics demonstrated that there were a significant number of magnetic anomalies across the development site (Bunn & Hardwick, 2000). These anomalies appeared to represent earth-cut features such as ditches and gullies. The orientations and inter-relationships of these features suggested that there was more than one phase of activity on the site, and that some of this was possibly associated with domestic occupation. The Lincolnshire SMR records that a medieval copper alloy ring was recovered from the field (SMR no. 43722), and this may provide a tentative date for some of the features. However, it would not be unreasonable, considering the site's location, to also expect features relating to Anglo-Saxon and post-medieval activity.

Archaeological Project Services carried out an archaeological watching brief during the construction of a tennis court, in the field immediately to the south of the present development (Cope-Faulkner, 1996). Although no archaeological features were detected, quantities of building debris and pottery were recovered from the topsoil and subsoil. Most of this material could be assigned a post-medieval provenance, but there were also a few sherds of medieval pottery within the layer.

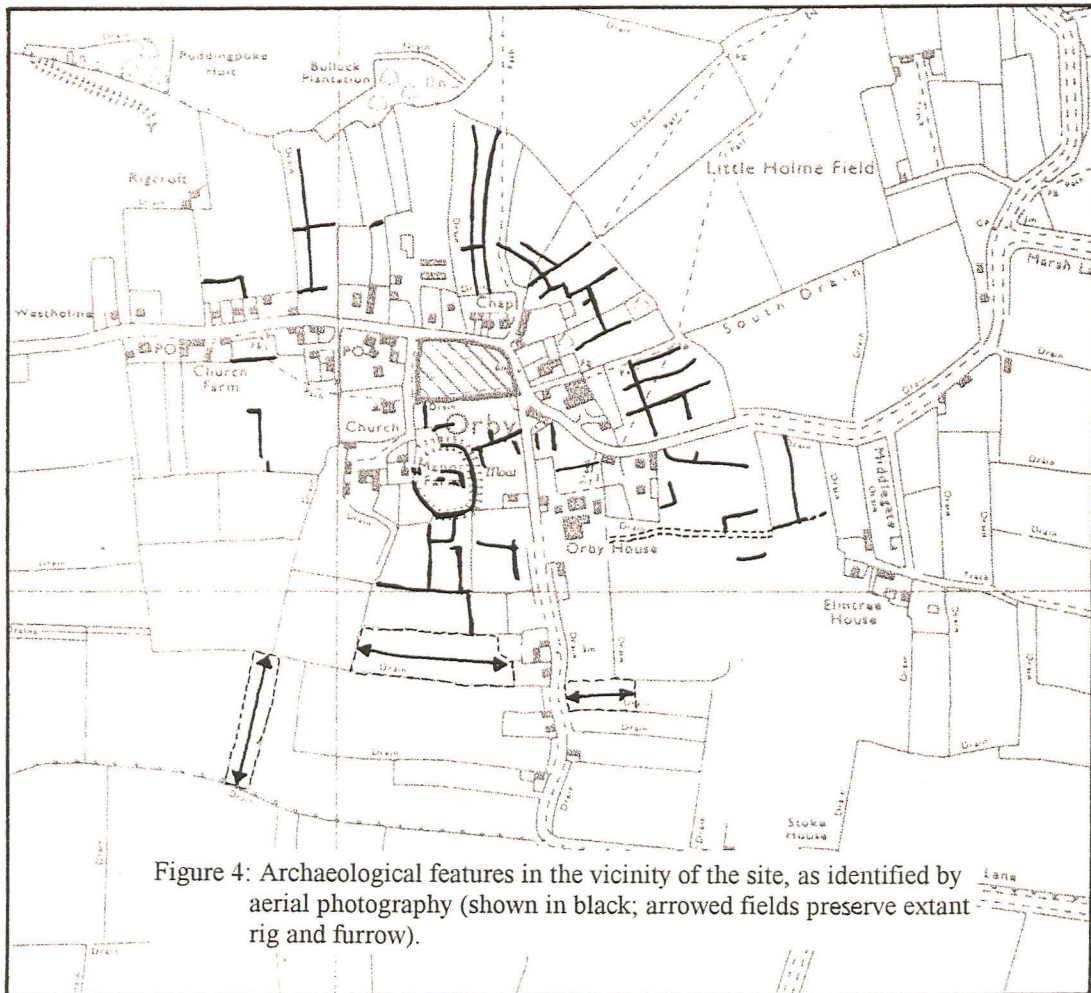


Figure 4: Archaeological features in the vicinity of the site, as identified by aerial photography (shown in black; arrowed fields preserve extant rig and furrow).

5.0 Methodology

Dr B. Lott, the Assistant County Archaeologist, devised a specification for a trenching scheme, which was based largely on the results of the gradiometer survey; this took into consideration the possibility that some archaeological remains may not have been identified by that survey. The survey had demonstrated that the area to the north of the proposed new access road contained a particularly high density of archaeological remains, but there was no intrusive investigation in this area, as this portion of the site will not be developed. Five 10m long trenches were placed within the southern half of the site. Trenches 4 and 5 were situated in the area that would potentially be disturbed by the access road, while trenches 1, 2 and 3 lay within the building plots.

A JCB fitted with a 1.5m wide, toothless ditching blade was used to remove all topsoil and subsoil in spits no greater than 0.2m in depth. The removal of these deposits was monitored constantly to ensure that any archaeological features exposed by this process were identified. All further excavation was undertaken by hand.

Where exposed, archaeological features and deposits were sample excavated, except where adverse weather conditions mitigated against this because of concerns for the health and safety of the archaeological team. Information relevant to the interpretation of the archaeology was entered on context record sheets, and complementary scale drawings were made in both plan and section. A photographic record (colour prints) of exposed features was maintained. Selective prints have been reproduced in this report, with the remainder forming part of the project archive.

An experienced archaeological team of four individuals carried out the excavation over a period of five days – on the 10th, 11th, 13th, 14th and 18th April.

Artefactual remains and soil samples were recovered from the site and these have been cleaned, processed and analysed by researchers specialising in the examination of archaeological materials. The results of these investigations have been included as independent appendices to this report, and the general conclusions of such accounts have been integrated within the main text.

6.0 Results

The topsoil, a silty clay loam, was noted to vary in depth slightly with progression across the site; the average depth was 0.26m, but it was observed to be some 0.06m deeper toward the east (trench 3). Residents of the village reported that this field had been cultivated up until three years ago, which indicates that ploughing has been responsible for homogenising this layer and creating its well defined, horizontal interfaces.

Trench 1

(See fig. 5)

This trench was located in building plot 1 to investigate a north-east to south-west orientated linear anomaly identified by the gradiometer survey.

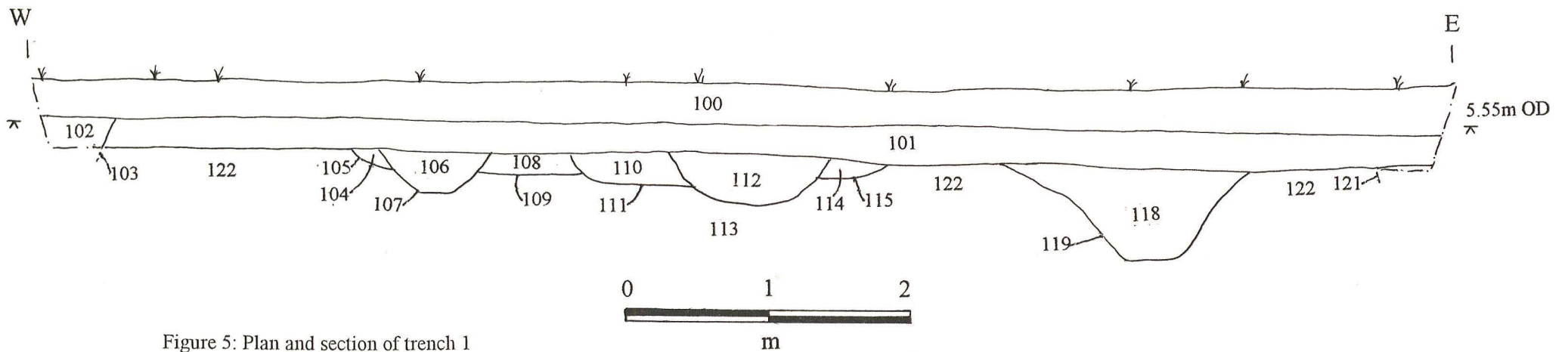
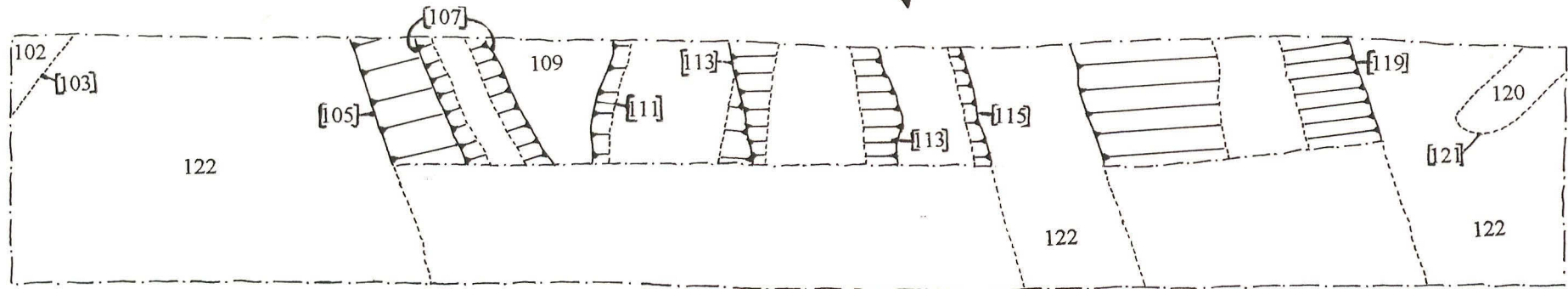


Figure 5: Plan and section of trench 1

A small portion of an archaeological feature, [103], probably a north-east to south-west aligned ditch or gully, was exposed in the extreme north-west corner of the trench. This feature cut through the subsoil and was directly sealed by the ploughsoil. It was not excavated due to the limited area accessible for examination.

