



Hallgate Lane Pilsley, Derbyshire

Archaeological Watching Brief



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Summary

Wessex Archaeology was commissioned by Caddick Construction Ltd to undertake an archaeological watching brief during ground reduction ahead of residential development. The monitored works covered 0.43 ha, centred on NGR 441916, 362807, at Hallgate Lane, Pilsley, Derbyshire, S45 8HN (**Fig. 1**).

The aims and objectives of the watching brief have been addressed.

As established by geophysical survey (Wessex Archaeology 2015) and trial trench evaluation (Wessex Archaeology 2021a), the remains of a field system pre-dating the extant system of enclosure were present on site. The watching brief has revealed the continuation of former field boundary ditches recorded in evaluation trenches 1 and 2. Radiocarbon dating of environmental material has revealed that these ditches were of Late Iron Age date. The environmental assemblages may be indicative of the burning of turves for fuel.

A wheat grain recovered from one of the ditches was also radiocarbon dated and found to be of early medieval origin. A small number of cereal grains were present in the ditch fills and were probably all intrusive. It is likely that arable agriculture was practiced somewhere in the vicinity in the early medieval period.

Three nearby pits have also been discovered. The pits did not correlate with discrete geophysical anomalies.

The finds assemblage is of negligible size and significance. In the absence of contextualising information there is no potential for further environmental analysis.

The archive resulting from the watching brief is currently held at the offices of Wessex Archaeology in Sheffield. Sheffield Museums has agreed in principle to accept the archive on completion of the project, under an accession code to be determined. An OASIS form, wessexar1-506657, has been provisionally completed and will be finalised at the time of deposition.

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Hallgate Lane, Pilsley, Derbyshire

Archaeological Watching Brief

1 INTRODUCTION

1.1 Project and planning background

- 1.1.1 Wessex Archaeology was commissioned by Caddick Construction Ltd to undertake an archaeological watching brief during ground reduction ahead of residential development. The monitored works covered 0.43 ha, centred on NGR 441916, 362807, at Hallgate Lane, Pilsley, Derbyshire, S45 8HN (**Fig. 1**).
- 1.1.2 The watching brief was carried out as a condition of planning permission, granted by North East Derbyshire District Council (15/00153/OL), as part of a programme of archaeological works, which had included a geophysical survey of the site (Wessex Archaeology 2015) and trial trench evaluation (Wessex Archaeology 2021a). The previous archaeological works revealed that the site contains the poorly-preserved remains of an undated field system. Preservation was best in the area in the north-west targeted by this watching brief.
- 1.1.3 The watching brief was undertaken in accordance with a written scheme of investigation (WSI) which detailed the aims, methodologies and standards to be employed (Wessex Archaeology 2021b). The Development Control Archaeologist for Derbyshire County Council approved the WSI, on behalf of the Local Planning Authority (LPA), prior to fieldwork commencing. The watching brief was undertaken between 14 March and 12 April 2022.

1.2 Scope of the report

- 1.2.1 The purpose of this report is to provide the results of the watching brief, to interpret the results within their local or regional context (or otherwise), and to assess their potential to address the aims outlined in the WSI, thereby making available information about the archaeological resource (a preservation by record).

1.3 Location, topography and geology

- 1.3.1 The site is located on the northern edge of Pilsley, 9 km south-south-east of the centre of Chesterfield in the county of Derbyshire.
- 1.3.2 The site occupies an area of 3.1 ha of agricultural land, currently used for silage production. An area of 0.43 ha in the north-west of the site was subject to archaeological monitoring. The site is bounded by Hallgate Lane to the south, Rupert Street to the east and playing fields to the north, with further agricultural land to the west.
- 1.3.3 The site is on a gentle south-facing incline that rises from 159 m OD in the south to approximately 167 m OD in the north-east.
- 1.3.4 The underlying geology is mapped as Sandstone of the Pennine Middle Coal Measures Formation with no overlying superficial geological deposits recorded (British Geological Survey online viewer).



2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The following information is summarised from the geophysical survey report (Wessex Archaeology 2015) and trial trenching report (Wessex Archaeology 2021a). These reports compiled background information from the Derbyshire Historic Environment Record and National Heritage List for England.

2.2 Previous investigations related to the development

Geophysical survey (2015)

2.2.1 A detailed gradiometer survey was conducted by Wessex Archaeology in 2015. It demonstrated the presence of anomalies of potential archaeological interest across the survey area. The most complex area of potential archaeology was located in the west of the site. In this area, discreet linear features were identified as probable archaeology, consisting of ditch-like features of unknown origin and date. These were thought to represent enclosures and/or former field systems. An area of increased magnetic response in the north-west of the survey area was thought to represent a change in the near surface geology.

Trial trench evaluation (2021)

2.2.2 Eleven trial trenches tested the results of the gradiometer survey, with variable correlation between archaeological features revealed by excavation and the geophysical results. The features uncovered generally could not be dated but represented a north-west to south-east aligned field system that pre-dates the extant field system. Remains of this scheme of land division have been impacted by ploughing. The north-west of the site (i.e., the area subsequently targeted for archaeological monitoring) was seen in the evaluation to be the least affected by ploughing.

2.3 Archaeological and historical context

Post-medieval

2.3.1 There are three 17th-century Grade II listed buildings recorded close to the site. Morton Road Farmhouse is a farmhouse with attached outbuildings and an associated barn listed separately (LB1158007 and LB1108910). Sitwell Lane Cottages are a pair of contemporary cottages.

2.3.2 Map regression indicated that the site has been in use as agricultural fields from at least the 19th century, although internal boundaries have changed over time.

