Land off Hillside Road, Castle Gresley Swadlincote, Derbyshire

Archaeological Evaluation

Planning Ref: 9/2019/0124
Ref: 221750.3
July 2019

wessexarchaeology

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Document Information

Document title	Land off Hillside Road, Castle Gresley, Swadlincote, Derbyshire
Document subtitle	Archaeological Evaluation
Document reference	221750.3
Client name	Heyford Developments Limited
Address	Elmcroft 9 Welcombe Road Stratford-Upon-Avon Warwickshire CV37 6UJ
Site location	Hillside Road, Castle Gresley, Swadlincote
County	Derbyshire
National grid reference (NGR)	42810 31760 (SK 2810 1760)
Statutory designations	No designations
Planning authority	Derbyshire County Council
Planning reference	9/2019/0124
Museum name	Derby Museums
Museum accession code	TBC
WA project name	Land off Hillside Road, Castle Gresley, Swadlincote Archaeological Evaluation
WA project code	221750
Dates of fieldwork	03/06/19 to 10/06/19
Fieldwork directed by	Simon Brown
Project management by	Andrew Norton
Document compiled by	Simon Brown
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Quality Assurance

Issue number	& date	Status	Author	Approved by
1	09/07/19	Draft submitted to client	SRB	APN
2	18/07/19	Submission to DCC	SRB	APN
3	04/10/19	Radiocarbon date addition	SRB	APN

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Summary

Wessex Archaeology was commissioned by Heyford Developments Limited to undertake an archaeological evaluation of a 5.2 ha parcel of land located off Hillside Road, Castle Gresley, Swadlincote, Derbyshire, centred on NGR 42810 31760 (SK 2810 1760) (Fig. 1). The evaluation was requested by Sarah Whitely, Derbyshire County Council (DCC) development control archaeologist, to inform the planning permission application (Ref: 9/2019/0124). The evaluation comprised 16 trial trenches (3% sample) which was carried out between 03/06/19 and 10/06/19.

The evaluation revealed archaeological features across the proposed development area, and substantial colluvial layers with depths exceeding 1.2 m in places that limited the excavation of some features. The evaluation area spanned three fields. The north-western field (field 1) contained several ditches, with two large ditches appearing across three trial trenches that were indicative of a bivallate hilltop enclosure. Adjacent shallower ditches potentially formed internal features.

The archaeological remains in the eastern field (field 2) comprised ditches and a pit that correlated with a previous geophysical survey (Wardell Armstrong 2018a), and were indicative of a small enclosure. The only find of the evaluation, a possible rubber stone/whetstone, was recovered from a pit within this field. The remains within the south-western field (field 3) comprised ditches and pits aligning in places with the geophysical survey (Wardell Armstrong 2018a). These features may be part of a field system.

There were no dateable finds recovered during the evaluation, limiting the ability to firmly date any of the features. The lack of finds combined with the depth of colluvium covering the archaeological features is suggestive of a prehistoric date but is by no means definitive.

The site archive is currently held at Wessex Archaeology's offices in Sheffield under project code 221750, and will be deposited with Derby Museums in due course under an agreed accession number.

Acknowledgements

Wessex Archaeology would like to thank Heyford Developments Limited, for commissioning the archaeological evaluation, in particular Jonathan Tomlinson. Wessex Archaeology is also grateful for the advice of Sarah Whiteley and Steve Baker, Derbyshire County Council development control archaeologists, who monitored the project for Derbyshire County Council, and to Paula and David Bowman for their cooperation and help on site.

The fieldwork was directed by Simon Brown, with the assistance of Chris Hirst, Michael Keech, Jack Peverill and Callum Bruce. This report was written by Simon Brown and edited by Patrick Daniel. The project was managed by Andrew Norton on behalf of Wessex Archaeology. The samples were processed by Liz Foulston and Samantha Rogerson, the flots were sorted by Nicki Mulhall. The stone object was recorded and reported on by Lorraine Mepham and the environmental report was written by Fiona Eaglesham, with contributions from Samantha Rogerson and reviewed by Inés López-Dóriga.

Land off Hillside Road, Castle Gresley, Swadlincote, Derbyshire

Archaeological Evaluation

1 INTRODUCTION

1.1 Project and planning background

1.1.1 Wessex Archaeology was commissioned by Heyford Developments Limited to undertake an archaeological evaluation of a 5.2 ha parcel of land located off Hillside Road, Castle Gresley, Swadlincote, Derbyshire, centred on NGR 42810 31760 (SK 2810 1760) (Fig. 1).

1.1.2 The proposed development comprises the construction of up to 100 dwellings on the site (planning application Ref. 9/2019/0124). Following a desk-based assessment and geophysical survey (Wardell Armstrong 2018a and b) that identified earthworks and possible enclosures, Sarah Whiteley, Derbyshire County Council (DCC) development control archaeologist, has requested that trial trenching take place on the site to inform development proposals.

1.1.3 All works were undertaken in accordance with a written scheme of investigation (WSI) which detailed the aims, methodologies and standards to be employed in order to undertake the evaluation (Wessex Archaeology 2019). Sarah Whitely, Derbyshire County council development control archaeologist approved the WSI, on behalf of the Local Planning Authority (LPA), prior to fieldwork commencing.

1.1.4 The evaluation comprising 16 trial trenches (3% sample) was undertaken between 03/06/19 to 10/06/19.

1.2 Scope of the report

1.2.1 The purpose of this report is to provide a detailed description of the results of the evaluation, to interpret the results within a local, regional or wider archaeological context and assess whether the aims of the evaluation have been met.

1.2.2 The presented results will provide further information on the archaeological resource that may be impacted by the proposed development, and facilitate an informed decision with regard to the requirement for, and methods of, any further archaeological mitigation.

1.3 Location, topography and geology

1.3.1 The evaluation area is located c. 2.5 km to the south-west of Swadlincote and bounded by Hillside Road and housing off Linton Road/High Cross Bank to the south. The site is bounded by agricultural land to the north-west and north-east.

1.3.2 The site is currently pasture and ground levels drop from c. 95 m OD in the north-east to c. 85 m OD in the south (Wardell Armstrong 2018b).

1.3.3 The underlying geology is mapped as Chester Formation sandstone and conglomerate with a north-south aligned band of mudstone (British Geological Survey online viewer). No superficial deposits are recorded.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The archaeological and historical background was assessed in a prior desk-based assessment (Wardell Armstrong 2018b), which considered the recorded historic environment resource within a 1 km study area of the proposed development. The same information was summarised in the WSI (Wessex Archaeology 2019). A summary of the results is presented below.

2.2 Previous investigations

Geomagnetic survey (November 2018)

2.2.1 Geomagnetic survey was carried out on the site in November 2018 (Wardell Armstrong 2018a), which detected modern service pipes and structures, evidence of a ploughing and evidence for small enclosures in the south and east of the site. The enclosures are not shown on historic maps and may be medieval or earlier in date. Possible pits and a boundary ditch were also identified.

Watching briefs (2004 and 2015)

2.2.2 Watching briefs carried out immediately to the east of the site in 2004, and 700 m south-west of the site in 2015 were undertaken and revealed no archaeological remains. In 2008 a strip, map and sample exercise, carried out in advance of a housing development 210 m to the north of the site, revealed a post-medieval ditch.

Geophysical survey (2013)

2.2.3 A post-medieval field boundary and remains of ridge and furrow were revealed during a geophysical survey carried out in 2013, 590 m north of the site.

2.3 Archaeological and historical context

Iron Age and Romano-British (700 BC to AD 410)

2.3.1 There is no evidence of prehistoric activity within 1 km of the site. The route of a Roman road may have extended between Ibstock and Ryknield Street, 400 m south of the site (HER reference 99031) and may have earlier origins.

Medieval (410 to AD 1500)

2.3.2 The site is located in the Manor of Drakelow, which is recorded in the Domesday Survey (1086) as belonging to Nigel de Stafford. At some time during the 12th century the Stafford family took the name De Gresley, possibly referencing a grassy clearing in a wooded area. The origins of Castle Gresley motte and bailey castle, 100 m to the north of the site, are unclear. It may have been constructed between 1086 and 1090 or established without licence from the King by William de Gresley at some point during King Stephen's reign (1135-54). William de Gresley is also known to have founded a monastic priory at some point during 1100-1154 1.2 km north-east of the site. The castle and the priory formed the foci for the establishment of two respective villages, Castle Gresley and Church Gresley.

2.3.3 The core of Castle Gresley appears to be located away from the site but the HER records the presence of an enclosure abutting the north-eastern boundary of the site (HER reference 17806), which may date to the medieval period.

2.3.4 The site likely lay within an open field system with ridge and furrow recorded close by.

Post-medieval and modern (AD 1500 to present)

2.3.5 The castle appears to have gone out of use by the 16th century, with a road network established by 1791 and the 19th-century working of the South Derbyshire-Leicestershire coal field. The Coton Park colliery, mining shafts and bell pits are located within 500 m to 830 m of the site and a brewery was located 70 m north of the site. High Cross Bank residential development was constructed to the south-east of the site by 1883, with further housing constructed in the first half of the 20th century.