Sealed beneath a sub-soil, (101), of c. 0.25m depth, were a series of inter-cutting ditches and gullies situated toward the centre of the trench. All of these linear features had approximately the same north to south orientation. Examination of the section suggested that three of these features, [105], [109] and [115], were all components of a single entity, which had been disassociated by later recuts. If this was the correct relationship, then this feature was a shallow flat-bottomed ditch, c. 3.75m wide and c. 0.16m deep. The fill, (114), of [115] contained two sherds of Lincoln Shelly Ware, which has a 10th century provenance.

A 'U'-shaped gully, [107], c. 0.30m deep, had been cut into the fills of this hypothesised composite feature near its western edge. A flat-bottomed feature, [111], was also cut into the central area of these same fills. Although the excavated portion appeared to be part of a further linear, the excavator suggested that morphologically [111] could be an elongated pit; at c. 0.21m deep, this was only slightly deeper than [109], which it appears to have replaced. Pottery was recovered from (110), the fill of [111], indicating a 10th to 11th century date for its creation.

A further recut, [113] - another 'U'-shaped gully, c. 1.12m wide and c. 0.36m deep - had removed the eastern edge of [111].

Situated some 0.70m to the east of this complex was a substantial ditch, [119], also aligned north to south. It was c. 1.8m wide at the top and had steeply sloping sides (at c. 60 degrees to the horizontal), which terminated in a flat base c. 0.38m wide. The depth of the latter was c. 0.88m below the base of subsoil (101). A 10 litre sample of the sediment, (118), filling this ditch was submitted for palaeo-environmental analysis to establish the site's potential for providing palaeo-economic data.

Also sealed beneath the subsoil was the rounded terminal of a gully, [121], which was exposed in the south-eastern corner of the trench. It was aligned north-east to south-west, and was c. 0.28m wide.

Trench 2

(See fig. 6)

Trench 2 was situated in building plot 3, and was positioned to intercept a pair of approximately parallel north-south orientated linear anomalies discovered by the gradiometer survey.

Sealed beneath c. 0.55m of topsoil/subsoil, two linear features were exposed in the centre of the trench, but both were aligned north-east to south-west. It is therefore difficult to ascertain whether they equate to the anomalies identified by geophysics.

Gully [205] was c. 0.73m wide and 0.16m deep, with a flattened 'U'-shaped profile that ended in a rounded terminal before reaching the northern edge of the trench. Its

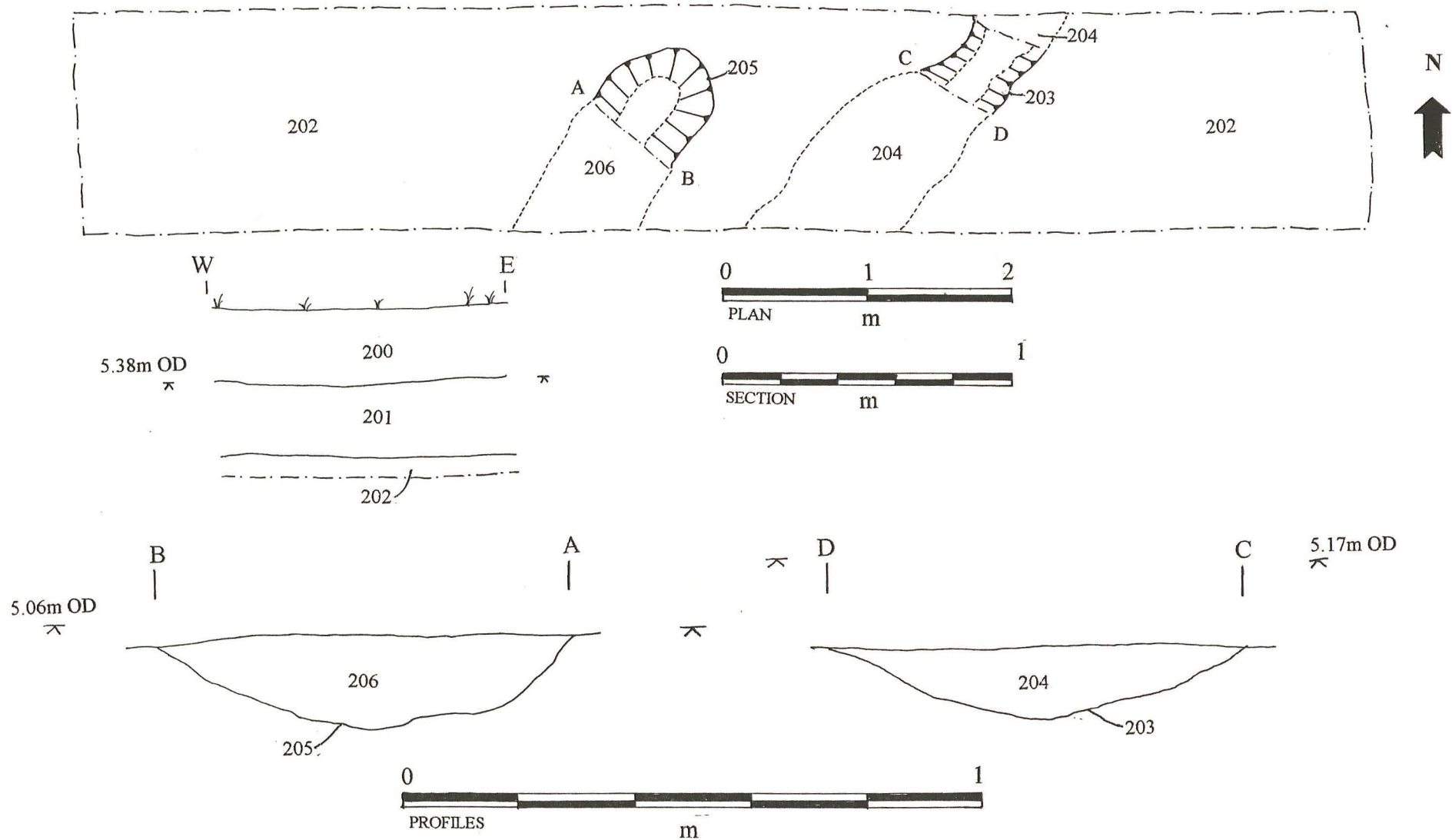


Figure 6: Plan, representative section and profiles - trench 2

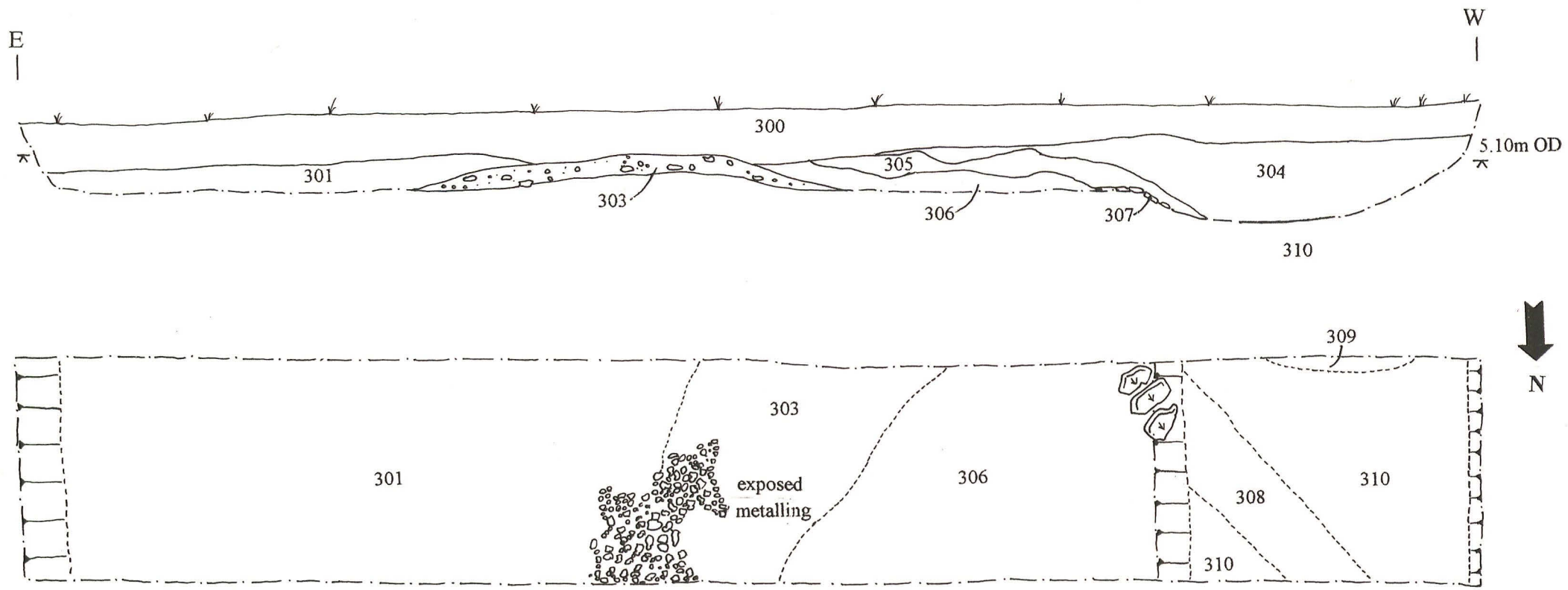
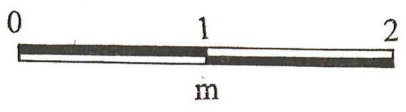


Figure 7: Plan and section of trench 3



counterpart, [203], ran parallel some 0.66m to the east. It is notable that the edges of [203] were irregular, resulting in variations in width between c. 0.44m and c. 0.85m. It had a flattened 'U'-shaped profile, which was c. 0.15m deep.

Trench 3

(See fig. 7)

This trench was located in building plot 5 to investigate an extremely well defined north-west to south-east orientated linear anomaly identified by the geophysical survey.

Removal of the topsoil revealed a slightly leached, relatively organic deposit, (301), at the eastern end of the trench, with another comparable deposit at the western end, (304). Neither was fully excavated due to problems encountered with groundwater (see 8.0), but it was possible to establish that (304) was the thicker deposit, at c. 0.60m. In contrast, (301) was c. 0.2m deep and sealed a relatively level section of a metallated surface, (303). The pottery contained within (301) and (304) was contemporaneous, being manufactured in the 16th to 17th centuries.