3 AIMS AND OBJECTIVES

3.1 Aims

3.1.1 The aims of the watching brief, as stated in the WSI (Wessex Archaeology 2021a) and as defined in the ClfA *Standard and guidance for an archaeological watching brief* (ClfA 2014a), were:

- to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of the development or other works;
- to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an



archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard; and,

- to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

3.2 Objectives

3.2.1 In order to achieve the above aims, the objectives of the watching brief, also defined in the WSI (Wessex Archaeology 2021b), were:

- to determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified works area;
- to record and establish, within the constraints of the works, the extent, character, date, condition and quality of any surviving archaeological remains (a preservation by record);
- to recover dating evidence related to the identified relict field system, be this through the retrieval of finds or environmental samples suitable for scientific dating, be that OSL dating or radiocarbon dating;
- to place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and,
- to make available information about the archaeological resource on the site by preparing a report on the results of the watching brief.

4 METHODS

4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methodology set out within the WSI (Wessex Archaeology 2021b) and in general compliance with the standards outlined in ClfA guidance (ClfA 2014a). The methods employed are summarised below.

4.2 Fieldwork methods

General

4.2.1 The watching brief monitored all groundworks in the north-west corner of site. This included ground reduction for each housing plot, all foundation trenches and all service trenches.

4.2.2 The attending archaeologist monitored all mechanical excavations within the specified area. Where necessary, the surfaces of uncovered archaeological deposits were cleaned by hand to aid visual definition. A sample of archaeological features and deposits was hand-excavated, sufficient to address the aims of the watching brief.

4.2.3 Spoil from machine stripping and hand-excavated archaeological deposits was visually scanned for the purposes of finds retrieval. Artefacts were collected and bagged by context.

Recording

4.2.4 All exposed archaeological deposits and features were recorded using Wessex Archaeology's pro forma recording system. A complete record of excavated features and deposits was made, including plans and sections drawn to appropriate scales (generally

1:20 or 1:50 for plans and 1:10 for sections) and tied to the Ordnance Survey (OS) National Grid.

- 4.2.5 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSTN15 and OSGM15, with a three-dimensional accuracy of at least 50 mm.
- 4.2.6 A full photographic record was made using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

4.3 Finds and environmental strategies

- 4.3.1 Strategies for the recovery, processing and assessment of finds and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2021b). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b), *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011) and ClfA's *Toolkit for Specialist Reporting*.

4.4 Monitoring

- 4.4.1 The Development Control Archaeologist for Derbyshire County Council monitored the watching brief on behalf of the LPA.

5 STRATIGRAPHIC EVIDENCE

5.1 Introduction

- 5.1.1 The following section is a summary of information held in the site archive. Information about each context is presented in Appendix 1. **Figure 1** shows the location and plan of the watching brief area.

5.2 Soil sequence and natural deposits

- 5.2.1 The undisturbed natural geological substrate (1003) comprised light yellowish brown sandy silt. It was overlain by reddish brown sandy silt relict ploughsoil subsoil (1002) and the area was sealed by greyish brown sandy silt topsoil (1001). The total depth of soil (topsoil and subsoil) was 0.4 m.

5.3 Late Iron Age

Ditches

- 5.3.1 During the trial trench evaluation, a linear ditch was revealed in each of trenches 1 and 2 (Wessex Archaeology 2021a). The continuation of these ditches was investigated during the watching brief. Both ditches correlated with linear geophysical anomalies (Wessex Archaeology 2015).
- 5.3.2 Ditch 1027 (**Fig. 2**; maximum 1.1 m wide and 0.32 m deep with a brown sandy silt or sandy clay fill) was recorded as ditch 104 during the trial trench evaluation. It was aligned north-west to south-east and has been investigated with four ditch segments (1020, 1022, 1024, and 104 from the evaluation). A single small sherd of modern pottery recovered from this ditch during the evaluation was almost certainly intrusive.

- 5.3.3 Ditch 1026 (**Fig. 3**; maximum 1.25 m wide and 0.23 m deep with a brown fill with variable texture) was recorded as ditch 204 during the evaluation. Ditch 1026 was aligned north-west to south-east, approximately perpendicular to ditch 1027. It was recorded in five ditch segments (1004, 1014, 1016, 1018, and 204 from the evaluation).
- 5.3.4 Radiocarbon dating (see below) of environmental material recovered from both of these ditches has demonstrated that they likely had a Late Iron Age origin.

Pits

- 5.3.5 Four discrete features were revealed during the watching brief, one of which (1008) was interpreted as bioturbation. A piece of undiagnostic slag was recovered from bioturbation 1008. The other three (**Figs 4 and 5**; 1006, 1010 and 1012) were probably anthropogenic; the fill of each contained some flecks of charcoal. The pits were subcircular or oval and were a maximum of 2.08 m across and 0.45 m deep. A single small sherd of medieval pottery was recovered from the fill of pit 1012, however this weighed only 12 g and could well be intrusive.

6 FINDS EVIDENCE

6.1 Report

- 6.1.1 A negligible quantity of finds was recovered from the site, comprising three items: two sherds of pottery and a fragment of slag (see Table 1).
- 6.1.2 Both sherds of pottery are medieval. The sherd from subsoil 1002 is in a coarse oxidised fabric containing sparse quartz sand and is from a jar or bowl rim, probably of 13th-/14th-century date. The sherd from pit 1012 is in a slightly finer sandy oxidised fabric and appears to come from a jug handle; this probably dates somewhere between the 13th and 15th centuries. Both could be products of the Brackenfield kilns near Chesterfield (Cumberpatch 2004).
- 6.1.3 The piece of slag is undiagnostic and is not necessarily a product of metalworking. This was the only find recovered from cut 1008 and is undated.

Table 1 All finds by context

Context	Description	Material	No.	Wt. (g)
1002	Subsoil	Pottery	1	47
1009	Cut 1008	Slag	1	258
1013	Pit 1012	Pottery	1	12

7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

- 7.1.1 Five bulk sediment samples were processed for the recovery and assessment of environmental evidence from Middle to Late Iron Age ditches and pits.

7.2 Aims and methods

- 7.2.1 The aim of this assessment is to determine the nature and significance of the environmental remains preserved at the site, and their potential to address the project aims. This assessment has been undertaken in accordance with Historic England guidance (English Heritage 2011).