Earthworks

2.3.6 Earthworks in the north-western corner of the site are thought to be modern in date, but a linear earthwork extending across the southern part of site is aligned with a trackway shown on the 1883 Ordnance Survey.

2.3.7 Earthworks in the centre of site are thought to be natural variations in geology or the result of localised quarrying. Although the parish boundary crosses the southern extremity of the site no corresponding earthwork remains were observed.

2.3.8 Elsewhere in the southern part of the site, linear earthworks and corresponding geophysical anomalies (Wardell Armstrong 2018a) are thought to represent two sides of a post-medieval enclosure to the rear of properties fronting Linton Road.

3 AIMS AND OBJECTIVES

3.1 General aims

3.1.1 The general aims of the evaluation, as stated in the WSI (Wessex Archaeology 2019) and in compliance with the CIfA's Standard and guidance for archaeological field evaluation (CIfA 2014a), were:

- To provide information about the archaeological potential of the site; and
- To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2 General objectives

3.2.1 In order to achieve the above aims, the general objectives of the evaluation were:

- To determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;
- To establish, within the constraints of the evaluation, the extent, character, date, condition and quality of any surviving archaeological remains;
- 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 within the site by reporting on the results of the evaluation.

3.3 Site-specific objectives

3.3.1 The significance and potential of the archaeology of Derbyshire were appraised in a resource assessment and research agenda (Cooper 2006). This was updated some six years later (Knight et al. 2012), and the regional research framework is currently being further revised by means of an open access 'wiki' document (http://tinyurl.com/EMHERF; EMHERF n.d.). These sources were used to identify the following site-specific research objectives:

- By examining evidence for remains associated with a postulated Roman road that may lie to the south of the site it was thought that the evaluation may contribute to EMHERF research question 5.4.1: '*How did the Conquest impact upon rural settlements and landscapes?*'
- By examining evidence for remains of medieval/post-medieval agricultural activity it was thought that the evaluation may contribute to EMHERF research questions 7.2.4 and 7.7.1 and 8.3.1: '*Can we clarify further the processes of settlement desertion and shrinkage, especially within zones of dispersed settlement?', 'Can we shed further light upon the origins and development of the open-field system and its impact upon agricultural practices?*', and '*How can we improve our understanding of the early landscapes of enclosure and improvement and the interrelationship between arable, pasture, woodland, commons and waste*?'.

3.3.2 The evaluation also attempted to:

- test the results of the geophysical survey (Wardell Armstrong 2018a);
- establish the origin and function of undated earthworks within the site; and
- determine to what extent later land use has impacted on any earlier remains.

4 METHODS

4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2019) and in general compliance with the standards outlined in CIfA guidance (CIfA 2014a). The methods employed are summarised below.

4.1.2 The evaluation comprised the excavation, investigation and recording of 16 trial trenches (each measuring 50 m by 2 m), equating to a 3% sample of the proposed development area.

4.2 Fieldwork methods

General

4.2.1 The trench locations were set out using GPS, in the approximate positions as those proposed in the WSI, although trench 16 had to be slightly moved 2 m to the north east of its original positions because of its proximity to located services and to allow for machine manoeuvring. The trench locations have been tied into the Ordnance Survey (OS) National Grid and Ordnance Datum (OD) (Newlyn) as defined by OSGM15 and OSTN15. (Fig. 1).

4.2.2 Sixteen trial trenches, each measuring 50 m in length and 2 m wide, were excavated in level spits using a 360º excavator equipped with a toothless bucket, under the constant

supervision and instruction of the monitoring archaeologist. Machine excavation proceeded until either the archaeological horizon or the natural geology was exposed.

4.2.3 Where necessary, the base of the trench/surface of archaeological deposits were cleaned by hand. A sample of archaeological features and deposits identified was hand-excavated, sufficient to address the aims of the evaluation.

4.2.4 Spoil derived from both machine stripping and hand-excavated archaeological deposits was visually scanned for the purposes of finds retrieval. Where found, artefacts were collected and bagged by context. All artefacts from excavated contexts were retained, although those from features of modern date (19th century or later) were recorded on site and not retained.

4.2.5 Trenches completed to the satisfaction of the client and the development control archaeologist for Derbyshire County Council were backfilled using excavated materials in the order in which they were excavated, and left level on completion. No other reinstatement or surface treatment was undertaken.

Recording

4.2.6 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 digital plans including photogrammetry and sections drawn to appropriate scales (generally 1:10 for sections), and tied to the Ordnance Survey (OS) National Grid. The Ordnance Datum (OD: Newlyn) heights of all principal features were calculated, and levels added to plans and section drawings.

4.2.7 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 OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.

4.2.8 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 Artefactual and environmental strategies

4.3.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2019). The treatment of artefacts and environmental remains was in general accordance with: Guidance for the collection, documentation, conservation and research of archaeological materials (CIfA 2014b) and Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage 2011).

4.4 Monitoring

4.4.1 The development control archaeologist for Derbyshire County Council, on behalf of the LPA, monitored the watching brief. Any variations to the WSI, if required to better address the project aims, were agreed in advance with both the client and the development control archaeologist.

5 ARCHAEOLOGICAL RESULTS

5.1 Introduction

5.1.1 Fourteen of the sixteen trial trenches contained archaeological features and deposits, indicating archaeological remains are present across the site. (Fig. 1).

5.1.2 The uncovered features comprising ditches, gullies, pits and a posthole are all of uncertain date, however the form of the features and lack of finds except fire cracked stone suggest some of the features are prehistoric in origin, the only firm dating evidence from the site were various modern finds from the topsoil; these were not retained, as per the WSI.

5.1.3 The following section presents the results of the evaluation with archaeological features and deposits discussed by group.

5.1.4 Detailed descriptions of individual contexts are provided in the trench summary tables (Appendix 1). Figure 1 shows all archaeological features recorded within the trenches, together with the preceding geophysical survey results (Wardell Armstrong 2018a).

5.2 Soil sequence and natural deposits

5.2.1 The natural geological substrate is predominantly sand and clay varying in colour between grey red and yellow with various degrees of mottling and banding with some areas of sandstone and mudstone protruding. The subsoil overlaying the natural is slightly more consistent varying between yellowish brown and reddish-brown coloured silt sand combinations. The overlaying topsoil is the most consistent being predominantly mid brown sandy silt.

5.3 Field 1

5.3.1 Field 1 consisted of five trenches numbered 1 to 5 within the northern field of the site and contained several ditches and pits (Fig. 2). Two large ditches with a width in plan of between 3 and 10 m appeared to be parallel to each other and follow the contour of the hillside; seemingly encircling the summit (Plate 1). Both ditches were evident in trenches 3 and 4 and the southerly of the two ditches evident in trench 5; approximately 80 m of the enclosure lay within the site. A machine sondage was excavated through the northern of the two ditches within trench 3, to a depth of 3 m without reaching the natural substrate (Plate 2).

5.3.2 Within trench 4 two smaller ditches, 406 (1.2 m x 1.8 m x 0.45 m+;) and 409 (0.5 m x 1.8 m x 0.28 m) (Plate 3, Plate 4), were located within what would be the interior of the possible enclosure. Pit 411 (0.9 m x 0.4 m) (Plate 5, Fig. 5) lay outside the possible enclosure and at a lower elevation.

5.3.3 Trench 2 contained a small ditch terminus, 206 (1 m x 2 m x 0.3 m), which may also be an associated feature (Fig. 2).

5.4 Field 2

5.4.1 Field 2 consisted of six trenches numbered 6 to 11 within the eastern field of the site that contained several ditches and a pit (Fig. 3). Trench 6 and trench 7 contained ditches that seemed to align with the geophysical results e.g. 704 (1.25 m x 1.8 m+ x 0.4 m) (Plate 6) and form a small enclosure. A tree throw pit (708) was also revealed in trench 7. Trench 8 contained pit 805 (1.25 m x 0.4 m) (Plate 7), which yielded the only find of the evaluation

(a possible worked stone) along with some heat affected stone. Trench nine contained shallow gully 905 (1.9 m x 1.8 m x 0.25 m) (Fig. 5), which may align with a response on the geophysical survey.

5.4.2 The colluvium within field 2 was deposited to a depth of roughly 0.65 m at the north-eastern edge of the area and increased in depth towards the south-western part of the area, with one end of trench 7 and all of trench 10 being deeper than 1.2 m. Due to the depth of trench 10, and that it was on a cross-slope across the hill, the north-eastern side of the trench was very unstable and it was backfilled the same day for safety.

5.5 Field 3

5.5.1 Field 3 consisted of five trenches numbered 12 to 16 within the southern field of the site (Fig. 4). Features were revealed in all of the trenches with ditches uncovered in trenches 12, 13 and 14 appearing to align with geophysical results. Trench 12 contained two ditches 1204 (0.9 m x 1.8 m x 0.54 m) (Plate 8, Fig. 5) and 1206 (0.9 m x 1.8 m x 0.2 m) that appeared to align with the geophysical results, however, upon excavation the ditches had a north-west to south-east alignment being at c. 90º to the geophysical results.