The metallated surface, (303), was constructed from closely packed sub-angular limestone, the stones of which were firmly pressed into a mid-pinkish brown clay matrix; the upper faces of these stones showed evidence of being slightly rounded due to weathering. It was interesting to note that (303) was not horizontal across the full width exposed in the trench. While level at the eastern end, it rose c. 0.35m toward the centre of the trench, to form a pronounced ridge c. 3.0m wide, before dropping again toward the western end. The crest of the ridge lay directly beneath the topsoil, (300), separating deposits (301) and (304). While the limitations imposed on the excavation make it difficult to be certain, it appears that (303) did not continue to, and beyond, the western end of the trench. A sherd of Toynton ware was contained within (303), suggesting that this surface was of late medieval construction (13th-15th centuries).

A sump was machine excavated at the western end of the trench to assist drainage and to discover the depth of (304). In the process, two additional features were identified (in plan only). The first was a north-west to south-east aligned ditch, [308], c. 0.55m wide. To the south of this, just protruding from the section, was the rounded edge of a pit or ditch terminal, [309], c. 1.0m wide. Both were cut into natural clay deposits, (310), some 0.83m below the ground surface.

Trench 4

(See fig. 8)

Trench 4 was positioned toward the western end of the planned access road, to investigate a north-south aligned linear anomaly distinguished by the gradiometer survey.

A north-south orientated gully, [409], was exposed adjacent to the western edge of the trench. This was situated beneath an accumulation of topsoil and subsoil with a

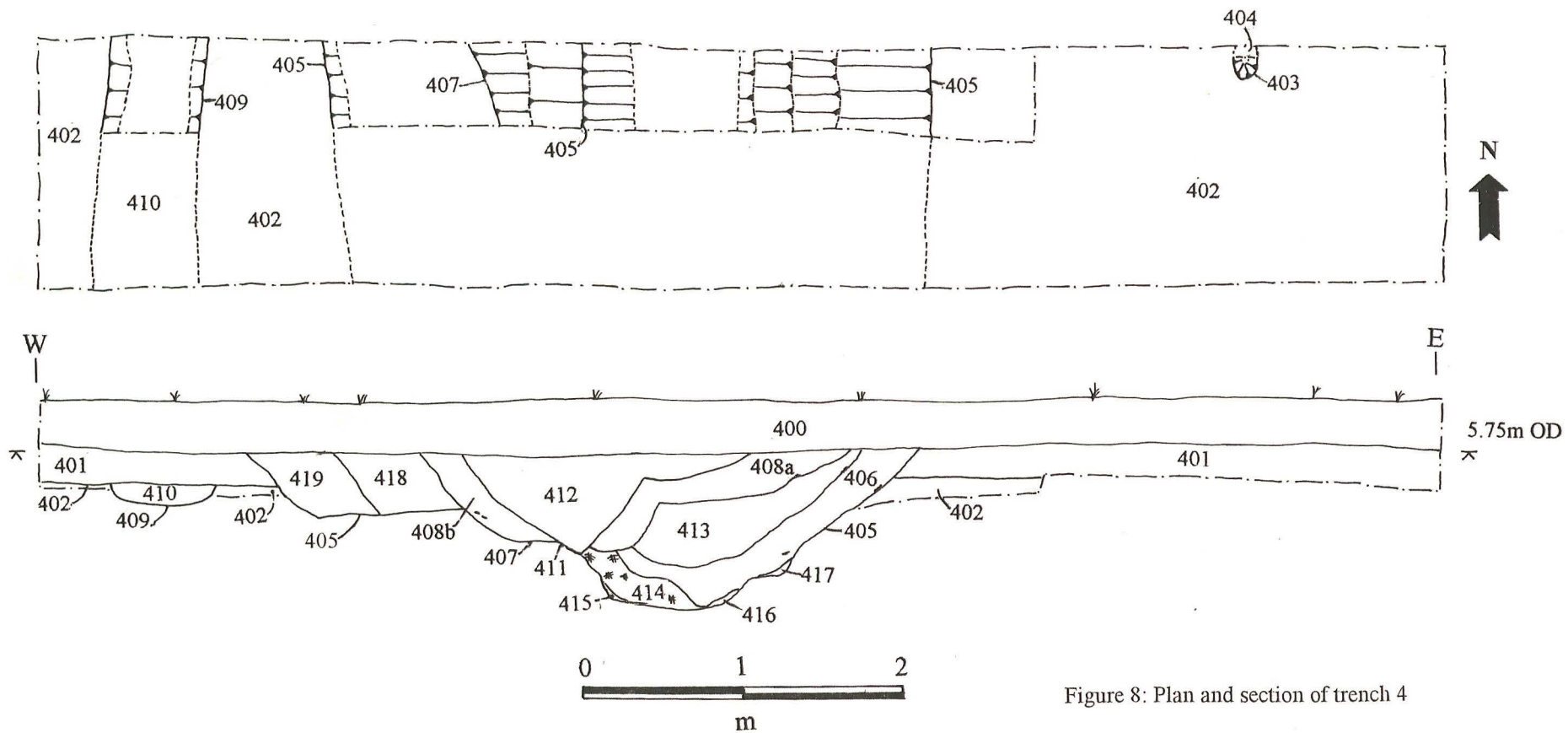


Figure 8: Plan and section of trench 4

combined depth of c. 0.48m. This linear feature was 0.70m wide, but had a relatively shallow 'U'-shaped profile, c. 0.12m deep.

Approximately 0.90m to the east of this gully was a complex of inter-cutting ditches, all of which appeared to cut through the subsoil. Each of these linear features had approximately the same north-south orientation; they appeared to represent the creation of a boundary and its reaffirmation on two or three subsequent occasions. The initial ditch, [405], had an irregular profile. Essentially, its eastern edge appeared to slope down at c. 45°, with several slight steps toward the base, which was situated some 1.3m below the modern ground surface. The form of its western edge was more difficult to establish, because of the effect of subsequent recuts. While it may have had a relatively symmetrical profile, the excavators felt that a broad, flat-bottomed feature c. 0.68m deep (filled by (418)/(419)), on the extreme western edge of this complex, represented an integral component of this initial phase. If this was the true situation, then this original boundary feature, [405], was c. 4.25m wide. The primary fill, (414), of this ditch contained pottery dating to the late 12th to early 13th centuries; contrarily, material from the secondary fill, (406), was approximately a century older (see Appendix 2).

The first identifiable recut, [407], appears as a smaller, mirror image of [405]; it is only c. 2.68m wide, with the base situated c. 0.96m below the modern ground surface; it had a flattish shelf, approximately half that depth, situated on the eastern side. This feature was again redefined by [411], a 'V'-shaped ditch c. 1.76m wide and c. 0.95m deep, again with a shelf on the eastern side.

A single small posthole, [403], was located toward the eastern end of the trench.

Trench 5

(See fig. 9)

This trench was located toward the eastern end of the proposed access road to investigate a pair of parallel linear anomalies orientated east-west, which were detected by the gradiometer survey.

Removal of the topsoil, (500), c. 0.30m deep, and the subsoil, (501), c. 0.24m deep, revealed the presence of a substantial ditch at the north-western end of the trench. This ditch, [503], was c. 2.0m wide and orientated east-north-east to west-south-west. It had a slightly flattened 'U'-shaped profile, the base of which was c. 1.42m below the modern ground surface. The upper fill of this feature was a thin, localised spread of redeposited natural, (509). The majority of [503] was filled by a silty clay, (502), a 10 litre sample of which was submitted for palaeo-environmental analysis. This sample contained fired clay, charcoal and cereal grains, faunal remains from wild and domesticated species, and relatively abundant quantities of snail shells. Pottery was also recovered from this deposit, and was dated to the 12th century AD.

Another ditch, [507], running in parallel to [503] was located toward the south-eastern end of the trench. This was only partially investigated due to adverse weather conditions (see 8.0). However, the material removed indicated that [507] was c. 1.96m wide, and also suggested that it had a similar profile to its northern companion.