- 7.2.2 The size of the bulk sediment samples varied between 37 and 40 litres, with an average volume of approximately 39 litres. The samples were processed by standard flotation methods on a Siraf-type flotation tank; the flots retained on a 0.25 mm mesh, residues fractionated into 4 mm and 1 mm fractions. Environmental material extracted from the residues was added to the flots. The fine residue fractions and the flots were examined using a stereomicroscope at magnifications of up to x40.
- 7.2.3 Plant remains were identified through comparison with modern reference material held by Wessex Archaeology and relevant literature (e.g., Cappers *et al.* 2006). Selected wood charcoal fragments were identified to identify suitable material for radiocarbon dating. The wood charcoal was identified through examination of the transverse, tangential longitudinal, and radial longitudinal sections at up to 400x magnification, with comparison to Wessex Archaeology's reference collection and identification keys (Gale and Cutler 2000; Hather 2000; Schweingruber 1990). Nomenclature follows Stace (1997) for wild taxa, and Zohary *et al.* (2012) for cereals and other cultivated crops (using traditional names).
- 7.2.4 Different potential indicators of bioturbation were noted, including the percentage of roots together with presence of modern seeds, mycorrhizal fungi sclerotia (e.g., *Cenococcum geophilum*) and animal remains, burrowing blind snails (*Cecilioides acicula*), earthworm eggs, and modern insects.
- 7.2.5 Remains were recorded semi-quantitatively on an abundance scale: C = <5 ('Trace'), B = 5–10 ('Rare'), A = 10–30 ('Occasional'), A* = 30–100 ('Common'), A** = 100–500 ('Abundant'), A*** = >500 ('Very abundant/Exceptional').

7.3 Results

- 7.3.1 The results are presented in Appendix 2, Table 4. There are some indicators of bioturbation which indicate the possibility of contamination from later intrusive material (e.g., abundant modern roots, modern uncharred seeds, fungal sclerotia, modern insects, earthworm eggs).
- 7.3.2 Environmental evidence comprises charred plant remains and wood charcoal. Highly fragmented coal and clinker/cinder is noted in all the samples.
- 7.3.3 The samples are all very similar in composition, with the same array of charred plant remains present across the features. These include 'tubers' of false oat-grass (*Arrhenatherum elatius* subsp. *bulbosum*) and, in some cases, pig-nut (*Conopodium majus*), together with other indeterminate tubers/rhizomes and monocotyledon stems. Other wild taxa included 'seeds' of sedge family species (Cyperaceae), vetches (Viciaeae), ribwort plantain (*Plantago lanceolata*), buttercups (*Ranunculus* subg. *Ranunculus*), brambles (*Rubus* sp.), knotgrass family species (Polygonaceae), grasses (Poaceae), heath-grass (*Danthonia decumbens*), and a large-seeded oat-type (*Avena* sp.) species. These oat-type grains may be from a species of wild oat or possibly false oat-grass; the caryopses of both are similar in appearance. Blackthorn (*Prunus spinosa*) endocarps and hazel (*Corylus avellana*) nutshell fragments were noted in the sample from pit 1012. Hazel nutshell was also noted in the sample from ditch 1016. The condition of these remains is generally good.
- 7.3.4 A small number of mostly poorly preserved cereal grains are present, with some of them identifiable as barley (*Hordeum* sp.), hulled barley (*Hordeum vulgare*), wheat (*Triticum* sp.), and free-threshing wheat (*Triticum aestivum/turgidum*). Many of the cereals are unidentifiable (Triticeae). No cereal chaff is noted in the samples.

- 7.3.5 The wood charcoal assemblage is primarily composed of non-oak (*Quercus* sp.) species, with evidence for hazel (*Corylus avellana*), blackthorn-type (*Prunus spinosa* tp.), and heather-type (*Calluna vulgaris*-tp.). Most of the wood charcoal is well-preserved.

7.4 Discussion

- 7.4.1 A relatively rich later Iron Age assemblage of charred plant remains and wood charcoal has been recovered from the site. Most of the material is likely to have been redeposited into the pits and ditches, perhaps after first forming a component of middens near to settlements. The generally high concentrations of remains and the large size of the wood charcoal fragments suggests that this material has not undergone significant levels of reworking prior to deposition.
- 7.4.2 Low numbers of cereal grains recorded across the features could all reflect later contamination. A free-threshing wheat grain from ditch 1026 (slot 1016) returned an early medieval radiocarbon date of cal. AD 880–1020 (1100 ±30 BP; UBA-49036). This suggests that there is earlier medieval activity in the vicinity of the site, and the cereal remains were potentially spread into features through later processes (e.g., manuring). All of the cereal remains could be later intrusions.
- 7.4.3 The range of wild taxa recorded across the samples are remarkably consistent. In particular, wild plant species commonly associated with (damp) grassland habitats have been recorded, including heath-grass, ribwort plantain, sedges, false oat-grass, and pignut. The frequent occurrence of subterranean plant parts is particularly notable, such as false-oat grass ‘tubers’ (swollen basal nodes), pignut tubers, and grass-type rhizomes/tubers. Some of these species are likely to have grown in heathy grassland, and this interpretation is supported by the presence of heather-type stems. This heathland habitat probably included scrubby areas composed of hazel and blackthorn.
- 7.4.4 Overall, this range of wild plant taxa is indicative of fuel debris generated through burning turves cut from a heathland habitat (Hall 2003). Turves have been traditionally cut from heathlands to provide sources of fuel, although they were also used as a flooring material in animal byres or as a construction material for roofing or in oven walls (Hall 2003). Evidence for the exploitation of heathland habitats is routinely recorded in later prehistoric and Romano-British sites in northern England, although the assemblages often lack close dating (Hall and Huntley 2007). Coal may also have been exploited as a fuel source alongside turves, although it is unclear if in the small quantities of fragmented coal and clinker/cinder reflect later contamination (*cf.* Claughton *et al.* 2016).

7.5 Further potential

- 7.5.1 There is some potential for further analysis of the charred plant remains and wood charcoal from these samples to provide additional information on the nature of settlement activity and the local environment. However, the features sampled lack contextualisation as part of a wider Iron Age settlement, with no clear evidence for a direct relationship to domestic activity. Consequently, further analysis would not significantly add to the information outlined in this assessment.