5.5.2 Trench 13 contained a pit 1304 (0.7 m x 0.25 m) (Fig. 5) and two linear features. The north-western of these features was excavated and was determined to be geological, and being of a similar fill and size the southern feature was assumed to be of a similar origin (Fig. 4).

5.5.3 Trench 14 contained a ditch 1404 (1.6 m x 1.8 m x 1.58 m) (Plate 9) in the south-eastern end that aligned with the geophysical results and with a linear feature within trench 16, which was left unexcavated.

5.5.4 Trench 15 contained a north-west to south-east 1.7 m wide ditch at the western end (1505) that was 0.56 m deep and not represented in the geophysical survey (Fig. 5). A c. 0.6 m deep posthole (1507) with postpipe (1509) was located to the west of the ditch.

5.5.5 A 1.1 m wide and 0.43 m deep ditch terminus (1510) was located in the centre of the trench, and a third ditch of similar dimensions (1512) in the eastern end of the trench (Figs 4 and 5). These ditches may have formed a return and continuation of ditch 1404 in trench 14. Ditch 1512 was cut by a shallow pit at its southern extent (1514).

5.5.6 Trench 16 also contained a second linear feature in the north-eastern end of the trench (1604). This feature was not picked up in the geophysical survey (Figs 4 and 5).

6 ARTEFACTUAL EVIDENCE

6.1.1 The only find recovered was a rounded sandstone cobble, roughly ovoid in shape (approximately 175 x 105 mm), with one flat surface and a lenticular cross section. The surfaces are smooth but show no obvious signs of utilisation; the object could have functioned as a rub-stone of some kind, but this remains ambiguous and it could be of completely natural origin. There is nothing to indicate the date of the fill (804) of pit (805) in which it was found.

7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

7.1.1 A bulk sediment sample was taken from a ditch terminus of uncertain chronology and was processed for the recovery and assessment of the environmental evidence.

7.2 Aims and methods

7.2.1 The purpose of this assessment is to determine the potential of the environmental remains preserved at the site to address project aims and to provide data valuable for wider research frameworks. The nature of this assessment follows recommendations set up by Historic England (Campbell et al. 2011).

7.2.2 The 18-litre sample was processed by standard flotation methods on a Siraf-type flotation tank; the flot retained on a 0.25 mm mesh, residues fractionated into 4 mm and 1 mm fractions. The coarse fraction (>4 mm) was sorted by eye and discarded. The environmental material extracted from the residues was added to the flots. The flot was scanned using a stereo incident light microscopy (Leica MS5 microscope) at magnifications of up to x40 for the identification of environmental remains. Different bioturbation indicators were considered, including the percentage of roots, the abundance of modern seeds and the presence of *mycorrhizal fungi sclerotia* (e.g. C*enococcum geophilum*) and animal remains, such as burrowing snails (*Cecilioides acicula*), or earthworm eggs and insects, which would not be preserved unless anoxic conditions prevailed on site. The preservation and nature of the charred plant and wood charcoal remains, as well as the presence of other environmental remains such as terrestrial and aquatic molluscs, animal bone and insects (in cases of anoxic conditions for their preservation), was recorded.

7.3 Results

7.3.1 The flot from the bulk sediment sample was 125 ml (Table 1). There were a low number of roots and modern seeds that may be indicative of some stratigraphic movement and the possibility of contamination by later intrusive elements.

7.3.2 A proportionally large quantity of wood charcoal was noted and comprises mature examples. No other environmental evidence is preserved in the bulk sediment samples.

7.4 Conclusions

7.4.1 A wood charcoal assemblage was retrieved from the single sample taken. The lack of charred plant remains does not provide evidence of domestic processing activities taking place. This is not surprising given the sampled feature is a ditch, where by-products from these activities are unlikely to be found. The analysis of the wood charcoal that is present in the sample could provide information on the species composition, management and exploitation of the local woodland resources, however, as there is only one sample the information would be limited and of little use. At this stage, recommendations are not suitable although this may be revised if further sampling has taken place at a later stage. However, the wood charcoal is the only potentially datable material from the evaluation and two charcoal samples will be submitted for AMS radiocarbon dating. The resulting dates will be used to inform any future mitigation strategy.

8 CONCLUSIONS

8.1 General

8.1.1 The archaeological evaluation met its general aims and objectives providing information about the archaeological potential of the site and providing enough information about the scope and nature of the site in order to develop a mitigation strategy, with only firm dating evidence eluding discovery.

8.2 Site-specific objectives

8.2.1 The evaluation did not address any of the site-specific research objectives identified from the regional research objectives in the Written Scheme of Investigation (Wessex Archaeology 2019).

8.2.2 No evidence of remains of a Roman road were discovered during the evaluation relating to EMHERF research question 5.4.1: 'How did the Conquest impact upon rural settlements and landscapes?'.

8.2.3 No firm evidence of medieval/post medieval agricultural activity were discovered in order to elucidate EMHERF research questions 7.2.4 and 7.7.1 and 8.3.1: 'Can we clarify further the processes of settlement desertion and shrinkage, especially within zones of dispersed settlement?', 'Can we shed further light upon the origins and development of the open-field system and its impact upon agricultural practices?', and 'How can we improve our understanding of the early landscapes of enclosure and improvement and the interrelationship between arable, pasture, woodland, commons and waste?'.

8.2.4 The veracity of the geophysical survey (Wardell Armstrong 2018a) has been generally proven. The revealed archaeological features seem to correlate reasonably well with the survey results in fields 2 and 3. However, the geophysical survey did not indicate any of the discovered features in field 1, which is likely due to the deep depth of colluvium in this area. The deep ditches in field 1 would presumably have once had large banks adjacent to them. It is likely that the colluvium also includes this upcast material, which has contributed to a the particularly deep overburden.

8.2.5 The origin and function of the undated earthworks within the site remain undated, however, the location of the features and the form of the ditches is indicative of a defended settlement and possibly a prehistoric bivallate hilltop enclosure.

8.2.6 Later land use seems to have had a limited impact on the archaeological remains within the boundaries of the proposed development area due to the depth of colluvium.

8.3 Discussion

8.3.1 Although the evaluation has proven that there are archaeological remains present across the proposed development area, it has not been possible to definitively date any of the features. Dating and interpretation were limited by the depth of the colluvium across site, which hampered excavation within the deep ditches in trenches 3-5. A machine sondage was excavated through one of the ditches, which immediately started to collapse during excavation demonstrating the instability of the ground. A revised strategy would be required to excavate and understand the ditches fully.

8.3.2 The lack of finds recovered during the evaluation has precluded the dating of any of the archaeological features. Whilst the absence of finds in combination with the form of some

of the archaeological features is suggestive of a prehistoric date, it is by no means definitive.

8.3.3 Despite the lack of dating evidence, the archaeological evidence is indicative of an enclosed hilltop focal area in field 1, bounded by two deep ditches. The archaeology of fields 2 and 3 is indicative of associated agricultural features comprising stock enclosures and field system ditches. The absence of finds would indicate that any settlement was short lived, seasonal or occupied by an aceramic culture. Samples from the charcoal recovered from site will be sent for radiocarbon dating, and the results used to inform any future mitigation strategy.[1]

9 ARCHIVE STORAGE AND CURATION

9.1 Museum

9.1.1 The archive resulting from the evaluation is currently held at the offices of Wessex Archaeology in Sheffield. Derby Museums have agreed in principle to accept the archive on completion of the project, under a relevant accession code. 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.

9.2 Preparation of the archive

9.2.1 The archive, which includes paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Derby Museums, and in general following nationally recommended guidelines (SMA 1995; CIfA 2014c; Brown 2011; ADS 2013).

9.2.2 All archive elements are marked with the site/accession code, and a full index will be prepared. The physical archive currently comprises the following:

- 1 files/document cases of paper records and A3/A4 graphics.

9.3 Selection policy

9.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4), with the aim of only retaining those items with further research potential, or which fulfil other criteria within the museum's collecting policy.

9.3.2 In this instance, given the ambiguous nature of the single find (possibly of completely natural origin), and lack of dating evidence, this will not be retained.

9.4 Security copy

9.4.1 In line with current best practice (eg, 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.

[1] At the request of DCC charcoal samples were subsequently sent for radiocarbon dating resulting in a Late Neolithic / Early Bronze Age date. The report is included as Appendix 4

9.5 OASIS

9.5.1 An OASIS online record (http://oasis.ac.uk/pages/wiki/Main) has been initiated, with key fields and a .pdf version of the final report submitted. 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 ArchSearch catalogue.

10 COPYRIGHT

10.1 Archive and report copyright

10.1.1 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. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.

10.1.2 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.