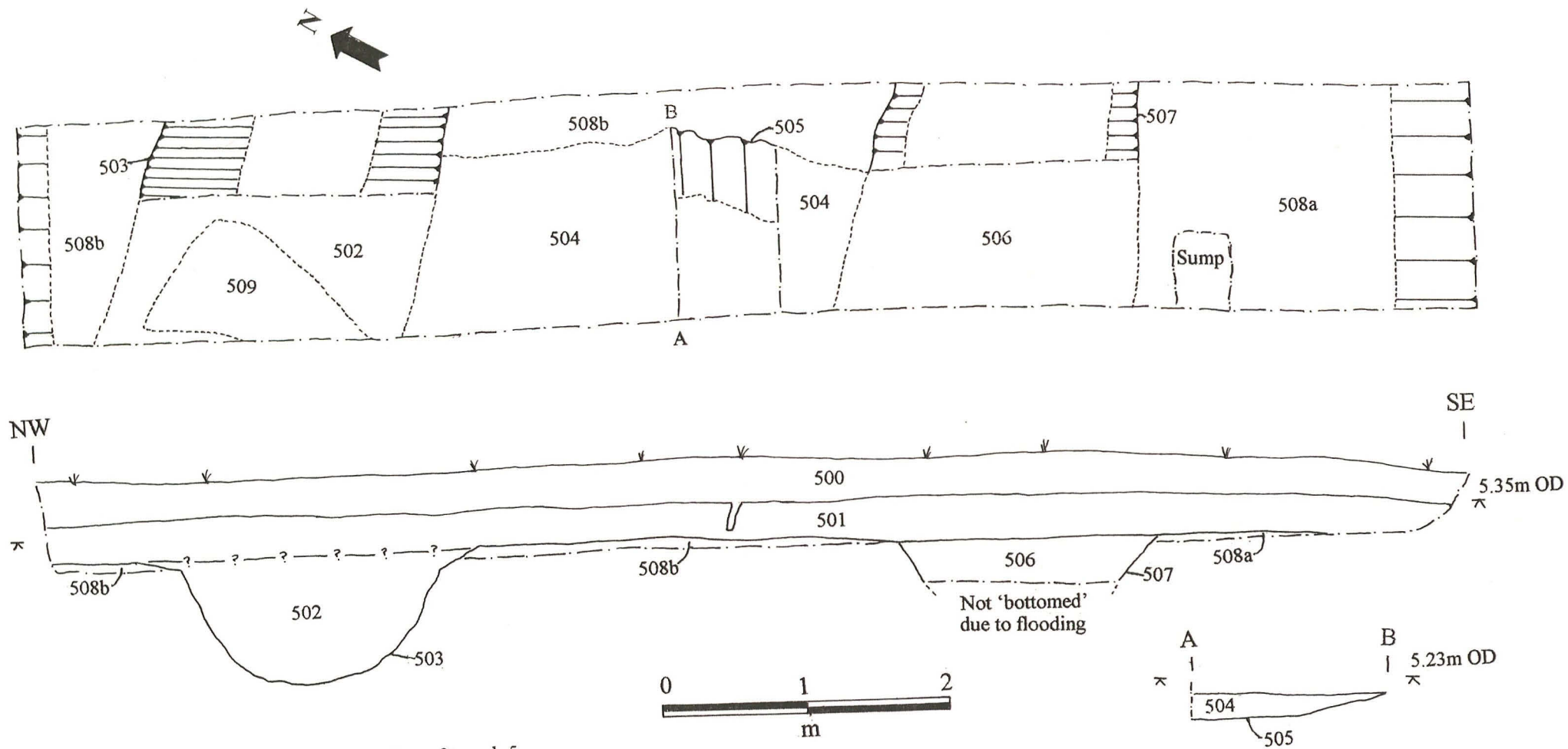


Figure 9: Plan and section of trench 5

Additionally, the ceramic material recovered from the fill of this ditch, (506), also had a 12th century provenance.

Ditches [503] and [507] were separated by an interval of c. 2.90m. The western portion of this area had been cut away by a slight depression, [505], c. 0.16m deep. The fill of this dip, (504), ran up the southern edge of [503] and the northern edge of [507], suggesting that it predated their creation and had been truncated during that process. However, some caution must be exercised in accepting this interpretation, as there was no evidence of any material corresponding to (504) to the north or south, respectively, of these ditches; moreover, pottery recovered from (504) was chronologically indistinguishable from sherds retrieved from the fills of both ditches.

7.0 Interpretation, discussion and conclusions

Based on the limited dating evidence available, the complex of north-south aligned boundary features identified in Trench 1 ([105], [107], [109], [111], [113] and [115]) appear to belong to a relatively limited period of activity in the 10th and 11th centuries. These late Saxon ceramics are the earliest datable material recovered from the site (see Appendix 2).

In many ways, it is unsurprising that the oldest material should be located near the south-western corner of the site. This is the highest area of the field and is situated closest to the medieval church. If there had been an earlier Anglo-Saxon predecessor, it is probable that such a structure would have acted as the focal point around which any later settlement would have aggregated. The presence of late Saxon material in this area of the site also raises the possibility that there was a pre-Conquest precursor to the medieval manorial complex (*c.f.* Goltho – Beresford, 1987; Sulgrave – Davison, 1977).

Dating evidence was not recovered from the adjacent substantial ditch [119], but a similar date may be tentatively inferred based on its spatial relationship to the linear features discussed above. A sample from the fill of this ditch, (118), was submitted for palaeo-environmental analysis (see Appendix 3). While domestic remains were relatively rare, there was an abundance of small vertebrate fauna and molluscs, which provided some indication of the nature of the local environment. The molluscan remains suggest that the ditch was fringed by grassland and was waterlogged for much of the year, but probably dried out each summer. The remains of frog/toad and *Carex* (sp.) seeds support such a hypothesis.

Late 12th to early 13th century pottery was recovered from the primary fill of ditch [405]. These chronological indicators are broadly compatible with the artefactual evidence recovered from the two ditches in trench 5, [503] and [507], both of which dated to the 12th century.

An examination of the results of the gradiometer survey also suggests that the ditches in trenches 4 and 5 are contemporaneous (Bunn & Hardwick, 2000). Ditch [405], and its successors, appears to abut and form a perpendicular return to [507]; it definitely does not seem to continue any further south than this point. Additionally, there

appears to be a c. 15m wide gap in the course of [507] to the west of the junction between these two ditches.

While working on-site, it was noted that if the line of [507] was projected to the west of the site it would run through the old vicarage garden at a point roughly one third of the distance from the northern boundary of the churchyard to the vicarage building itself. This coincided with the northern edge of a raised grassed platform, which supported a number of large mature trees. This platform was of a similar height to the churchyard, from which it was separated by a conifer hedge. It is therefore suggested that the raised area was originally part of the churchyard, which had been annexed by one of the vicars to increase the size of his garden; Pevsner and Harris (1989) note that the Old Vicarage was constructed c. 1870, which tentatively provides a date for this event. By integrating the observations made during geophysical survey, excavation and observation of the topography, it is proposed that ditch [507] was a major boundary within the medieval settlement of Orby. It appears to differentiate the 'geophysically' busy northern half of the site from the church and manorial area to the south. Is the northern half of the site essentially a peasant settlement servicing the needs of the seigneurial and ecclesiastical hierarchy to the south?

The apparent contemporaneity of [507] with ditch [503], suggests that together they framed a 12th century trackway that ran eastward from the junction with [405]. The gap in ditch [507], mentioned above, roughly corresponds with the north-south aligned hollow way visible at the north-west corner of the site. A southerly projection of this line beyond the confines of the site coincides with the suggested position of the northern junction between the moated manor and its associated 'home farm' (see fig. 3). Therefore, while the hypothesis remains extremely tentative, it is proposed that ditch [405] defined the eastern edge of the track forming the main means of access to the manor.

A rapid walkover survey and discussion with the occupants of Manor Farm established that the modern farm was enclosed on the south and west sides by a relatively substantial ditch. There was no comparable channel on the northern side of the farm complex, but it became evident that a depression running thorough the southern part of the churchyard probably represented the remains of a corresponding feature. It is proposed that this channel defined an 'outer bailey'-like enclosure, which is likely to have contained the 'home farm', known from documentary sources to have lain adjacent to the manor (indicated by crosses on fig. 3) (*q.v.* Owen, 1996a/b).

The size of the manorial complex suggests that it was a very wealthy holding, and the dispersal of the buildings, lands, homage and services detailed in the will of Sir John of Orby (Owen, 1996b) supports this assertion. It is probable that much of this wealth was generated by the production of wool (Platts, 1985). Large flocks of sheep are known to have been pastured on the Wolds and marshlands at the time of the Domesday survey (Foster & Longley, 1924). Moreover, there were 223.5 acres of pasture within the parish of Orby, which were specifically mentioned in the will of 1318. The recovery of a glass slick-stone from the fill of ditch [503] may have some significance in relation to this aspect of the economic operation of the estate. It conceivably implies that the manor did not just produce bulk raw materials, to be converted into finished articles elsewhere. Rather, it raises the provisional impression that the medieval occupants of the settlement were actively involved in the production

of textiles, and even in the further transformation of these into completed garments. Such self-sufficiency has parallels at 10th century Goltho, where a weaving shed was a component of the enclosed manorial complex (Beresford, 1987).

The results of the environmental analysis of the soil sample recovered from ditch [503] provided some significant contrasts to the material from trench 1 (see Appendix 3). The most important results were derived from the molluscan remains. These were largely derived from terrestrial species. This suggested that the water table had been significantly lowered in the interval between the 10th-11th centuries, the probable date of sample [118], and the 12th century. Consequently, it seems possible that the lords of the manor implemented a comprehensive and effective programme of drainage to enhance the profitability of their landholding. This is only an outline hypothesis based on the analysis of two samples and any further work at this site should include provision to further explore this aspect of environmental adaptation.

The material recovered from trench 3 suggests that the exposed features post-date those found elsewhere on the site. However, it must be remembered that features underlying the metallated surface, (303), were identified but could not be investigated. Pottery that was embedded in the metallating, and other material recovered from sediments that had built up against the western side of the ridge, dated to the later medieval period (13th to 15th century).

An examination of the gradiometry results suggests that the metallating, (303), was part of a linear feature running north-west to south-east across the eastern corner of the site. A southern projection of this alignment suggests that this was a continuation of the road that still proceeds out of the village to Addlethorpe and Ingoldmells; this now runs in a more sinuous curve around the north-eastern corner of the site. The ditches bounding the study area provide circumstantial support for this hypothesis. Those on the western and southern sides run the full length of the boundary, whereas that on the northern edge only defines the western two-thirds of the perimeter. This latter ditch terminates approximately at the same point where the geophysics indicates that the linear feature reaches the northern edge of the field. The eastern border of the site has no ditch, but if it were accepted that (303) represents a late-medieval alignment of the modern road, then this area would originally have lain in a different block of land.

Realignment of the road appears to have taken place in the 16th to 17th century, or possibly slightly later, based on the pottery recovered from (301) and (304). These two relatively organic deposits appear to have been deliberately dumped to level the ground surface over the now redundant road. The high level of domestic waste implies that this material came from middens and other refuse deposits within the post-medieval settlement.

The evaluation at Orby has indicated that the development site contains substantial and significant archaeological deposits. In its present form, it is likely that the proposed development would threaten the archaeological resource. Were strip-type footings to be used, there is little doubt that archaeological remains would be disturbed or destroyed. Only a limited area of the site was investigated during the evaluation, so it is difficult to be certain, but it is likely that there are a number of archaeological features that did not register as geophysical anomalies. Consequently,

it would be difficult to propose an alternative housing layout that would not threaten the resource.

Ideally, it would be desirable to preserve any archaeological remains *in-situ*, rather than resort to a protracted programme of intrusive investigation prior to the destruction of sub-surface deposits. With this in mind, it may be advantageous for the client, P. Sharp, the curatorial archaeologists and the planning authority to explore the possibilities of constructing the planned dwellings on rafted foundations. The evaluation confirmed that there was some 0.4 – 0.5m of relatively sterile soils covering the archaeologically significant deposits. When compared to the excavation of trenches for strip-footings, this could be removed with relatively few implications to the survival of this heritage resource.

8.0 Effectiveness of methodology

All of the trenches opened upon The Green, Orby, contained archaeological remains. The density of these features and deposits varied across the site: from c. 15% of the exposed surface area in trench 2, to c. 80% in trench 5.