8 RADIOCARBON DATING

8.1 Introduction

- 8.1.1 Four samples were submitted for radiocarbon dating to the 14CHRONO Centre, Queen’s University, Belfast (UBA).

- 8.1.2 Following the WSI (Wessex Archaeology 2021b), the primary aim of the radiocarbon dating programme was to examine the chronology of the relict field system ditches. Single-entity, short-life samples were selected for dating including charred plant remains and wood charcoal (avoiding long-lived species). Samples of wood charcoal with a strong growth ring curvature were selected for dating since these derive from small branches or stems (i.e., short-lived).
- 8.1.3 The samples were measured following standard procedures with full details of analytical methods are provided in 14Chrono 2019. The radiocarbon ages were calibrated with OxCal 4.4 (Bronk-Ramsey 2009) using the IntCal20 curve (Reimer *et al.* 2020). Calibrated dates are reported at the 95% confidence interval, with end points rounded out to the nearest 10 years. The dates were checked for consistency using the R_Combine function in OxCal which performs a chi-square (X^2) test following Ward and Wilson (1978).

8.2 Results

- 8.2.1 The results are outlined in Table 2.
- 8.2.2 The two samples from ditch 1026 (slot 1016, fill 1017) returned inconsistent radiocarbon determinations. A Middle–Late Iron Age date of 370–170 cal. BC (UBA-49037; 2194 ± 26 BP) was obtained on hazel (*Corylus avellana*) charcoal. In comparison, a charred free-threshing wheat (*Triticum aestivum/turgidum*) grain produced an early medieval date of cal. AD 880–1020 (UBA-49036; 1100 ± 30 BP).
- 8.2.3 In ditch 1027 (slot 1020, fill 1021), the two samples also returned inconsistent radiocarbon determinations ($T'=14.6$; $T'5\%=3.8$; $df=1$; Ward and Wilson 1978), although they are broadly coeval and suggest activity between the Middle to Late Iron Age (390 cal BC – cal. AD 10). The sample of hazel (*Corylus avellana*) charcoal returned a Middle–Late Iron Age date of 390–200 cal. BC (UBA-49039; 2222 ± 25 BP), whilst a charred pignut (*Conopodium majus*) tuber returned a Late Iron Age date of 180 cal. BC – cal. AD 10 (UBA-49038; 2084 ± 26 BP).

Table 2 Radiocarbon dating results

Lab. Ref	Sample details	Radiocarbon age (BP)	Calibrated date (95.4% probability)
UBA-49036	Ditch 1026 (slot 1016, fill 1017, sample 4) – charred free-threshing wheat (<i>Triticum aestivum/turgidum</i>) grain x 1	1100 ± 30	cal. AD 880–1020
UBA-49037	Ditch 1026 (slot 1016, fill 1017, sample 4) –Hazel (<i>Corylus avellana</i>) charcoal, excellent condition (>10 mm frag.), strong growth ring curvature, 9 growth rings, pith present	2194 ± 26	370–170 cal. BC
UBA-49038	Ditch 1027 (slot 1020, fill 1021, sample 5) – charred pignut (<i>Conopodium majus</i>) tuber x 1	2084 ± 26	180 cal. BC – cal. AD 10
UBA-49039	Ditch 1027 (slot 1020, fill 1021, sample 5) – Hazel (<i>Corylus avellana</i>) charcoal, good condition, strong growth ring curvature, 3 growth rings	2222 ± 25	390–200 cal. BC

8.3 Discussion

- 8.3.1 Three of the radiocarbon determinations fall between the Middle to Late Iron Age (UBA-49037, -49038 and -49039), and they suggest that the ditches were open between these

periods. It can be reasonably assumed that the relatively high concentrations of charred plant remains and wood charcoal in the ditch fills reflect concentrated dumps of fuel debris, and that the dated material is unlikely to have been substantially reworked (see the environmental assessment). However, the discrepancy between the dates may be due to the presence of residual or intrusive material. Since the samples derive from secondary deposits, some material could be residual if it had first accumulated elsewhere for decades (i.e., in domestic middens) or if the hazel charcoal was already 'old' prior to deposition (i.e., reused timber from a building). An age-offset due to the 'old wood effect' is unlikely since the hazel charcoal derives from short-lived fragments of wood. The Middle to Late Iron Age radiocarbon determinations on hazel charcoal from ditches 1026 (slot 1016) and 1027 (1020) are statistically consistent and they could therefore be of the same actual age ($T=0.6$; $T'5\%=3.8$; $df=1$; Ward and Wilson 1978). However, both determinations are older than the pignut tuber which is dated to the Late Iron Age. It is unclear which of these three samples provides the most accurate date.

- 8.3.2 A free-threshing wheat grain from ditch 1026 (slot 1016) is dated to the early medieval period (cal. AD 880–1020) which indicates that it is a later intrusive contaminant. Free-threshing wheat was one of the main crops cultivated in northern England after the Romano-British period, so this date is consistent with expectations (*cf.* Hall and Huntley 2007). It is likely that all of the other cereals recorded are also later contaminants.

9 DISCUSSION

9.1 Conclusion

- 9.1.1 The aims and objectives of the watching brief have been addressed.
- 9.1.2 As established by geophysical survey (Wessex Archaeology 2015) and trial trench evaluation (Wessex Archaeology 2021a), the remains of a field system pre-dating the extant system of enclosure were present on site. The watching brief has revealed the continuation of former field boundary ditches recorded in evaluation trenches 1 and 2. Radiocarbon dating of environmental material has revealed that these ditches were of Late Iron Age date. The environmental assemblages may be indicative of the burning of turves for fuel.
- 9.1.3 A wheat grain recovered from one of the ditches was also radiocarbon dated and found to be of early medieval origin. A small number of cereal grains were present in the ditch fills and were probably all intrusive. It is likely that arable agriculture was practiced somewhere in the vicinity in the early medieval period.
- 9.1.4 Three nearby pits have also been discovered. The pits did not correlate with discrete geophysical anomalies.
- 9.1.5 The finds assemblage is of negligible size and significance. In the absence of contextualising information there is no potential for further environmental analysis.