10.2 Third party data copyright

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APPENDICES

Appendix 1 Trench summaries

Trench No 1	**Length 50m**	**Width 1.80m**	**Depth 1.20m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
101		Topsoil	Friable mid brownish grey silty sand (40 / 60) with frequent small sub rounded stones and <40mm and dense rooting.	0 - 0.15
102		Subsoil	Light reddish-brown silty sand. Loosely compacted. Very frequent small sub-rounded inclusions ~80%	0.15 - 0.20
103		Gravel layer	Dark reddish-brown sand. Loosely compacted. Midsized to large sub rounded inclusions extremely common ~90%	0.20+
104		Natural	Pale yellow grey silty sand. Loosely compacted. Mid-sized sub-rounded inclusions common ~80%	1.20+

Trench No 2	**Length 50m**	**Width 1.80m**	**Depth 0.54m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
201		Topsoil	Friable light brownish grey silty sand (30 / 70) with occasional small well-rounded stones <40mm and dense grass rooting	0 - 0.27m
202		Subsoil	Compact light brownish orange silty sand (30 / 70) with dense very small stones <20mm.	0.27 - 0.46m
203		Compact light brown yellow silty sand with frequent patches of dark brownish red silty clay and gravel bands		0.46 - 0.54m
204		Made ground	Dark brown red sandy silt with frequent gravel, sat below subsoil, appears 7m from Eastern end runs down slope (possibly build up from railway cutting.	0.46 - 1.6m

205	206	Fill	Light yellowish grey moderately compact silty sand (30 / 70) with frequent small sub rounded stones <40mm and sparse very small sub-angular stones <20mm inclusions. Archaeological components: Sparse charcoal and fire cracked pebbles	0.46 - 0.83m
206	205	Uncategorised	Linear uncategorised with moderate, concave sides and a concave base. Length: 1.30m. Width: 0.84m. Depth: 0.27m.	0.27m

Trench No 3	**Length 50m**	**Width 1.80m**	**Depth 1.20m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
301		Topsoil	Friable light brownish grey silty sand (40 / 60) with occasional small sub rounded stones <50mm and dense grass rooting.	0 - 0.3m
302		Subsoil	Moderately compact mid brown orange silty sand with frequent small rounded stones <40mm.	0.3 - 0.42m
303		Colluvium	Hill wash. Moderately compact dark sandy silt (40 / 60) with occasional very small well-rounded stones <10mm, hill was goes down to 3+m	0.42 - 1.2
304		Natural	Compact light pinkish yellow silty clay with occasional small well-rounded stones <40mm	1m

Trench No 4	**Length 5m**	**Width 1.80m**	**Depth 0.55m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
401		Topsoil	Mid brownish grey silty sand. Loosely compacted. Very common, ~50%, small sub-rounded stony inclusions located mostly towards base. Disturbance from grass roots	0 - 0.24
402		Subsoil	Light reddish grey silty sand. Loosely compacted. Frequent small sub-rounded inclusions, ~75%, scattered throughout	0.24 - 0.39
403		Natural	Light brownish grey sand. Loosely compacted. Frequent small sub-rounded inclusions, ~65%, scattered throughout	0.39+

404	405	Fill	Light orange brown moderately compact silty sand (20 / 80) with frequent small well-rounded stones <40mm inclusions	
405	407	Fill	Mid brownish grey moderately compact silty sand (40 / 60) with frequent very small well-rounded stones <20mm and large sub-angular sandstone blocks <250mm inclusions. Archaeological components: Sparse fire cracked pebbles	
406	404, 405	Uncategorised	Linear uncategorised with moderate, concave sides and a flat base. Length: >1.80m. Width: 1.30m. Depth: 0.47m.	
407	409	Fill	Mid orange brown moderately compact silty sand (40 / 60) with occasional small sub rounded stones <40mm inclusions. Archaeological components: Sparse charcoal flecking	
408	409	Fill	Mid orange red soft silty sand (40 / 60)	
409	407, 408	Gully	Curvilinear gully with moderate, concave sides and a concave base. Length: >1.80m. Width: 0.54m. Depth: 0.29m.	
410	411	Fill	Dark orange brown loosely compact silty sand (40 / 60) with dense very small well-rounded stones < 20mm inclusions. Archaeological components: Sparse fire cracked pebbles	
411	410	Uncategorised	Circular uncategorised with steep, concave sides and a concave base. Length: 1.00m. Width: 0.94m. Depth: 0.43m.	

Trench No 5	**Length 50m**	**Width 1.80m**	**Depth 0.79m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
501		Topsoil	Friable light brownish grey silty sand (40 / 60) with frequent small well-rounded stones <30mm and dense grass rooting.	0 - 0.29
502		Subsoil	Moderately compact mid brownish orange silty sand (30 / 70) with occasional small sub-angular stones <50mm.	0.29 - 0.47

503		Natural	Compact light brownish yellow silty sand (20 / 80) with frequent patches of gravel and medium to small well-rounded stones <150mm.	0.47+
504		Colluvium	Hillwash. Loosely compact dark reddish-brown silty sand (20 / 80) with frequent patches of gravel and medium sub-rounded stones <40mm. Does not appear throughout extent of trench, only on slope in S end	0.47 - 1.00

Trench No 6	**Length 50m**	**Width 1.80m**	**Depth 0.75m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
601		Topsoil	Soft light brownish grey silty sand (40 / 60) with frequent small well-rounded stones <30mm and dense bioturbation.	0 - 0.34m
602		Subsoil	Moderately compact mid brownish orange silty sand (30 / 70) with frequent small well-rounded stones.	0.34 - 0.65m
603		Natural	Moderately compact light yellowish grey silty sand (30 / 70) with frequent well-rounded stones and patches of reddish pink silty clay.	0.65 - 0.75m

Trench No 7	**Length 50m**	**Width 1.80m**	**Depth 1.20m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
701		Topsoil	Soft light brown grey silty sand (40 / 60) with frequent small well-rounded stones <60mm and frequent grass rooting.	0 - 0.34m
702		Subsoil	Moderately compact mid orange brown silty sand (30 / 70) with occasional small sub rounded stones<30mm	0.34 - 0.98m
703		Natural	Moderately compact light orange yellow silty sand with frequent medium to small sub rounded stones., clay pockets appear 10m from sw end of trench, deep due to hill wash.	0.98 - 1.2m
704	705, 706	Gully	Linear gully with moderate, straight sides and a flat base. Length: >2.00m. Width: 1.28m. Depth: 0.46m.	

705	704	Secondary fill	Mid greyish brown sand with infrequent, ~5%, mid-sized sub-rounded stony inclusions	
706	704	Secondary fill	Very dark brownish grey sand with infrequent, <1%, mid-sized sub-rounded stony inclusions scattered unevenly throughout inclusions	
707	708	Secondary fill	Dark brownish grey sand with infrequent, <5%, small sub-rounded stone inclusions scattered unevenly throughout. two pieces of cylindrical charcoal were recovered inclusions	
708	707	Tree Throw	Sub-circular tree throw with shallow, straight sides and an irregular / undulating base.	

Trench No 8	**Length 50m**	**Width 1.80m**	**Depth 0.68m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
801		Topsoil	Friable light brownish grey silty sand (40 / 60) with frequent small sub rounded stones <60m and dense grass rooting.	0 - 0.28m
802		Subsoil	Moderately compact mid brown orange silty sand (30 / 70) with frequent small sub rounded stones <40mm.	0.28 - 0.62m
803		Natural	Soft light brown yellow silty sand (10 / 90) with orange brown iron pan flecking.	0.62m - 0.68m
804	805	Fill	Dark brownish grey moderately compact silty sand (30 / 60) with occasional medium to small sized sub rounded stones <120mm inclusions. Archaeological components: Sparse fire cracked pebbles and single rubbing stone	0 - 0.38m
805	804	Uncategorised	Sub-circular uncategorised with steep, concave sides and a concave base. Length: 1.30m. Width: 1.50m. Depth: 0.38m.	

Trench No 9	**Length Unknown**	**Width Unknown**	**Depth 0.77m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
901		Topsoil	Friable light brownish grey silty sand (40 / 60) with sparse medium to small sub rounded stones <1 20mm and dense grass rooting.	0 - 0.25m

902		Subsoil	Moderately compact mid brown orange silty sand (30 / 70) with frequent medium to small rounded stones < 100mm	0 - 0.68m
903		Natural	Soft light brownish yellow silty sand (10 / 90) with gravel patches and frequent small sub rounded stones.	0.68m - 0.77m
904	905	Fill	Dark brownish grey moderately compact silty sand (30 / 70) with frequent very small well-rounded stones <20mm inclusions	
905	904	Uncategorised	Linear uncategorised with shallow, concave sides and a concave base. Length: 2.00m. Width: 2.00m. Depth: 0.24m.	