During the fieldwork, it was found that the main limitation inhibiting a full investigation of the exposed features resulted from the high level of the water table and the volume of groundwater, which resulted from the excessive level of precipitation in April 2000. The natural clay deposits had a particularly low level of permeability, and although the fills of the archaeological features were also clayey, they had completely different characteristics with regard to the discharge of ground water. Water was observed to literally pour from the sections cut through these features, some of which were relatively deep. In most cases, this necessitated the continuous use of pumps to drain the features. The main consequence of this was that excavation was at best difficult and at worst dangerous or impossible; the bases of several features were not reached and in one case the section suffered a catastrophic collapse before it had been fully recorded. Additionally, a considerable proportion of the time spent on site was devoted to draining trenches and features, significantly reducing the period actually allotted to excavation.

Although some features in trenches 3 and 5 were not fully investigated, it is felt that the evaluation served its primary purpose by determining the density, nature and date of archaeological features located in the area of the proposed development.

9.0 Acknowledgements

Pre-Construct Archaeology (Lincoln) would like to thank Mr P. Sharp for this commission and for his assistance during the programme of fieldwork. Thanks are also extended to the occupants of Manor Farm, Orby for their help and for allowing access to the large moated monument on their property. Finally, the author wishes to express his gratitude to the field team, R. Mouraille, A. Chapman, and R. Schofield, for their continued endeavours, despite the adverse conditions.

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11.0 Site archive

The site archive (documentary and physical) for this project is in preparation and will be deposited at the Lincoln City and County Museum and the Lincolnshire Archives Office (documentary) within six months. Access to the archive may be granted by quoting the global accession number 2000.87.

Appendix 1: Colour photographs



Plate 1: Trench 1: general view following excavation, showing ditches/gullies [105], [107], [109], [111], [113] and [115] in centre, and ditch [119] at the far end of the trench, looking south-east.



Plate 2: Trench 1: section excavated through ditch [119], looking north.



Plate 3: Trench 3: the exposed area of the ridge situated at the centre of the metallised surface (303), deposit (304) lies at the right hand side of the picture, looking south.



Plate 4: Trench 3: condition of the trench each morning prior to pumping out the groundwater. Manor Farm is the building background right, looking south-west.

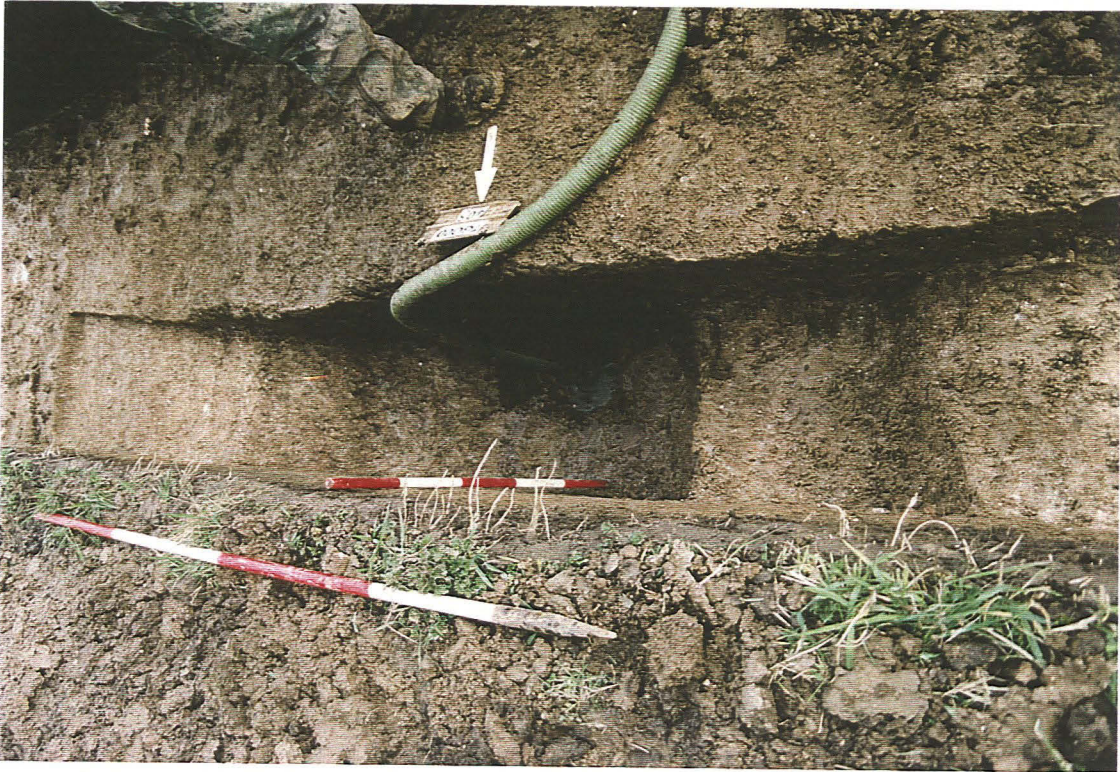


Plate 5: Trench 4: general view following excavation, showing ditches [405], [407] and [411] in centre of the trench, looking east.

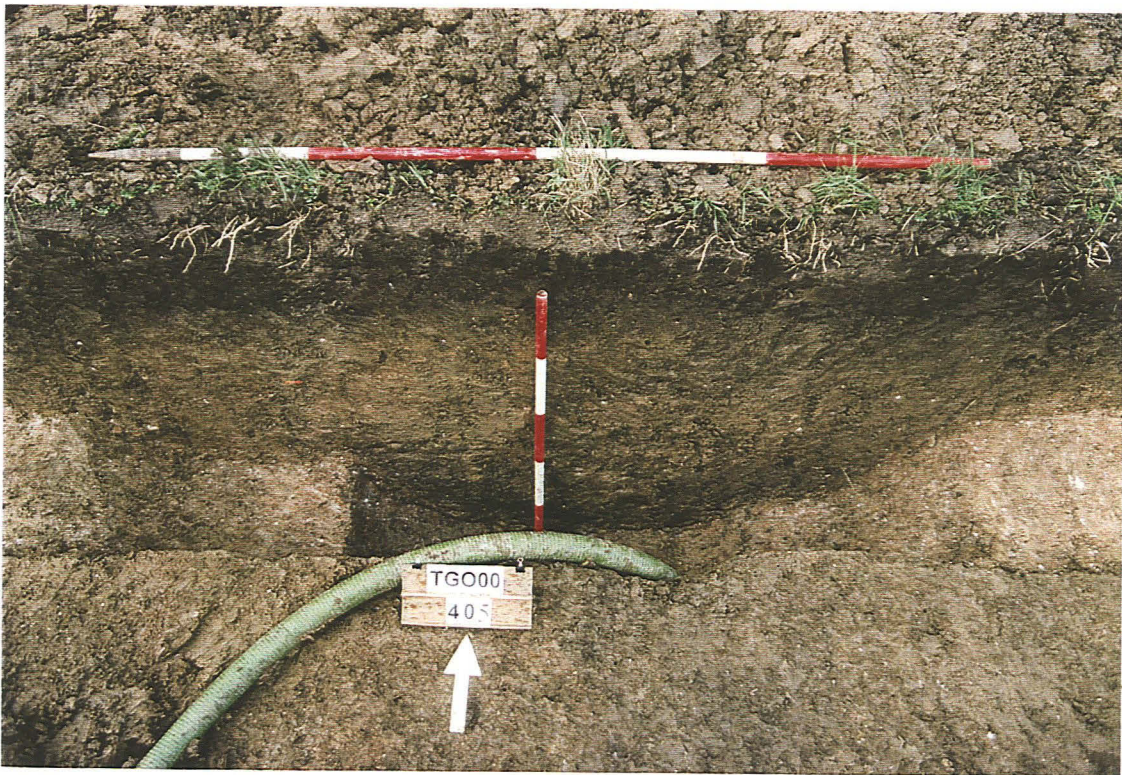


Plate 6: Trench 4: section excavated through ditch [405], looking north.



Plate 7: Trench 5: general view following excavation, showing catastrophic collapse of section excavated through ditch [503] in foreground, and ditch [507] being pumped dry, looking south-east.



Plate 8: Southern side of the garden of the Old Vicarage. The conifer hedge on the left defines the boundary of the churchyard. The mature trees in the centre of the picture run along the edge of a raised platform, continuing the line of ditch [507] to the west of the site.

Appendix 2

Archive Report on the Pottery from an Evaluation at Orby, Lincolnshire (tgo00)

Jane Young

Lindsey Archaeological Services

1. Introduction

A total of 80 sherds of pottery and a fragment of fired clay were recovered from the site. The material ranges in date from the Roman to the post-medieval period. The pottery was examined both visually and using a x20 magnification, then recorded using locally and nationally agreed codenames. Several new fabric types occurred amongst the assemblage and these were characterised and given new codenames or sub-fabric numbers.

2. Condition

The material is mainly in a fairly fresh condition with some degree of abrasion. A small number of the shell-tempered sherds (from context 504) were completely leached and one sherd from context 506 was worn to a higher degree than the rest of the assemblage.

3. Overall Chronology and Source

A range of 20 different, identifiable post-Roman pottery types were found on the site, the type and general date range for these fabrics are shown in Table 1.

Table 1: Post-Roman pottery codenames and total quantities by sherd count and vessel count where appropriate

codename	full name	sher	vessels	earliest date	latest date
BERTH	Brown glazed earthenware	1	1	1550	1800
BEVO1T	Beverley Orange-type ware Fabric 1	2	1	1100	1230
BS	Brown stoneware	2	1	1680	1850
ELGQC	East Lincolnshire Glazed Quartz and Chalk fabrics	3	1	1150	1220
ELQC	East Lincolnshire Quartz and Chalk fabrics	2	1	1100	1220
EMLOC	Local Early Medieval fabrics	1	1	1150	1230
GSS	Greensand quartz and shell	5	1	1050	1250
HLKT	Horncastle-type LKT ware	1	1	920	1010
LFS	Lincolnshire Fine-shelled ware	2	1	970	1200
LKT	Lincoln kiln-type shelly ware	2	1	850	1000
LSH	Lincoln shelly ware	3	2	850	1000
LSLOC	Late Saxon Local Fabrics	5	1	850	1050
MEDLOC	Medieval local fabrics	4	1	1150	1450
MISC	Unidentified wares	2	1	400	1900

R	Roman pottery	1	1	40	400
SCAR	Scarborough ware	1	1	1150	1350
ST	Stamford Ware	4	1	970	1200
TB	Toynton/Bolingbroke wares	15	1	1450	1750
TOY	Toynton Medieval Ware	3	1	1250	1450
TOYII	Toynton Late Medieval ware	3	1	1450	1550
WEMS	Wheelthrown Early Medieval Shell-tempered	19	1	1050	1220

Most of the material dates to between the 10th or 11th centuries and the middle of the 13th century, with a smaller element dating to the post-medieval period. There appears to be a hiatus in the assemblage between the mid 13th and mid 15th to 16th centuries. A suggested date for the deposition of each context is shown in Table 2.