10 ARCHIVE STORAGE AND CURATION

10.1 Museum

- 10.1.1 The archive resulting from the watching brief is currently held at the offices of Wessex Archaeology in Sheffield. Sheffield Museums has agreed in principle to accept the archive on completion of the project, under an accession code to be determined. Deposition of any finds with the museum will only be carried out with the full written agreement of the landowner to transfer title of all finds to the museum.

- 10.1.2 A Project Notification was sent to the Museum on 7th January 2021 and a Mid Project Agreement on the 20th October 2022. No response has been received from the Museum. Once the extent of the material that needs to be deposited is established the archive will be deposited with the Museum within three months.
- 10.1.3 Deposition with ADS will be completed by the end of January 2023.
- 10.1.4 Costs for the deposition of the archive are expected to be approximately £450.00. This would cover the deposition of a box of documents (£300.00) and a half box of environmental material (£150.00). Deposition with ADS is expected to cost £200.00. Funding for this work has already been agreed with the developer (Forge New Homes) and will be paid by Wessex Archaeology upon request.

10.2 Preparation of the archive

Physical archive

- 10.2.1 The physical archive, which includes paper records, graphics, artefacts and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Sheffield Museums, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011).
- 10.2.2 All archive elements will be marked with the accession code, and a full index will be prepared. The physical archive currently comprises the following:
- 1 cardboard box of artefacts, ordered by material type
 - 1 file of paper records

Digital archive

- 10.2.3 The digital archive generated by the project, which comprises born-digital data (e.g. site records, survey data, databases and spreadsheets, photographs and reports), will be deposited with a Trusted Digital Repository, in this instance the Archaeology Data Service (ADS), to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance) and accompanied by metadata.

10.3 Selection strategy

- 10.3.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of an archaeological project require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e. the retained archive should fulfil the requirements of both future researchers and the receiving Museum.
- 10.3.2 The selection strategy, which details the project-specific selection process, is underpinned by national guidelines on selection and retention (Brown 2011, section 4) and generic selection policies (SMA 1993; Wessex Archaeology's internal selection policy) and follows ClfA's 'Toolkit for Selecting Archaeological Archives'. It should be agreed by all stakeholders (Wessex Archaeology's internal specialists, external specialists, local authority, museum) and fully documented in the project archive.
- 10.3.3 In this instance, given the relatively low level of finds recovery, the selection process has been deferred until after the fieldwork stage was completed. Project-specific proposals for



selection are presented below. These proposals are based on recommendations by Wessex Archaeology’s internal specialists and will be updated in line with any further comment by other stakeholders (museum, local authority). The selection strategy will be fully documented in the project archive.

10.3.4 Any material not selected for retention may be used for teaching or reference collections by Wessex Archaeology.

Finds

10.3.5 This is an extremely small assemblage comprising three items of which only two are datable (sherds of medieval pottery, of which one came from subsoil). Given the very small quantities involved, retention for long-term curation is not recommended.

Environmental material

10.3.6 All assessed samples from the evaluation and mitigation have the potential for further analysis, despite no further analysis being recommended at this stage, as they may be of interest to future research in the local area and to those studying the wider region. Therefore, the assessed flots and all extracted materials are to be retained in the site archive.

10.3.7 The residues were discarded after sorting.

Documentary records

10.3.8 Paper records comprise site registers (other pro-forma site records are digital), drawings and reports (Written Scheme of Investigation, client report). All will be retained and deposited with the project archive.

Digital data

10.3.9 The digital data comprise site records (tablet-recorded on site) in spreadsheet format; finds records in spreadsheet format; survey data; photographs; reports. All will be deposited, although site photographs will be subject to selection to eliminate poor quality and duplicated images, and any others not considered directly relevant to the archaeology of the site.

10.3.10 The table below summarises the recommended selection and deposition strategy.

Table 3 Archive selection and deposition strategy

Class	Element	Quantification	Depository	Format
Physical archive	Paper records	1 A4 file	Sheffield Museums	N/A
Digital archive	Report	1 (5 MB)	ADS	.pdf
	Digital recording sheets	52 (18.1 MB)	ADS	.pdf
	Images	72 (444 MB)	ADS	.jpg
	Survey	2.36 MB	ADS	.dxf (vector graphics)

10.4 Security copy

10.4.1 In line with current best practice (e.g. Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital



preservation of electronic documents through omission of features ill-suited to long-term archiving.

10.5 OASIS

10.5.1 An OASIS (online access to the index of archaeological investigations) record (<http://oasis.ac.uk>) has been initiated, with key fields completed (Appendix 3). A.pdf version of the final report will be submitted following approval by the Development Control Archaeologist for Derbyshire County Council on behalf of the LPA. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

11 COPYRIGHT

11.1 Archive and report copyright

11.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*.

11.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

11.2 Third party data copyright

11.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.