Trench No 10	**Length 50m**	**Width 1.80m**	**Depth 1.20m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
1001		Topsoil	Friable light brown grey silty sand (60 / 40) with occasional small sub rounded stones <60mm and dense grass rooting.	0 - 0.32m
1002		Subsoil	Moderately compact mid brown orange silty sand with frequent small rounded stones < 40mm	0.32 - 0.78m
1003		Colluvium	Soft dark orange brown silty sand (20 / 80) with sparse small sub rounded stones.	0.78 - 1.6m
1004		Natural	Moderately compact light brownish yellow silty sand (10 / 90)	1.6 - 1,68m

Trench No 11	**Length 50m**	**Width 1.80m**	**Depth 54m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
1101		Topsoil	Friable light brown grey silty sand (40 / 60) and occasional small sub rounded stones <40mm and dense bioturbation and grass rooting.	0 - 0.26m
1102		Subsoil	Moderately compact mid brown orange silty sand (30 / 70) with sparse medium to small well-rounded stones<150mm.	0.26 - 0.48m
1103		Natural	Moderately compact light brownish yellow silty sand (20 / 80) with sparse small rounded stones <40mm and occasional pinkish brown silty clay patches.	0.48 - 0.54m

Trench No 12	**Length 50m**	**Width 1.80m**	**Depth 0.82m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
1201		Topsoil	Friable light greyish brown silty sand with frequent small well-rounded stones <30 mm and dense grass rooting.	0 - 0.28m
1202		Subsoil	Mid orange brown silty sand (30 / 70) with occasional small sub rounded stones <40mm.	0.28 - 0.75m
1203		Natural	Compact light brownish yellow silty sand (30 / 70) with sparse medium to small well-rounded stones <120mm	0.75 - 0.82m
1204	1205	Ditch	Linear ditch with steep, concave sides and a u-shaped base. Length: >2.00m. Width: 0.90m. Depth: 0.54m.	0.82 to 1.36
1205	1204	Secondary fill	Dark brown sandy silt with abundant sub-rounded medium stones inclusions	0.82 to 1.36
1206	1207	Ditch	Linear ditch with shallow, concave sides and a u-shaped base. Length: >2.00m. Width: 0.90m. Depth: 0.20m.	0.82 to 1.02
1207	1206	Secondary fill	Light grey sand	0.82 to 1.02

Trench No 13	**Length 50m**	**Width 1.80m**	**Depth 0.54m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
1301		Topsoil	Soft mid brownish grey silty sand with sparse small sub-rounded stones and frequent bioturbation	0 -0.31
1302		Subsoil	Moderately compact mid orange brown silty sand with dense sub rounded stones <50mm	0.41 - 0.53
1303		Natural	Compact mid brownish yellow sandy silt with patches of light grey yellow clay and frequent gravel patches.	0.53+
1304	1305	Pit	Circular pit with steep, concave sides and a u-shaped base. Diameter: 0.70m. Depth: 0.25m.	0.54 to 0.79
1305	1304	Secondary fill	Mid brown sandy silt with abundant rounded medium stones inclusions	0.54 to 0.79

Trench No 14	**Length 50m**	**Width 1.80m**	**Depth 0.34m**
Easting	**Northing**	**MaOD**	

Context Number	Fill Of/Filled With	Interpretative Category	Description	Depth BGL
1401		Topsoil	Soft light grey brown silty sand (40 / 60) with sparse small rounded stones <30mm and dense grass rooting throughout.	0 - 0.12m
1402		Subsoil	Moderately compact silty sand (30 / 70) with sparse small rounded stones <30mm	0.12m - 0.23m
1403		Natural	Very compact mid yellowish pink silty clay with compact yellow silt bands running e -w.	0.23 - 0.34m
1404	1405, 1406	Ditch	Linear ditch with steep, concave sides and a u-shaped base. Length: >2.00m. Width: 1.60m. Depth: 0.58m.	0.34 to 0.92
1405	1404	Primary fill	Mid greyish brown clay	0.34 to 0.82
1406	1404	Secondary fill	Light grey sandy silt with rare small rounded stones inclusions	0.82 to 0.92

Trench No 15	Length 50m	Width 1.80m	Depth 0.80m
Easting	Northing	MaOD	

Context Number	Fill Of/Filled With	Interpretative Category	Description	Depth BGL
1501		Topsoil	Soft light grey brown silty sand (40 / 60) with occasional small well-rounded stones <40mm and dense grass rooting.	0 - 0.28m
1502		Subsoil	Mid brownish orange moderately compact silty sand (30 / 70) with sparse small well-rounded stones.	0.28 - 0.46m
1503		Colluvium	Mid yellowish-brown silty sand with occasional sub rounded stones<50mm	0.46 - 0.73m
1504		Natural	Moderately compact light brownish yellow silty sand (30 / 70) with frequent medium to small well-rounded stones and sandstone.	0.73 - 0.8m
1505	1506	Uncategorised	Linear uncategorised with moderate, concave sides and a concave base. Length: >1.38m. Width: 1.70m. Depth: 0.56m.	
1506	1505	Secondary fill	Mid reddish-brown silty sand with frequent sub rounded pebbles inclusions. Archaeological components: No finds	
1507	1508, 1509	Uncategorised	Uncategorised Width: 0.40m. Depth: 0.56m.	
1508	1507	Deliberate backfill	Light yellowish red silty sand with frequent sub-rounded pebbles inclusions. Archaeological components: No finds	

1509	1507	Post pipe	Mid greyish brown silty sand with frequent sub rounded pebbles <4cm inclusions. Archaeological components: No finds	
1510	1511	Ditch	Linear ditch with moderate, irregular sides and a concave base. Length: >2.40m. Width: >1.10m. Depth: 0.43m.	
1511	1510	Secondary fill	Mid reddish-brown silty sand with sparse sub-rounded rounded pebbles <4cm inclusions. Archaeological components: No finds	
1512	1513	Ditch	Linear ditch with shallow, concave sides and a concave base. Depth: 0.48m.	
1513	1512	Secondary fill	Mid yellowish greyish brown silty sand with sparse sub-rounded rounded pebbles <6cm inclusions. Archaeological components: No finds	
1514	1515	Pit	Sub-circular pit with concave sides and a concave base. Depth: 0.12m.	
1515	1514	Secondary fill	Mid greyish brown silty sand with sparse sub-rounded rounded pebbles <6 inclusions. Archaeological components: Charcoal	

Trench No 16	**Length 50m**	**Width 1.80m**	**Depth 0.50m**
Easting	**Northing**	**MaOD**	

Context Number	**Fill Of/Filled With**	**Interpretative Category**	**Description**	**Depth BGL**
1601		Topsoil	Friable light brownish grey silty sand (40 / 60) with sparse small sub rounded stones <40mm and dense grass rooting	0 - 0.25m
1602		Subsoil	Moderate Yorkshire compact mid brownish orange silty sand (30 / 70) with occasional small well-rounded stones < 30mm	0.25 - 0.42m
1603		Natural	Compact dark pinkish red silty clay (20 / 80) with frequent compact brown silt bands.	0.42 -0.5m
1604	1605, 1606	Ditch	Linear ditch with steep, concave sides and a u-shaped base. Length: >2.00m. Width: 0.90m. Depth: 0.35m.	0.50 to 0.85
1605	1604	Primary fill	Mid brown sandy silt	0.76 to 0.85
1606	1604	Secondary fill	Light grey sandy silt with rare medium rounded stones inclusions	0.50 to 0.76

Appendix 2 Oasis Form

OASIS ID: wessexar1-353065

Project details

Project name	Land off Hillside Road, Castle Gresley, Swadlincote
Short description of the project	Archaeological evaluation of a 5.2 ha parcel of land located off Hillside Road, Castle Gresley, Swadlincote, Derbyshire. The evaluation discovered archaeological features across the proposed development area, a portion of which were excavated in order to try to ascertain their date and function. The evaluation encountered substantial colluvial layers across the evaluation area with depths exceeding 1.2 m in places, which limited the excavation of some features. The evaluation area spanned three fields. The north-western field (field 1) contained several ditches, with two large ditches appearing across three trial trenches suggesting a bivallate hilltop enclosure with the remaining ditches forming internal features. The archaeological remains in the eastern field (field 2) comprised ditches and a pit which seem to correlate with the geophysical survey (Wardell Armstrong 2018a) suggesting a small enclosure. The only find of the evaluation, a possible rubber stone/whetstone, was recovered from the excavated pit within this field. The remains within the south-western field (field 3) comprised ditches and pits aligning in places with the geophysical survey (Wardell Armstrong 2018a). These features may be part of a field system. There were no dateable finds recovered during the evaluation, limiting the ability to firmly date any of the features. The lack of finds combined with the depth of colluvium covering the archaeological features is suggestive of a prehistoric date but is by no means definitive.
Project dates	Start: 03-06-2019 End: 10-06-2019
Previous/future work	Yes / Not known
Any associated project reference codes	221750 – Site code
Any associated project reference codes	9/2019/0124 - Planning Application No.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation

Project location

Country	England
Site location	DERBYSHIRE SOUTH DERBYSHIRE SWADLINCOTE Land off Hillside Road, Castle Gresley, Swadlincote, Derbyshire
Postcode	DE11 9HE
Study area	5.2 Hectares
Site coordinates	42810 31760 42810 00 00 N 31760 00 00 E Point
Height OD / Depth	Min: 0.39m Max: 1.2m

Project creators

Name of Organisation	Wessex Archaeology
Project brief originator	Derbyshire County Council
Project design originator	Wessex archaeology
Project director/manager	Andrew Norton
Project supervisor	Simon Brown
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Heyford Developments Limited