Table 2: Suggested deposition date of pottery groups from contexts

context	date	comments
100	11th	
101	10th	
110	10-11th	
114	10th	
300/301	mid 15th to mid 16th	
301	16-17th	
303	13-15th	
304	16-17th	
305	13-15th	
400	18-19th	
406	late 11-12th	
414	late 12 to early 13th	
420	late 12 to early 13th	
500	12th	
502	12th	
504	12th or 18-20th	Intrusive sherd?
506	12th	

4. Summary and Recommendations

The material recovered is a small, but important collection. This assemblage has given the first opportunity to characterise for the first time some of the fabrics found on the coastal edge of Lincolnshire. Ceramic assemblages from this area are usually recovered in too poor condition to enable full recognition of fabric types and the knowledge gained from this site should enable a better understanding of medieval ceramics in the area.

A number of sherds have been removed for a temporary fabric type series to be held by Lindsey Archaeological Services pending the setting up of a county fabric type series.

pottery archive tgo00

context	cname	sub fabric	form type	sherds	vessels	decoration	part	action	ref no	description	date
100	LFS		bowl	1	1		base			soot	
100	LSLOC	grey sandy	jar?	1	1		base			fine to med subround quartz + occ ca; could be Lincoln	
100	LSLOC	grey sandy	jar?	1	1		BS			soot; poorly sorted subround quartz; not Lincoln	
100	LSLOC	grey sandy	jar?	1	1		BS			similar to NLLSG fabric 2	
100	LSLOC	shelly	jar	1	1		rim			everted A3 rim; possibly LSH	
101	LKT		?	1	1		BS			flake	
101	LKT		jar?	1	1		BS			interior soot	
101	LSH		jar	1	1		BS			soot	
101	MISC			1	1		BS			fired clay	
110	LSLOC	shelly	jar	1	1		BS			could be LSH	
110	MISC			1	1		BS			no surfaces; chalk + quartz + fe fabric	
114	LSH		jar	2	1		BS				
300/301	BERTH		jug	1	1		BS			int & ext thick amber glaze	mid 15 to mid 16th
300/301	TB		jug	2	1		BS				14-16th
300/301	TB		bowl	1	1		base				14-16th

context	cname	sub fabric	form type	sherds	vessels	decoration	part	action	ref no	description	date
300/301	TB		bowl	1	1		BS				14-16th
300/301	TB		bowl	1	1		BS				14-16th
300/301	TB		jug	1	1		rim			triangular rim;pocked brown glaze	mid 15th to mid 16th
300/301	TB		?	1	1		BS				14-16th
300/301	TB		?	1	1		BS				14-16th
300/301	TB		jug	1	1		BS				14-16th
300/301	TOY		jug	1	1	frilled base	base				14/15th
300/301	TOYII		jug	1	1		base				mid 15-mid 16th
300/301	TOYII		jug/bunghole	1	1		LHJ			plugged	mid 15-mid 16th
300/301	TOYII		jug/bunghole	1	1		rim & handle			ribbed strap handle;hollow everted rim;fresh condition	mid 15-mid 16th
301	TB		bowl	1	1		base			int glaze	16/17th
301	TB		jug/jar	1	1		BS				16/17th
303	TOY		small jug	2	1		base				13-15th
304	MEDLOC		jar?	1	1		base			glaze patches;? TB	14-16th
304	TB		bowl	1	1		BS			interior glaze	15/16th
304	TB		bowl	1	1		BS			interior glaze	16/17th
304	TB		large jug?	1	1		BS			interior deposit	15/16th
305	MEDLOC		jar/jug	1	1		BS			TOY?	13-15th
305	MEDLOC		jar?	1	1		BS			interior glaze;? TOY	13-15th

context	cname	sub fabric	form type	sherds	vessels	decoration	part	action	ref no	description	date
400	BEVO1T		jug	1	1		BS			very fine smooth fabric;? ID	
400	BS		strainer	1	1		base			perforated	18-20th
400	ELQC	fabric 1	small jar	1	1		rim	draw;LA S type series	DR3	soot on rim edge	
400	GSS	fabric 1	jar	1	1		BS				
400	MEDLOC		jug	1	1	thumbed base	BS			interior red deposit;fabric similar to TOY but lower fired; ?? Mareham	
400	TB		bowl	1	1		BS			interior glaze	16-18th
400	WEMS	fabric 3	?	1	1		BS	L'AS type series		soot	
400	WEMS	fabric 3	?	1	1		BS			soot	
406	ST		jar/pitcher	1	1		BS			glaze	late 11 to 12th
414	ELGQC		jug	1	1		BS	LAS type series		developed splashed glaze	
414	SCAR	white	jug	1	1	vertical scales between vertical strips	BS			green glaze	
414	WEMS	fabric E	?	2	1		base			interior deposit;ext & part int soot	
420	ELGQC		small jug	2	1		BS			pocked amber glaze	
500	EMLOC		jug	1	1		BS			flake;abundant rounded quartz	

context	cname	sub fabric	form type	sherds	vessels	decoration	part	action	ref no	description	date
500	GSS	fabric 1	jar?	1	1		BS	LAS type series		soot	
500	LFS		bowl	1	1		base			soot on sides but not on underneath	
500	R	Samian		1	1		BS			flake	
500	ST		jar/pitcher	1	1		BS			worn;glaze	late 11-12th
500	WEMS	fabric 1	jar?	1	1		BS	LAS type series			
500	WEMS	fabric 2	bowl	1	1		rim			fold over triangular rim	
502	GSS	fabric 1	globular? Jar	1	1		rim	draw;	DR2	similar rim to EMHM types	
502	GSS	fabric 1	jar?	1	1		base	LAS type series		soot	
502	ST		jar/pitcher	1	1		BS `			pocked glaze	late 11-12th
502	WEMS	fabric 2	bowl	7	1		rim base & B	draw	DR1	soot;fold over triangular rim	
504	BEVO1T		jug	1	1		BS			pocked glaze	
504	BS		?	1	1		base				18-20th
504	WEMS		jar	1	1		rim			completely leached	
504	WEMS		jar	1	1		BS			completely leached;soot	
504	WEMS	fabric 3	?	1	1		BS			? Same vessel in 506	
506	ELQC	fabric 1	jar?	1	1		neck	LAS type series			

context	ename	sub fabric	form type	sherds	vessels	decoration	part	action	ref no	description	date
506	GSS	fabric 1	jar?	1	1		BS	LAS type series		soot	
506	HLKT		jar	1	1		rim	LAS type series		everted type A3 rim; ? ID	
506	ST		jar/pitcher	1	1		BS			well worn;glaze	late 11-12th
506	WEMS	fabric 2	bowl?	1	1		BS	LAS type series		possibly same vessel in 502	
506	WEMS	fabric 3	jar?	1	1		BS	LAS type series		soot	
506	WEMS	fabric E	?	1	1		BS			soot	

The Green, Orby - TGO00**Environmental Archaeology Assessment***Introduction*

Evaluation excavations conducted by Pre-Construct Archaeology at The Green, Orby, uncovered a number of ditches that have been provisionally dated to the Late Saxon and Medieval period. Soil samples were taken from the fills of two of the ditches for environmental assessment. A small assemblage of animal bone, also, was collected by hand during excavation. This material was submitted for environmental assessment.

Table 1: Samples taken for environmental analysis

site	context	volume in l.	description	date
TGO00	118	10	ditch fill	?
TGO00	502	10	ditch fill	12th C AD

Methods

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

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The float of each sample was studied under a low power binocular microscope. The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2 and 3.

Results

The residues from both samples were composed of rounded chalk and flint gravel, with occasional pebbles and concreted silty sediment matrix. The site lay on chalky till and this is clearly a major component of the ditch fills.

Context 118

The only archaeological finds from this sample were a small piece of pottery, a couple of grammes of fired earth and a little animal bone. Domestic debris is equally rare in the flot which contains just a few charred cereal grains, including barley, and a couple of charred weed seeds. The bulk of the environmental finds from the sample relate to the local environment.

The small vertebrate fauna includes bones of frog/toad, common shrew and rodent, while the most abundant remains are the shells of molluscs.

The mollusc fauna is dominated by shells of aquatic or damp ground taxa, with *Planorbis leucostoma* the most abundant, and shells of *Lymnaea truncatula* and *Succinea* sp.. Terrestrial snails are represented by the shells of *Pupilla muscorum*, *Vallonia excentrica* and *Trichia hispida*. This suite reflects a ditch that was seasonally water filled (Macan 1977), but probably dried out in the summer, and probably with grassland adjacent. A few seeds of *Carex* sp. are consistent with this damp environment.

Table 2: Archaeological finds from the samples

context	vol. in l.	residue vol in l.	pot *	fired clay g	bone in g.	Egg-shell g.	Marine shell g.
118	10	0.32	1/<1	2	2		<1
502	10	0.26	8/4	10	6	<1	<1

(* - sherd no/weight in g.)

Context 502

The character of the finds in context 502 was similar but the density greater. Eight small sherds of pottery and 10 grammes of fired clay were recovered, along with six grammes of animal bone and a few fragments of mussel shell, bird eggshell (probably chicken) and a fish vertebra. The wild vertebrate fauna is represented by the bones of frog/toad, field vole and wood mouse.

The flot was also a bit richer than 118. Charcoal and about two dozen charred cereal grains, including wheat and oats(?) although generally in a poor state of preservation, are present with a few charred seeds, and a probable pulse. The local environment is reflected in the terrestrial snail fauna present. In contrast to 118 aquatic molluscs are relatively rare with only one or two shells of *Planorbis leucostoma* being present. The majority of the snails were *Cecilioides acicula*, the burrowing blind snail which is probably intrusive in the deposits, with shells of *Pupilla muscorum*, *Vallonia excentrica*, *Trichia hispida*, *Cochlicopa* sp. and *Retinella nitidula*. Apart from this last taxa this suite contains taxa generally associated with grassland or open country habitats (Evans 1972).