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APPENDICES

Appendix 1 Contexts

Context Number	Type	Category	Fill of/Filled With
1001	Layer	Topsoil	n/a
Mid-greyish brown sandy silt with infrequent rounded, sub-rounded stones, <5%, 20 mm–50 mm			
1002	Layer	Subsoil	n/a
Mid-reddish orange brown sandy silt with occasional rounded/ sub-rounded stones, 20 mm–40 mm			
1003	Layer	Natural	n/a
Light yellowish brown sandy silt with rare large sub-angular silt stone 150mm, moderate medium and small sub-angular silt stone 20 to 100mm			
1004	Cut	Ditch	1005
Linear ditch aligned SW-NE with irregular, irregular sides and an irregular/undulating base. Length: 50.00 m. Depth: 0.20 m.			
1005	Fill	Secondary fill	1004
Mid-orange brown sand with moderate medium sub-angular stones			
1006	Cut	Pit	1007
Sub-oval pit with shallow, straight sides and a concave base. Length: 2.08 m. Width: 1.59 m. Depth: 0.45 m.			
1007	Fill	Secondary fill	1006
Light brown sandy silt with moderate medium sub-angular stones			
1008	Cut	Bioturbation	1009
Irregular bioturbation with irregular, irregular sides and an irregular/undulating base. Length: 1.98 m. Width: 1.22 m. Depth: 0.25 m.			
1009	Fill	Secondary fill	1008
Mid-brown sandy silt with rare small sub-angular stone			
1010	Cut	Pit	1011
Sub-circular pit with irregular, irregular sides and a flat base. Width: 0.76 m. Depth: 0.22 m.			
1011	Fill	Secondary fill	1010
Mid-brown sandy silt with rare small and medium sub-angular stones			
1012	Cut	Pit	1013
Sub-circular pit with irregular, irregular sides and a concave base. Length: 1.25 m. Width: 0.82 m. Depth: 0.33 m.			
1013	Fill	Secondary fill	1012
Mid-brown sandy silt with rare small sub-angular stone			
1014	Cut	Ditch	1015
Linear ditch aligned NE-SW with irregular, irregular sides and a flat base. Length: 50.00 m. Width: 1.25 m. Depth: 0.23 m.			
1015	Fill	Secondary fill	1014
Mid-brown sandy silt with sparse medium sub-angular stones			
1016	Cut	Ditch	1017
Linear ditch aligned SW-NE with shallow, straight sides and a flat base. Length: 50.00 m. Width: 0.90 m. Depth: 0.11 m.			
1017	Fill	Secondary fill	1016
Mid-brown sandy silt with moderate medium sub-angular stones			
1018	Cut	Ditch	1019
Linear ditch aligned NE-SW with irregular, irregular sides and a flat base. Length: 50.00 m. Depth: 0.21 m.			
1019	Fill	Secondary fill	1018
Mid-brown sandy silt with rare small and medium sub-angular stones			
1020	Cut	Ditch	1021
Linear ditch with moderate, straight sides and a flat base. Depth: 0.14 m.			
1021	Fill	Secondary fill	1020
Dark brown sandy silt with rare medium sub-angular stones			
1022	Cut	Ditch	1023
Linear ditch aligned NW-SE with irregular, irregular sides and an irregular/undulating base. Depth: 0.05 m.			
1023	Fill	Secondary fill	1022



Context Number	Type	Category	Fill of/Filled With
			Mid-brown sandy silt with rare medium sub-angular stones
1024	Cut	Ditch	1025
			Linear ditch aligned NW-SE with moderate, straight sides and an irregular/undulating base. Depth: 0.15 m.
1025	Fill	Secondary fill	1024
			Dark brown sandy silt with sparse medium sub-angular stones
1026	Group	Ditch	n/a
			Field boundary seen in the geophysical survey (WA 2015) and trench 2 in the evaluation (WA 2021a).
1027	Group	Ditch	n/a
			Field boundary seen in the geophysical survey (WA 2015) and trench 1 in the evaluation (WA 2021a).



Appendix 2 Environmental data

Table 4 Environmental evidence: charcoal and charred plant remains

Feature Type	Feature	Context	Group	Sample Code	Sample Vol. (l)	Flot vol. (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal >2mm (ml)	Charcoal	Other material
Ditch	1004	1005	1026	243131 _1	39	170	70%, A**, F, E, I	C	-	<i>Triticum</i> sp., Triticeae	A	<i>Arrhenatherum elatius</i> subsp. <i>bulbosum</i> tubers, tubers/rhizomes, monocot stems, <i>Danthonia decumbens</i> , Cyperaceae, Viciae, <i>Plantago lanceolata</i> , large-seeded <i>Avena</i> tp. grain, <i>Ranunculus</i> subg. <i>Ranunculus</i> , Polygonaceae, indet tree bud	10	Mixture of <i>Quercus</i> sp. and non- <i>Quercus</i> sp. incl. <i>Calluna vulgaris</i> tp. stems. Moderate to good condition, some mineral staining.	Coal, fragmented (A*), Clinker/cinder, fragmented (A)
Pit	1010	1011	-	243131 _2	40	100	60%, A*, F, E	C	-	<i>Triticum aestivum/turgidum</i> , <i>Hordeum</i> sp., Triticeae	A*	<i>Arrhenatherum elatius</i> subsp. <i>bulbosum</i> tubers, cf. <i>Conopodium majus</i> tubers, tubers/rhizomes, monocot stems, <i>Danthonia decumbens</i> , Cyperaceae, large-seeded <i>Avena</i> tp. grains, indets	40	Mixture of <i>Quercus</i> sp. and non- <i>Quercus</i> sp. incl. <i>Calluna vulgaris</i> tp. stems. Moderate to good condition, some mineral staining.	Coal, fragmented (A*), Clinker/cinder, fragmented (A)
Pit	1012	1013	-	243131 _3	37	150	60%, A*, F, E	C	-	<i>Hordeum vulgare</i> (twisted)	A	Poaceae, <i>Prunus spinosa</i> endocarp fragment, <i>Corylus avellana</i> nutshell fragment, tubers/rhizomes, monocot stems, indet amorphous plant material (fragment), indets	60	Mixture of <i>Quercus</i> sp. and non- <i>Quercus</i> sp. incl. <i>Calluna vulgaris</i> tp. stems. Moderate to good condition, some mineral staining.	Coal, fragmented (A*), Clinker/cinder, fragmented (A)