Project archives

Physical Archive recipient	Derby Museum and Art Gallery
Physical Contents	"Worked stone/lithics"
Physical Archive notes	agreed in principle
Digital Archive recipient	Derby Museum and Art Gallery
Digital Media available	"Database","Text"
Digital Archive notes	agreed in principle
Paper Archive recipient	Derby Museum and Art Gallery
Paper Media available	"Context sheet","Correspondence","Diary","Drawing"
Paper Archive notes	agreed in principle

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Land off Hillside Road, Castle Gresley, Swadlincote, Derbyshire, Archaeological Evaluation.
Author(s)/Editor(s)	Brown, S
Author(s)/Editor(s)	Daniel, P
Other bibliographic details	221750.3
Date	2019
Issuer or publisher	Wessex Archaeology

Entered by	Emily Eastwood (e.eastwood@wessexarch.co.uk)
Entered on	8 July 2019

Appendix 3 Environmental Data

Table 1: Assessment of the environmental evidence and charcoal

Feature	Context	Sample	Vol (l)	Flot (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal >2mm (ml)	Charcoal	Other
1505	1506	1	18	125	1%, A, E, I	-	-	-	-	-	80	Mature	-

Key: Scale of abundance: A = 30-10, B = 9-5, C = <5; Bioturbation proxies: Roots (%), Uncharred seeds (scale of abundance), E = earthworm eggs, I = insect

Appendix 4 Radiocarbon dating

Radiocarbon Dating of Environmental Evidence Land off Hillside Road, Castle Gresley, Swadlincote

Acknowledgements

Radiocarbon sample selection and liaison: Inés López-Dóriga.

1 RADIOCARBON DATING

1.1 Introduction

1.1.1 Following the completion and reporting of an archaeological evaluation at land off Hillside Road, Castle Gresley, Swadlincote (Wessex Archaeology 2019), Steve Baker Steve Baker, Derbyshire County Council development control archaeologist requested that two radiocarbon dating samples were submitted with the aim of obtaining a better understanding of the chronology of undated features revealed during the works. This report forms an addendum to the evaluation report (Wessex Archaeology 2019).

1.1.2 The only suitable dating material was recovered from a linear ditch (1505, fill 1506) forming part of a potential field system in Field 3. Although the reliability of the results is moderate on account of the nature of the deposit (a ditch fill with potentially residual material), the pair of measurements is consistent, and the results suggest that the feature was infilled with prehistoric (Late Neolithic/Early Bronze Age) material. Although the results only provide a relative *terminus post-quem* for the ditch abandonment or infilling, they also indicate the existence of Late Neolithic/Early Bronze Age human activity in the area.

1.2 Methods

1.2.1 Two radiocarbon samples from rootwood charcoal of unidentified taxa were submitted to the 14CHRONO Centre, Queen's University, Belfast. The macrofossil samples were treated with AAA, and the measurement corrected using AMS δ13C values. The calibrated age ranges were calculated with OxCal 4.2.3 (Bronk-Ramsey and Lee 2013) using the IntCal13 curve (Reimer et al. 2013). The radiocarbon dates are quoted as uncalibrated years before present (BP), followed by the lab code and the calibrated date-range (cal. BC) at the 2σ (95.4%) confidence, with the end points rounded out to the nearest 10 years, and the ranges calculated according to the maximum intercept method (Stuiver and Reimer 1986). Reporting of the radiocarbon dating results follows international conventions (Bayliss and Marshall 2015; Millard 2014).

1.3 Results

1.3.1 The samples were successfully measured (UBA-41446: 3780±27 BP: 2290-2070 cal. BC; UBA-41447: 3822±28 BP: 2430-2150 cal. BC) and the measurements fall both in the Late Neolithic/Early Bronze Age (Table 1:).

Table 1: Radiocarbon dating results

Lab. Ref	Sample reference	Material	Date BP	calibration (2 sig. 95.4%)
UBA-41446	221750_(1506) <1> I	Wood charcoal: Rootwood fragment	3780±27	2290-2070 cal. BC
UBA-41447	221750_(1506) <1> II	Wood charcoal: Rootwood fragment	3822±28	2430-2150 cal. BC

1.4 Discussion

1.4.1 Ditches, due to their nature as “negative” features, are notably difficult elements to date in archaeological sites due to the impossibility of obtaining sample material possessing a direct relationship with the activity aimed to be dated (see Waterbolk 1971): as it is only possible to date infilling material, which is necessarily residual (unless intrusive), any radiocarbon date can only provide a *terminus post-quem* (TPQ) for the construction and use of the feature. The time gap between the formation of the sediment infilling a feature and the cutting of the feature can be estimated looking into formation processes and assessing the speed of infilling. Another option is to obtain a pair of radiocarbon measurements and assess their consistency via the function Combine in Oxcal. The combination, should the samples be consistent, would produce a more precise calibrated result and would allow to verify the assumption of the remains having resulted of a single episode of activity.

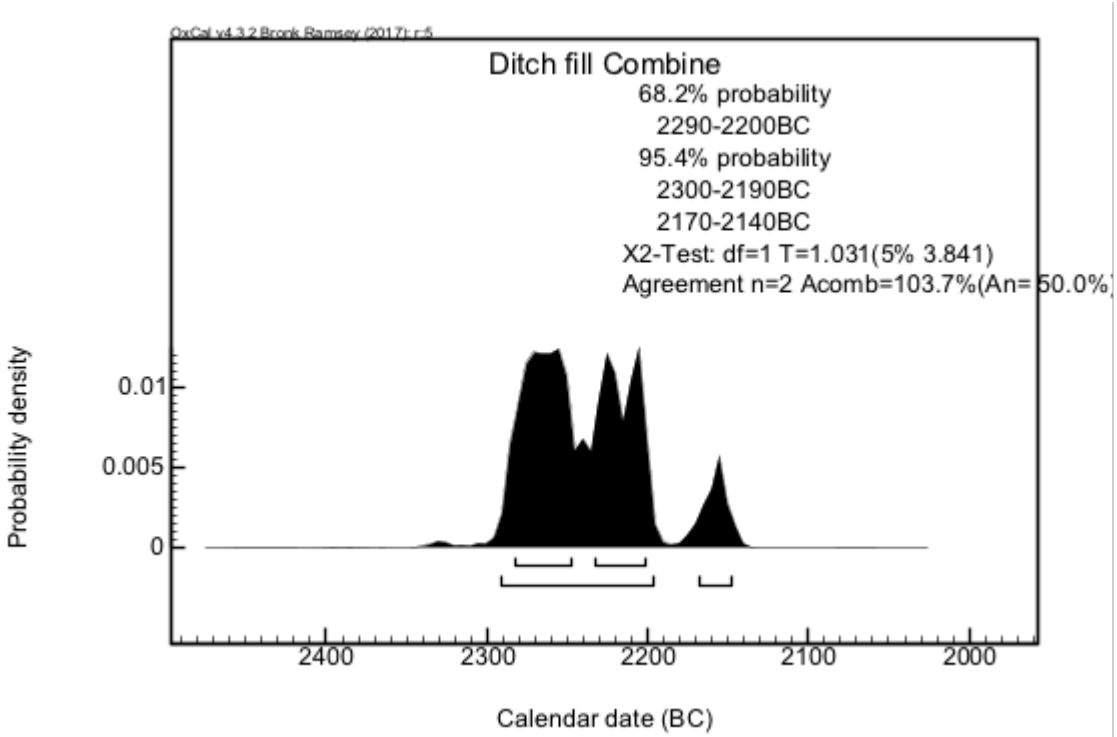

Figure 1. Combination of the radiocarbon measurements from the ditch fill at Castle Gresley.

1.4.2 In this case, the radiocarbon results proved to be statistically consistent, as they passed at 5% the X^2 test in OxCal, which allows to combine the measurements (Figure 1). This consistency is also suggested by the type of deposit (a dump of wood charcoal) and indicates that the samples probably originate in a single episode of activity (such as a burning event), having undergone similar formation processes and being eventually deposited in a ditch not long after its first initial deposition elsewhere, sometime after the Late Neolithic/Early Bronze Age (2300-2140 cal BC) as TPQ. Although it is not possible to establish with certainty that the ditch was cut in any particular period and the Late Neolithic/Early Bronze Age TPQ is only a marker for the time of ditch infilling, the results also indicate the existence of Late Neolithic/Early Bronze Age activity in the area.