Table 3: Environmental finds from the samples

con	vol	flot vol	snail */#	ch'rd grain *	ch'rd seed *	Char coal *	Unch ar'd seed	Fish	small mam-mal *	comment
118	10	2	3/2	1	1	1	1		1	barley, common shrew, rodent, frog/toad, mussel
502	10	3	3/2	2				1	1	wheat, oat?, pulse?, field vole, wood mouse, frog/toad, bird, fish, mussel

diversity of molluscs as follows: 1=1-3; 2=4-10; 3=11-25; 4=26-50 taxa.

* frequency of items: 1=1-10; 2= 11-100; 3=101-250; 4=251-500; 5=>500

Animal Bone

Forty six fragments of animal bone were recovered during the excavations. These have been identified where possible and the catalogue is attached. The condition of the animal bone is fairly good and it is unlikely that material will have been lost through post-depositional processes other than scavenging. Approximately 25% of the bones carried evidence of dog gnawing indicating a fairly high level of scavenging and possible destruction by dogs.

Cattle, sheep (or goat), pig, fallow deer and goose have been identified (see attached catalogue), and these included juvenile cattle and immature sheep.

Discussion

The soil conditions at the site are clearly conducive to the survival of snails, animal bone and charred plant remains. A few potentially contemporary uncharred seeds occurred in one sample but, accepting that the deposits in context 118 formed in a wet environment, burial conditions have not been stable enough for well preserved organic material to survive. Unless deeper features are found on site, waterlogged remains, except in a degraded condition, are unlikely to occur on site.

The occurrence of animal bone and charred cereal remains indicates that some economic data survives on site and information on the domestic diet and agricultural economy of the settlement is available. Palaeoenvironmental data will be largely restricted to the information obtainable from the molluscan analyses, although analysis of the small vertebrates, charcoal and charred weed seeds can be expected to expand this. The occurrence of a fallow deer bone in such a small sample is perhaps unusual and if this taxa occurs more frequently in the deposits it is likely to indicate a late Saxon or medieval site of relatively high status.

The range of animal bone and charred cereals and possible pulses indicate that there is probably domestic occupation near the excavated ditches, but the density of finds in the samples is indicative of background levels of material rather than dumping within the ditches.

The occurrence of aquatic snails in ditch fill 118, which is undated, higher upslope and shallower than the ditch with fill 502 suggests that in the 12th century (the date of ditch fill 502 which has very few aquatic snails) the site was probably drier than when 118 formed. It seems unlikely therefore that these two features can be contemporary, although local variations in soil, if they exist, could perhaps account for the differences. This may indicate changes in the local drainage and should be investigated if any further work is carried out.

Recommendations

No further work needs to be conducted on the samples from the evaluation. If further archaeological work is conducted at the site then somewhat larger samples (30 litres) would be more appropriate for the recovery of the charred plant remains and these should be taken from a range of different feature types, preferably where they are dated. The palaeoenvironmental analyses should be concentrated on the mollusca from a column of samples taken through the fills of two or three of the larger dated ditches, with particularly reference to the evidence for changing wetness on the site perhaps between the 10th and 12th centuries. OD heights should therefore be recorded for all the samples taken for molluscan analysis.

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Key to codes used in the cataloguing of animal bones

SPECIES		BONE		SIDE	FUSION
BOS	cattle	SKL	skull	W - whole	Records the fused/unfused condition of the epiphyses
CSZ	cattle size	TEMP	temporal	L - left side	P - proximal; D - distal; E - acetabulum;
SUS	pig	FRNT	frontal	R - right side	N - unfused; F - fused; C - cranial; A - posterior
OVCA	sheep or goat	PET	petrous	F - fragment	
OVI	sheep	PAR	parietal	TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B.Wilson, C.Grigson and S.Payne (eds) <i>Ageing and sexing animal bones from Archaeological sites, 91-108.</i>	
SSZ	sheep size	OCIP	occipital	Teeth are labelled as follows in the tooth wear column:	
EQU	horse	ZYG	zygomatic	h ldpm4/dupm4	f ldpm2/dupm2
CER	red deer	MAN	mandible	H lpm4/upm4	g ldpm3/dupm3
CAN	dog	MAX	maxilla	I lm1/um1	
MAN	human	ATL	atlas	J lm2/um2	
UNI	unknown	AXI	axis	K lm3/um3	
CHIK	chicken	CEV	cervical vertebra		
GOOS	goose, dom	TRV	thoracic vertebra		
LEP	hare	LMV	lumbar vertebra		
UNB	indet bird	SAC	sacrum		
MALL	duck, dom.	CDV	caudal vertebra	ZONES - zones record the part of the bone present.	
GULL	gull sp.	SCP	scapula	The key to each zone on each bone is on page 2	
FISH	fish	HUM	humerus		
UNIB	bird indet	RAD	radius		
UNIF	fish indet	MTC	metacarpus	MEASUREMENTS - Any measurements are those listed in A.Von den Driesch (1976) <i>A Guide to the Measurement of Animal Bones from Archaeological Sites</i> , Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA	
GSZE	goose size	MCI-4	metacarpus 1-4		
BEAV	beaver	INN	innominate		
CORV	crow or rook	ILM	ilium		
POLE	polecat/ferret	PUB	pubis	PRESERVATION	
PART	partridge	ISH	ischium	1 - enamel only surviving	
ORC	rabbit	FEM	femur	2 - bone very severely pitted and thinned, tending to break up teeth with surface erosion and loss of cementum and dentine	
ROD	rodent	TIB	tibia	3 - surface pitting and erosion of bone, some loss of cementum and dentine on teeth	
JACK	jackdaw	AST	astragalus	4 - surface of bone intact, loss of organic component, material chalky, calcined or burnt	
OWL	owl indet.	CAL	calcaneum	5 - bone in good condition, probably with some organic component	
AUR	aurochs	MTT	metatarsus		
DUCK	duck sp.	MT1-4	metatarsus 1-4		
CRA	goat	PH1	1st phalanx		
FER	feral dove	PH2	2nd phalanx		
DAM	fallow deer	PH3	3rd phalanx		
		LM1-LM3	Lower molar 1 - molar 3		
		UM1-UM3	upper molar 1 - molar 3		
		LPM1-LPM4	lower premolar 1-4		
		UPM1-UPM4	upper premolar 1-4		
		DLPM1-4	deciduous lower premolar 1-4		
		DUPM1-4	deciduous upper premolar 1-4		
		MNT	mandibular tooth		
		MXT	maxillary tooth		
		LBF	long bone		
		UNI	unidentified		
		STN	sternum		
		INC	incisor		
		TTH	indet. tooth		
		CMP	carpo-metacarpus		
		SKEL	skeleton		

ZONES - codes used to define zones on each bone

SKULL -	<ol style="list-style-type: none"> 1. paraoccipital process 2. occipal condyle 3. intercornual protuberance 4. external acoustic meatus 5. frontal sinus 6. ectorbitale 7. entorbitale 8. temporal articular facet 9. facial tuber 0. infraorbital foramen 	METACARPUS -	<ol style="list-style-type: none"> 1. medial facet of proximal artciulation, MC3 2. lateral facet of proximal articulation, MC4 3. medial distal condyle, MC3 4. lateral distal condyle, MC4 5. anterior distal groove and foramen 6. medial or lateral distal condyle
		FIRST PHALANX	<ol style="list-style-type: none"> 1. proximal epiphysis 2. distal articular facet
MANDIBLE	<ol style="list-style-type: none"> 1. Symphyseal surface 2. diastema 3. lateral diastemal foramen 4. coronoid process 5. condylar process 6. angle 7. anterior dorsal ascending ramus posterior M3 8. mandibular foramen 	INNOMINATE	<ol style="list-style-type: none"> 1. tuber coxae 2. tuber sacrale + scar 3. body of illium with dorso-medial foramen 4. iliopubic eminence 5. acetabular fossa 6. symphyseal branch of pubis 7. body of ischium 8. ischial tuberosity 9. depression for medial tendon of rectus femoris
VERTEBRA	<ol style="list-style-type: none"> 1. spine 2. anterior epiphysis 3. posterior epiphysis 4. centrum 5. neural arch 	FEMUR	<ol style="list-style-type: none"> 1. head 2. trochanter major 3. trochanter minor 4. supracondyloid fossa 5. distal medial condyle 6. lateral distal condyle 7. distal trochlea 8. trochanter tertius
SCAPULA	<ol style="list-style-type: none"> 1. supraglenoid tubercle 2. glenoid cavity 3. origin of the distal spine 4. tuber of spine 5. posterior of neck with foramen 6. cranial angle of blade 7. caudal angle of blade 	TIBIA	<ol style="list-style-type: none"> 1. proximal medial condyle 2. proximal lateral condyle 3. intercondylar eminence 4. proximal posterior nutrient foramen 5. medial malleolus 6. lateral aspect of distal articulation 7. distal pre-epiphyseal portion of the diaphysis
HUMERUS	<ol style="list-style-type: none"> 1. head 2. greater tubercle 3. lesser tubercle 4. intertuberal groove 5. deltoid tuberosity 6. dorsal angle of olecranon fossa 7. capitulum 8. trochlea 	CALCANEUM	<ol style="list-style-type: none"> 1. calcaneal tuber 2. sustentaculum tali 3. processus anterior
RADIUS	<ol style="list-style-type: none"> 1. medial half of proximal epiphysis 2. lateral half of proximal epiphysis 3. posterior proximal ulna scar and foramen 4. medial half of distal epiphysis 5. lateral half of distal epiphysis 6. distal shaft immediately above distal epiphysis 	METATARSUS	<ol style="list-style-type: none"> 1. medial facet of proximal artciulation, MT3. 2. lateral facet of proximal articulation, MT4 3. medial distal condyle, MT3 4. lateral distal condyle, MT4 5. anterior distal groove and foramen 6. medial or lateral distal condyle
ULNA	<ol style="list-style-type: none"> 1. olecranon tuberosity 2. trochlear notch- semilunaris 3. lateral coronoid process 4. distal epiphysis 		