Feature Type	Feature	Context	Group	Sample Code	Sample Vol. (l)	Flot vol. (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal >2mm (ml)	Charcoal	Other material
Ditch	1016	1017	1026	243131_4	40	125	60%, A*, F, E	C	-	<i>Hordeum</i> sp., <i>Triticum</i> sp., Triticeae	A*	<i>Arrhenatherum elatius</i> subsp. <i>bulbosum</i> tubers, <i>Corylus avellana</i> nutshell fragments, <i>Conopodium majus</i> tubers, tubers/rhizomes, monocot stems, <i>Danthonia decumbens</i> , Cyperaceae, large-seeded <i>Avena</i> tp. grains, <i>Rubus</i> sp., indet seeds	60	Mixture of <i>Quercus</i> sp. and non- <i>Quercus</i> sp. incl. <i>Calluna vulgaris</i> tp. stems. Moderate to good condition, some mineral staining.	Coal, fragmented (A***), Clinker/cinder, fragmented (A)
Ditch	1020	1021	1027	243131_5	38	110	60%, A*, F, E	-	-	-	A	<i>Arrhenatherum elatius</i> subsp. <i>bulbosum</i> tubers, <i>Conopodium majus</i> tuber, tubers/rhizomes, monocot stems, <i>Danthonia decumbens</i> , large-seeded <i>Avena</i> tp. grains, <i>Plantago lanceolata</i> , indet tree buds, indet seeds	20	Mixture of <i>Quercus</i> sp. and non- <i>Quercus</i> sp. incl. <i>Calluna vulgaris</i> tp. stems. Moderate condition, some mineral staining.	Coal, fragmented (A***), Clinker/cinder, fragmented (A)

Scale of abundance: C = <5, B = 5–10, A = 10–30, A* = 30–100, A** = 100–500, A*** = >500; Bioturbation proxies: Roots (%), Uncharred seeds (scale of abundance), F = mycorrhizal fungi sclerotia, E = earthworm eggs, I = insects.



Appendix 3 OASIS record

OASIS ID (UID): wessexar1-506657

Project Name: Watching Brief at Hallgate Lane, Pilsley, Derbyshire

Activity type: Watching Brief

Project Identifier(s): Hallgate Lane, Pilsley, Derbyshire

Planning Id: 15/00153/OL

Reason for Investigation: Planning: Post determination

Organisation Responsible for work: Wessex Archaeology

Project Dates: 14-Mar-2022 - 12-Apr-2022

HER: Derbyshire County Council

HER Identifiers: [no data]

Project Methodology: Watching brief on groundworks in north-west part of previous geophysical survey and trial trench evaluation area

Project Results: The aims and objectives of the watching brief have been addressed. As established by geophysical survey (Wessex Archaeology 2015) and trial trench evaluation (Wessex Archaeology 2021a), the remains of a field system pre-dating the extant system of enclosure were present on site. The watching brief has revealed the continuation of former field boundary ditches recorded in evaluation trenches 1 and 2. Radiocarbon dating of environmental material has revealed that these ditches were of Late Iron Age date. The environmental assemblages may be indicative of the burning of turves for fuel. A wheat grain recovered from one of the ditches was also radiocarbon dated and found to be of early medieval origin. A small number of cereal grains were present in the ditch fills and were probably all intrusive. It is likely that arable agriculture was practiced somewhere in the vicinity in the early medieval period. Three nearby pits have also been discovered. The pits did not correlate with discrete geophysical anomalies. The finds assemblage is of negligible size and significance. In the absence of contextualising information there is no potential for further environmental analysis.

Keywords:

Subject/Period: Field System: UNCERTAIN

FISH Thesaurus of Monument Types

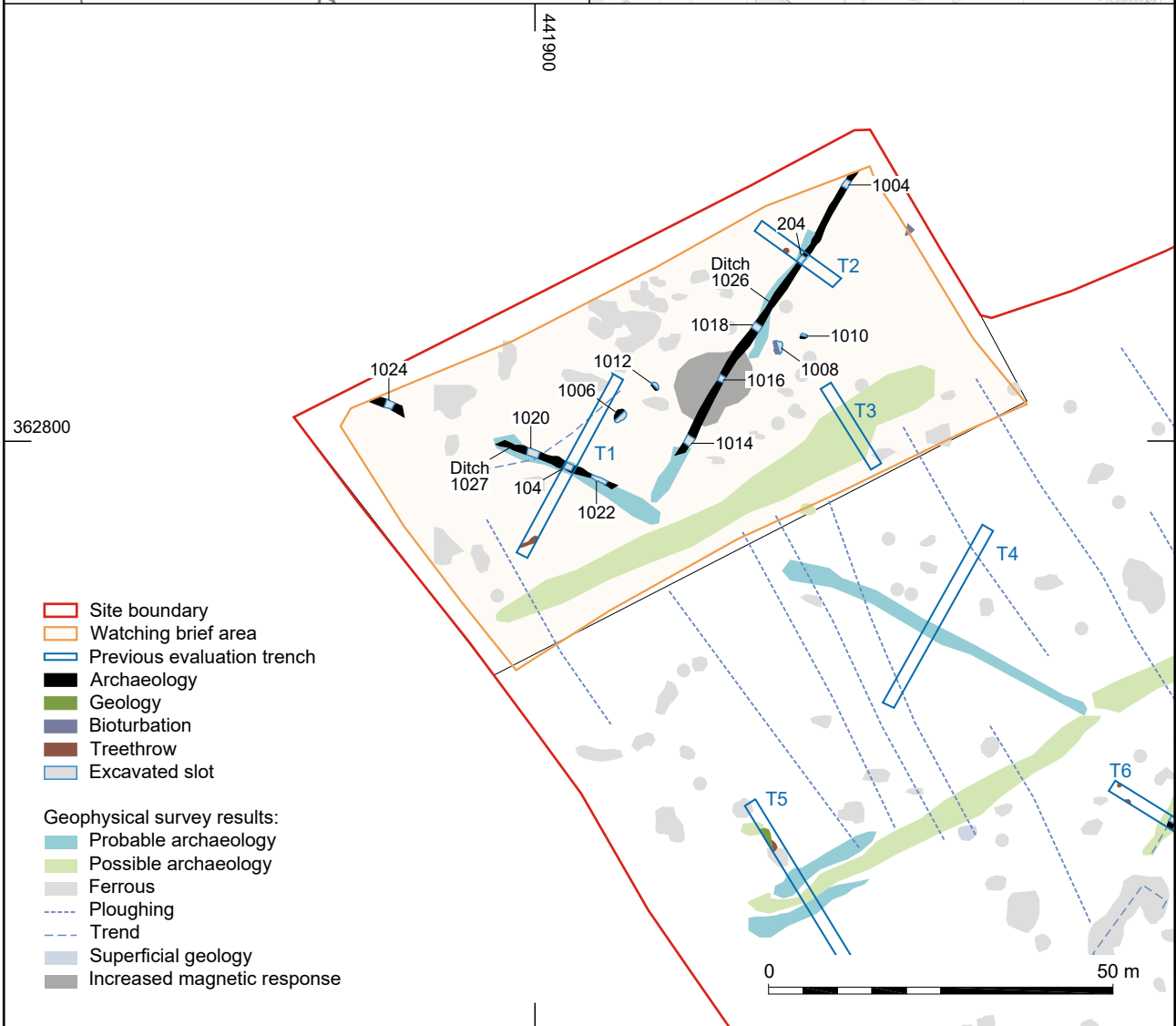
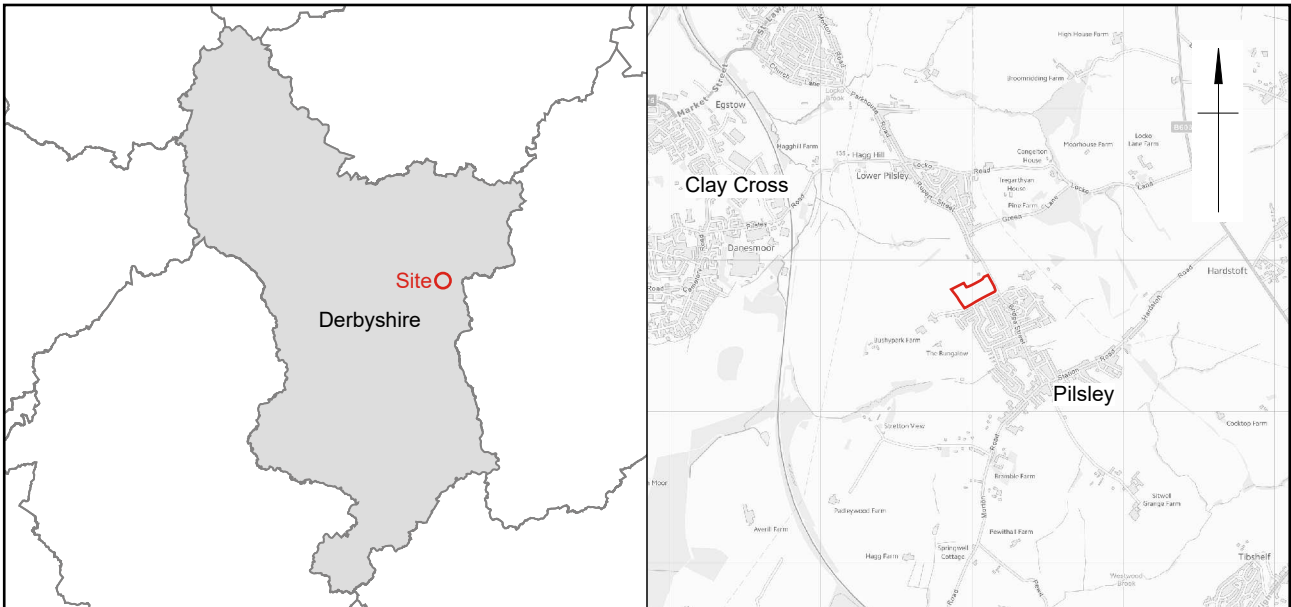
Archive:


Documentary Archive - to be deposited with Museums Sheffield;

Digital Archive - to be deposited with Archaeology Data Service Archive;

Reports in OASIS:

Tuck, A., Laycock, C. and Swann, A., (2022). *Hallgate Lane, Pilsley, Derbyshire: Archaeological Watching Brief*. Sheffield: Wessex Archaeology. 243131.02.



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Site location and plan

Figure 1

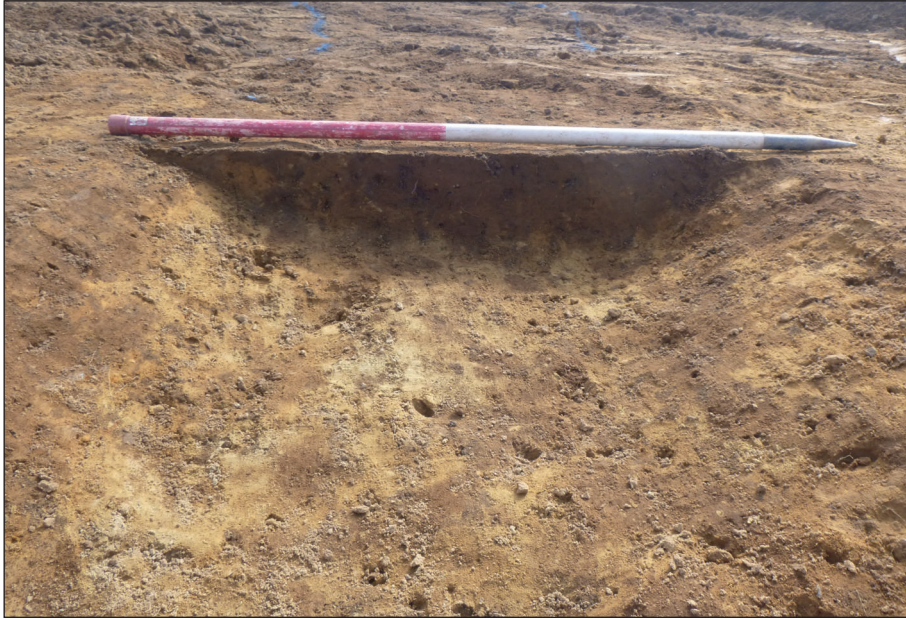


Figure 2: Ditch 1027 (segment 1020) from north-west (1 x 1 m scale)



Figure 3: Ditch 1026 (segment 1018) from south-west (1 x 1 m scale)



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Figure 4: Pit 1006 from south (1 x 1 m scale)



Figure 5: Pit 1010 from north-east (1 x 1 m scale)

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