1.5 References

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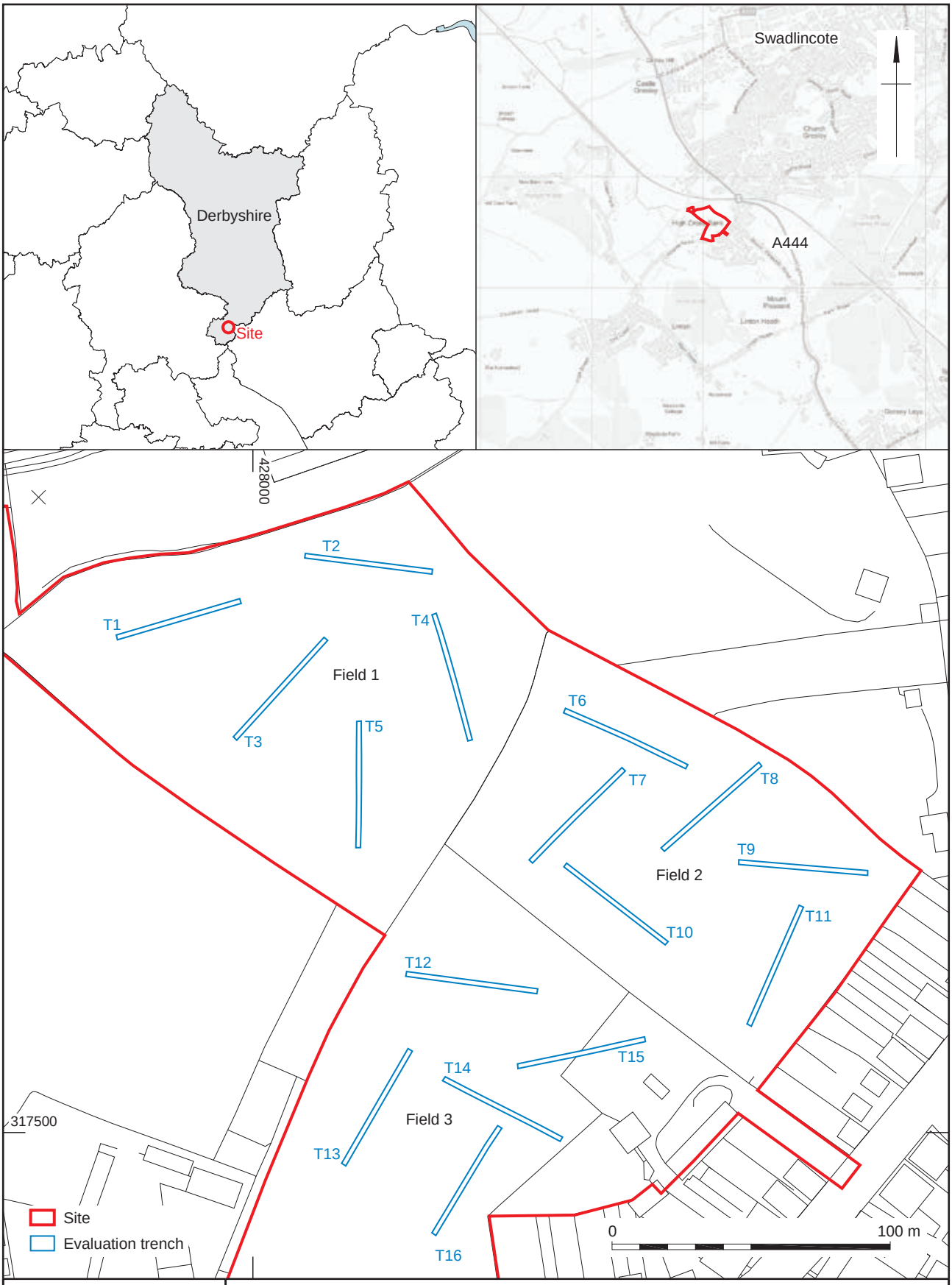

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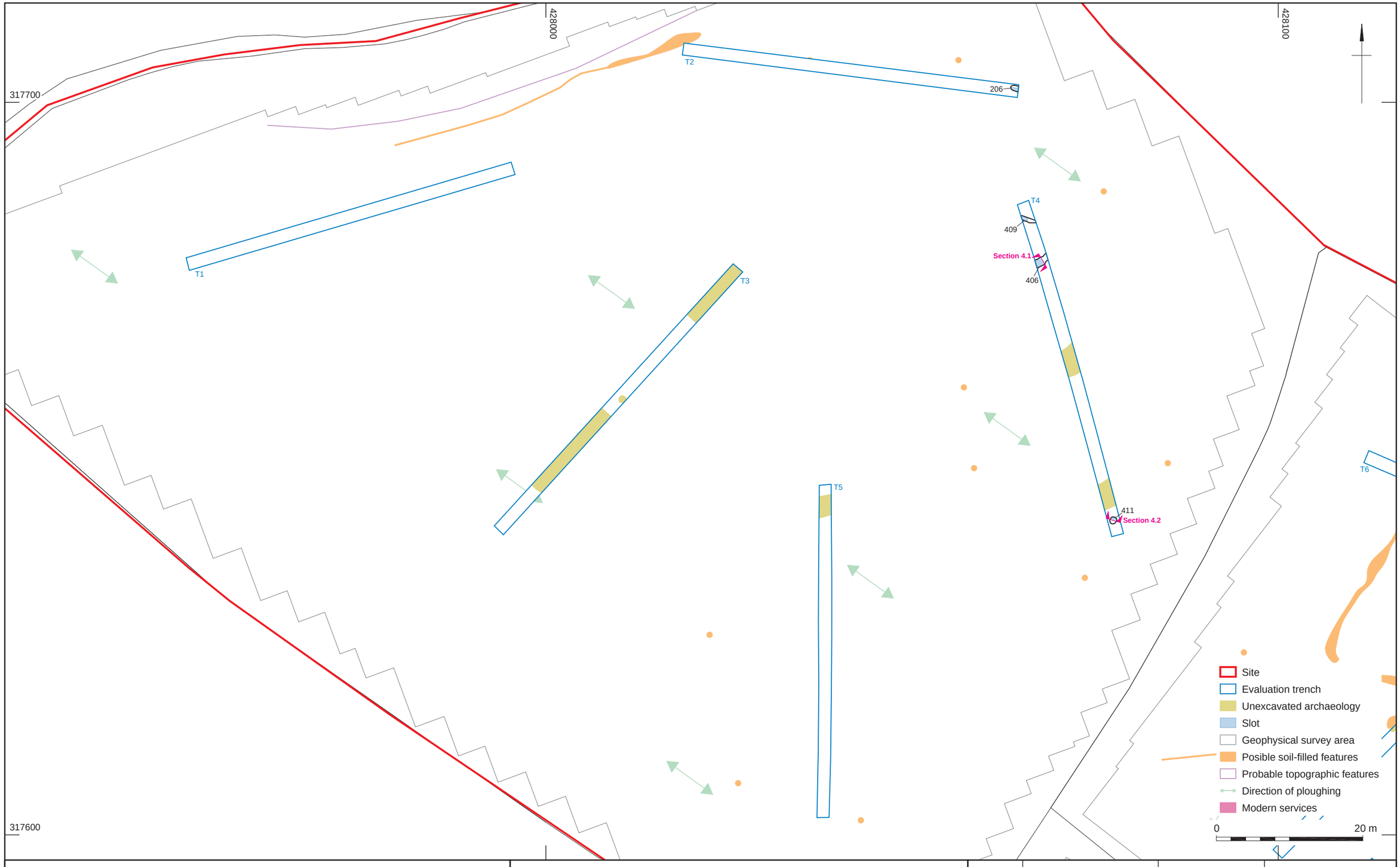
Site location showing evaluation trenches

Figure 1



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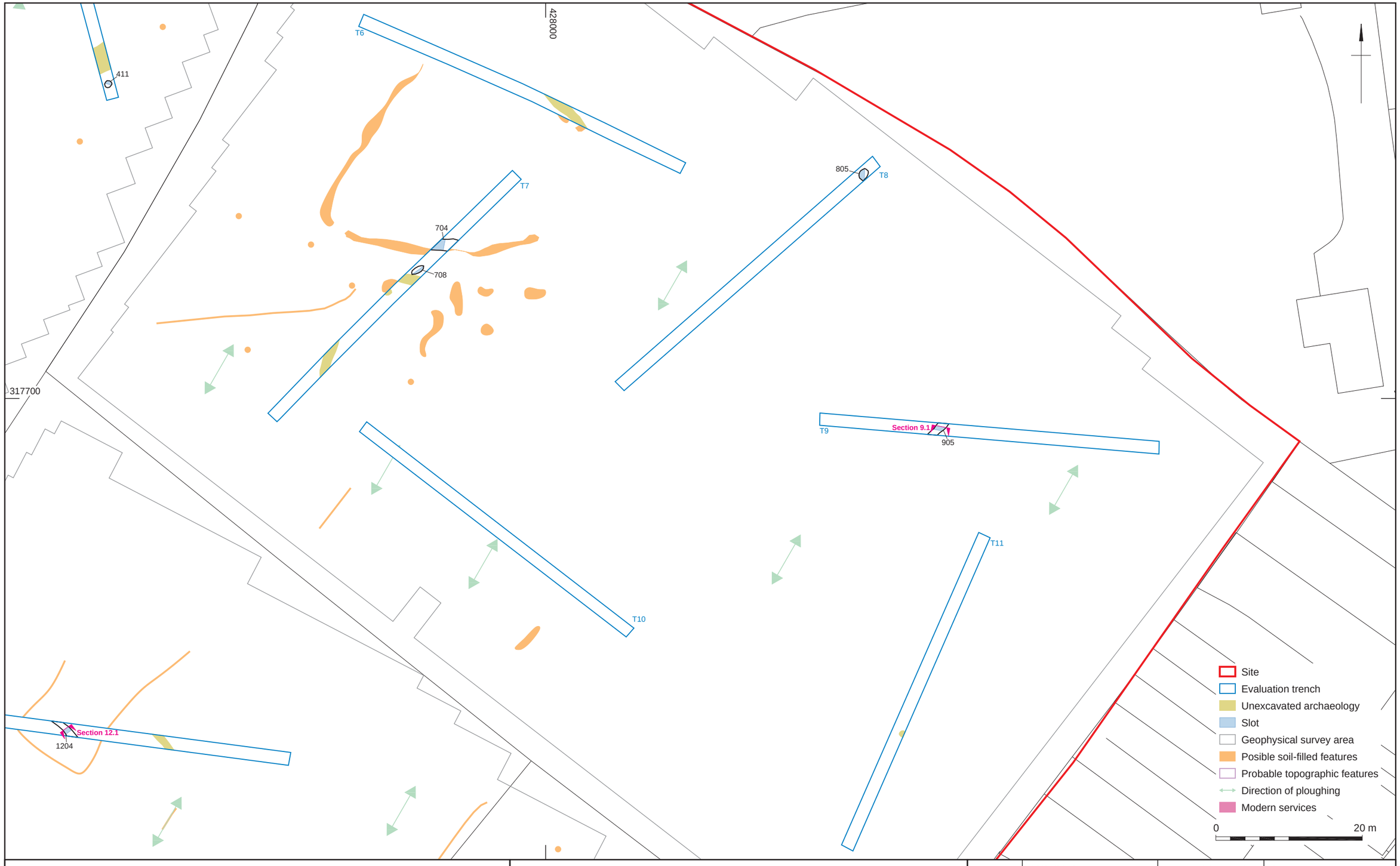
Field 1 trench locations showing archaeological features