Animal Bone Archive for The Green Orby - TGO00

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
TGO00	101	CSZ	RIB	1	F								SHAFT FRAG	4
TGO00	108	BOS	RAD	1	R	PF	12				Bp-70 Dp-36.9		PROX END	4
TGO00	110	BOS	MTT	1	L		12		DG				PROX HALF-PROX FACET CHEWED	4
TGO00	110	BOS	SCP	1	R				DG				CAUDAL MARGIN OF BLADE-BOTH ENDS CHEWED	4
TGO00	110	CSZ	CDV	1	W	CFAF							COMPLETE	4
TGO00	118	CSZ	RIB	1	F			KN					PROX SHAFT FRAG-CUTS MARKS ON VENTRAL SURFACE	4
TGO00	300/301	BOS	LM2	1	R					J11				4
TGO00	300/301	BOS	MAN	1	R		6						ANGLE-SL POROUS	4
TGO00	300/301	BOS	MTT	1	R				DG				SHAFT-JUENILE--PROX END SL CHEWED	4
TGO00	300/301	BOS	PH1	1	L	PF	12						PROX END DAMAGED	4
TGO00	300/301	BOS	SCP	1	R				DG				CRANIAL MARGIN OF BLADE AND BASE SPINE-CHEWED	4
TGO00	300/301	BOS	SCP	1	R			CH					FRAGMENT OF CAUDAL MARGIN-CHOPPED	4
TGO00	300/301	CSZ	LBF	1	F								SHAFT FRAG	4
TGO00	300/301	GOOS	ULN	1	F								JUVENILE-POROUS FRAG	4
TGO00	300/301	OVCA	INN	1	L	EF	59		DG				ACETABULUM-ILIAL SHAFT CHEWED	4
TGO00	300/301	OVCA	MAN	1	R		7						ANT FRAGMENT ASCENDING RAMUS	4
TGO00	300/301	OVCA	SKL	1	R								PREMAXILLA	4
TGO00	300/301	SSZ	FEM	1	F				DG				PROX SHAFT FRAG-CHEWED	4
TGO00	300/301	SSZ	LBF	1	F				DG				SHAFT FRAG-POROUS-JUV-CHEWED	4
TGO00	300/301	SUS	FEM	1	L		4	CH	DG				DISTAL THIRD OF SHAFT-MIDSHAFT CHOPPED-DISTAL CHEWED- 2 PIECES	4
TGO00	301	DAM	TIB	1	L	PF	123	CH					PROX END-CUT ACROSS PROX FACET	4
TGO00	304	CSZ	RIB	1	L			CH					PROXIMAL SHAFT FRAGMENT-MIDSHAFT CHOPPED	4
TGO00	304	SSZ	RIB	1	R			CH					PROX HALF SHAFT-MIDSHAFT CHOPPED	4
TGO00	400	CSZ	FEM	1	F								SHAFT FRAGMENT	4
TGO00	400	CSZ	LBF	1	F								SHAFT FRAGMENT	4
TGO00	400	CSZ	RIB	1	F								PROX SHAFT FRAGMENT	4
TGO00	400	OVCA	MTT	1	L				DG				PROX SHAFT-PORX END CHEWED	4
TGO00	500	BOS	MTT	1	R		12		DG				PROXIMAL END-CHEWED	4
TGO00	500	CSZ	RIB	1	R			CH	DG				PROXIMAL SHAFT FRAGMENT-PROX CHEWED-DISTAL CHOPPED- 2 PIECES	4
TGO00	500	SUS	INN	1	R	EF	7		DG				ISCHIAL SHAFT WITH PART OF ACETAB-POST CHEWED	4
TGO00	500	SUS	LI	1	W								WELL WORN-CEMENTUM GROWTH OVER ENAMEL UP TO OCCULING SURFACE	4
TGO00	502	BOS	DLP4	1	R					h14				4
TGO00	502	BOS	LM3	1	L					K6				4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
TGO00	502	BOS	MAN	1	R		12345678	SC		fgh14I12J7 K1			SCORED BELOW CONDYLE- 2 PIECES-COMplete- INCISORS UNERUPTED	4
TGO00	502	BOS	TIB	1	L	DN	567						DISTAL HALF-CALF EPI UNATTACHED	4
TGO00	502	CSZ	RIB	1	F								SPLIT RIB FRAGMENT	4
TGO00	502	CSZ	UNI	1	F							P	UNIDENTIFIABLE FRAGMENT-HEAVILY PITTED & EXTRA GROWTH-POSS INFECTED BREAK OR TB	4
TGO00	502	OVCA	MAN	1	L		237			FGHI14J12 K8			HORIZONTAL RAMUS WITH TOOTH ROW	4
TGO00	502	OVCA	SCP	1	L		35		DG				DISTAL TWO THIRDS BLADE-GLENOID CHEWED OFF	4
TGO00	502	SSZ	RIB	1	F								SHAFT FRAGMENT	4
TGO00	502	SSZ	RIB	1	F			CH					DISTAL SHAFT FRAG-PROX CHOPPED- ?PIG	4
TGO00	502	SSZ	RIB	1	F								SHAFT FRAGMENT	4
TGO00	502	SSZ	RIB	1	F								SHAFT FRAGMENT- 1ST RIB?	4
TGO00	502	SSZ	RIB	1	L	PN							PROX END	4
TGO00	506	BOS	SKL	1	F								BASIOCCIPITAL	4
TGO00	506	CSZ	RIB	1	F			CH					SHAFT FRAGMENT-BOTH ENDS CHOPPED- 2 PIECES	4

Appendix 4

CATALOGUE OF THE FINDS FROM THE EVALUATION AT THE GREEN, ORBY (TGO 00).

The object catalogue.

Context 300/301, Glass bottle, post medieval.

Neck and rim of a green glass bottle. The neck is curved and the rim off centre so it is probably not the remains of an ordinary wine bottle.

Context 305, Glass window quarry, post medieval.

Possibly complete, with two curving and two straight sides. May have traces of paint surviving on one side. Maximum dimensions 38 x 17mm, 1mm thick.

Context 502, Stone object?

Dark grey – black quartz stone with one worn uneven surface. Maximum dimensions 52 x 43 x 25mm.

Context 502, Glass slick-stone, 10th – 13th century.

Incomplete central portion with a prominent manufacturing scar on the back. Probably dark green glass. Traditionally these objects have been referred to as linen smoothers in archaeological literature, however, Walton Rogers has suggested that their use was not restricted solely to linen and that they were used for smoothing the seams of all garments after laundering (Walton Rogers 1997, 1775).

Fired Clays.

Context 414, fired clay, weight 121g.

Large thick piece with a single roughly flat surface probably created against wooden shuttering. Natural untempered clay with the surface oxidised while the back is oxidised and reduced fired. Maximum dimensions 80 x 78mm, 28mm thick.

Context 500, fired clay, weight 15g.

Fired lump of natural clay with no surfaces. Oxidised and reduced fired.

Context 502, fired clay, weight 7g.

Small piece of natural clay with one flat surface; oxidised and reduced fired. Maximum dimensions 25 x 18mm, 11mm thick.

Context 502, ceramic brick or tile, weight 7g

Maximum dimensions 22 x 18mm, 15mm thick.

Bibliography

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Jane Cowgill©

May 2000

Appendix 5: List of Archaeological Contexts

Trench 1

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
100	Layer	Topsoil
101	Layer	Subsoil
102	Fill	Fill of [103]
103	Cut	Ditch, probably modern and only partially exposed.
104	Fill	Fill of [105] (?same as 108)
105	Cut	Ditch, largely truncated by [107]
106	Fill	Fill of [107]
107	Cut	Gully
108	Fill	Fill of
109	Cut	Ditch, largely truncated by [107]/[111]
110	Fill	Fill of [111]
111	Cut	Possible pit
112	Fill	Fill of [113]
113	Cut	Ditch
114	Fill	Fill of [115]
115	Cut	Possible ditch, largely truncated by [113]
118	Fill	Fill of [119]
119	Cut	Large ditch
120	Fill	Fill of [121]
121	Cut	Gully – unexcavated
122	Layer	Natural

Trench 2

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
200	Layer	Topsoil
201	Layer	Subsoil
202	Layer	Natural
203	Cut	Gully
204	Fill	Fill of [203]
205	Cut	Gully
206	Fill	Fill of [205]

Trench 3

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
300	Layer	Topsoil
301	Deposit	Dump deposit to make up ground? (?same as 304)
303	Deposit	Road surface (same as 307)
304	Deposit	Dump deposit to make up ground? (?same as 301)
305	Deposit	Build up of material against road
306	Deposit	Build up of material against road
307	Deposit	Road surface (same as 303)
308	Fill	Fill of ditch/gully - unexcavated
309	Fill	Fill of ?pit – edge exposed near section - unexcavated
310	Layer	Natural

Trench 4

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
400	Layer	Topsoil
401	Layer	Subsoil
402	Layer	Natural
403	Cut	Posthole
404	Fill	Fill of [403]
405	Cut	Ditch
406	Fill	Secondary fill of [405]
407	Cut	Ditch – probable recut of [405]

408	Fill	Fill of [407]
409	Cut	Gully
410	Fill	Fill of [409]
411	Cut	Ditch – probable recut of [407]
412	Fill	Fill of [411]
413	Fill	Tertiary fill of [405]
414	Fill	Primary fill of [405]
415	Lens	Small basal deposit filling [405]
416	Lens	Small basal deposit filling [405]
417	Lens	Small basal deposit filling [405]
418	Fill	Secondary fill of upper part of [405], or gully running on western edge of that ditch
419	Fill	Primary fill of upper part of [405], or gully running on western edge of that ditch

Trench 5

<i>Context No.</i>	<i>Category</i>	<i>Description</i>
500	Layer	Topsoil
501	Layer	Subsoil
502	Fill	Fill of [503]
503	Cut	Ditch
504	Fill	Fill of [505]
505	Cut	Shallow scoop bracketed by [503] & [507]
506	Fill	Fill of [507]
507	Cut	Ditch
508	Layer	Natural - (a): Slightly sandy clay with c.25% chalk grit (b): As 'a', but without the chalky inclusions – it is probable that these have been leached out by acidic soil-chemistry
509	Fill	Upper fill of [503] – redeposited natural