Figure 2



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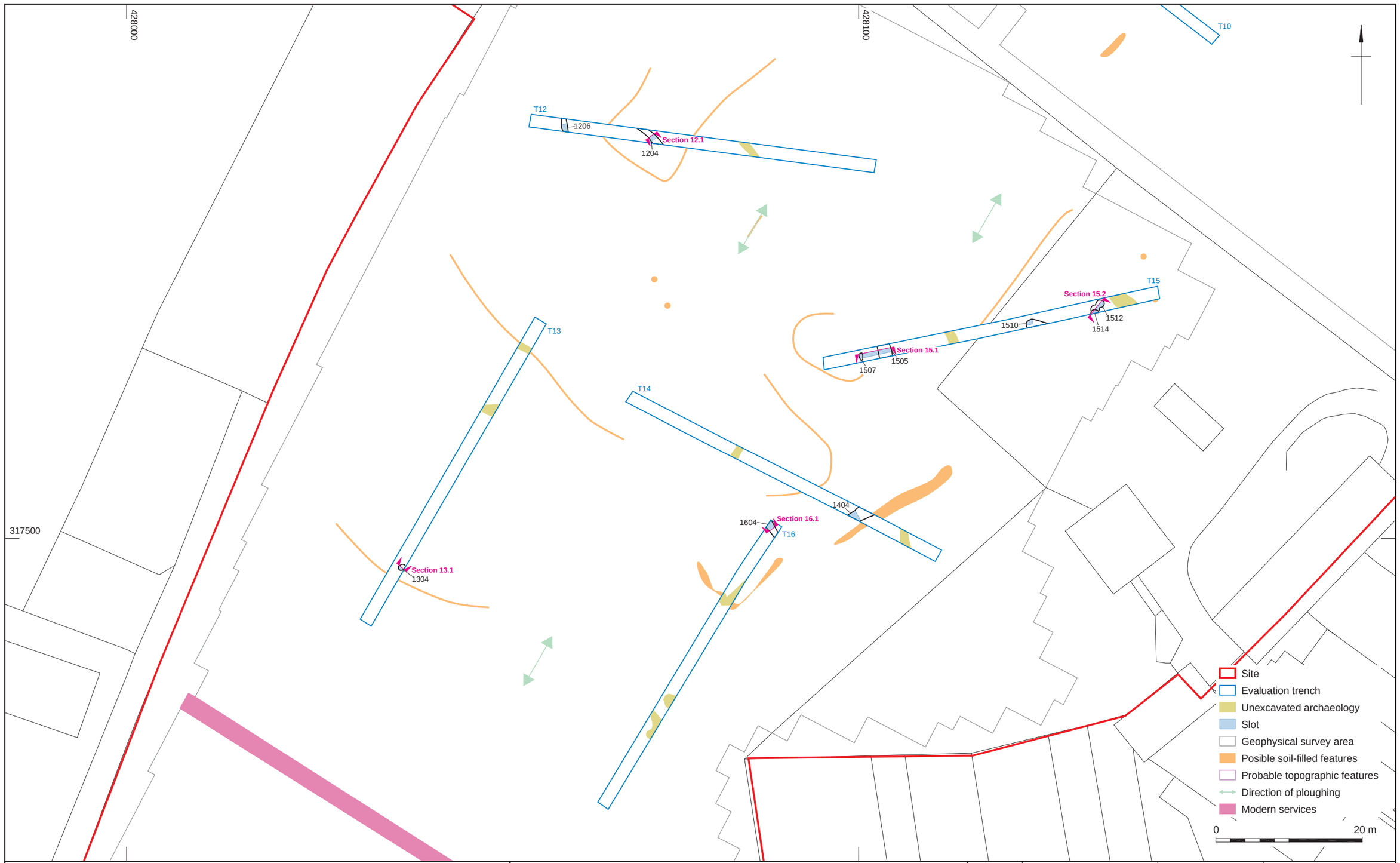
Field 2 trench locations showing archaeological features

Figure 3



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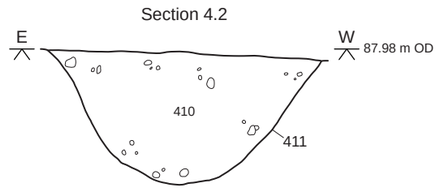
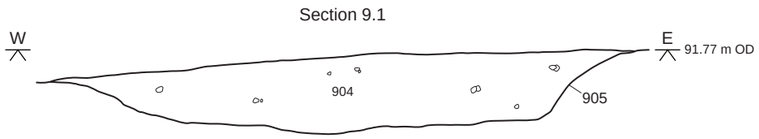
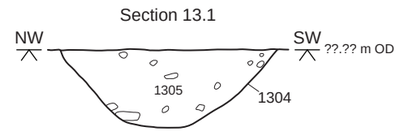
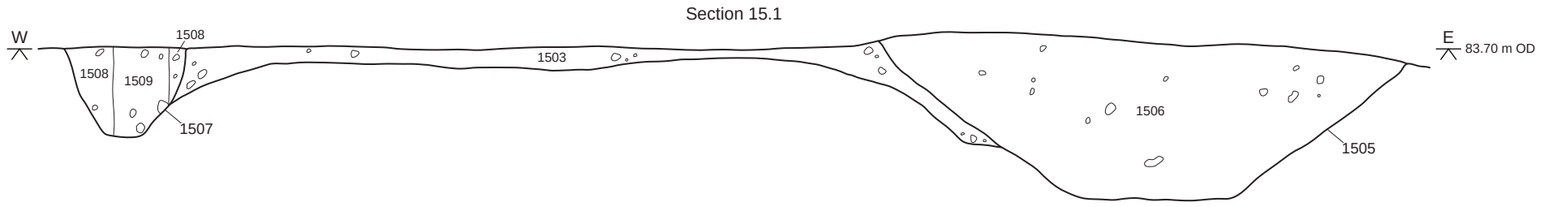
Field 3 trench locations showing archaeological features

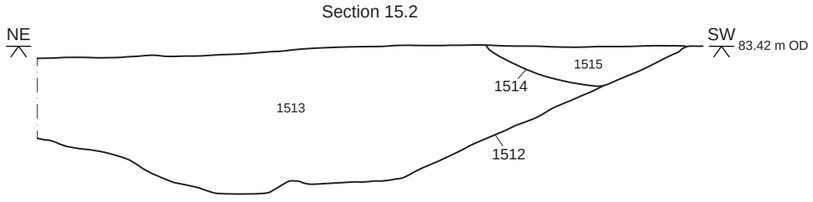
Figure 4











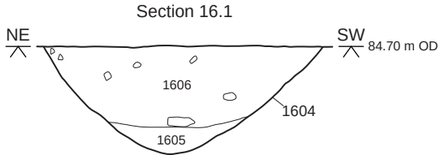


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Plate 1: Trench 3 from south-west

Plate 2: South-east facing section of trench three showing cut of large ditch in the north-west of the trench

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Plate 3: East facing section of ditch 406

Plate 4: West facing section of curvilinear ditch 409

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Plate 5: North facing section of pit 411

Plate 6: West facing section of ditch 704

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Plate 7: South facing section of pit 805

Plate 8: South facing section of ditch 1204

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Plate 9: South-west facing section of ditch 1404

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