University of Leicester
Archaeological Services

An Archaeological Evaluation at Stoney Bridge, Broughton Astley Leicestershire NGR: SP 504 927 centre

Tim Higgins

ULAS Report No 2009-166.

An Archaeological Evaluation

Stoney Bridge, Broughton Astley

Leicestershire

NGR: (SP 504 927)

Tim Higgins

For: Fisher German LLP

Checked by:

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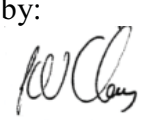
Signed:  **Date**: 11/11/2009

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ULAS Report Number 2009-166

[X.A183.2009]

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An Archaeological Evaluation Stoney Bridge, Broughton Astley Leicestershire (SP 504 927)

Tim Higgins

Summary

An archaeological field evaluation by trial trenching was undertaken on land adjacent, Stoney Bridge, Broughton Astley, Leicestershire by University of Leicester Archaeological Services in advance of proposed construction of anaerobic digestion plant and associated landscaping and access road. Fifteen trial trenches were excavated in an area defined as having potential as it lies in an area of archaeological interest. The trial trenching revealed areas of archaeological potential including a shallow pit containing Mesolithic flints. Other features including possible post-holes, gullies and pits were found under a deep colluvial deposit. The site archive will be held with the Archaeology, Environment and Heritage Services (Leicestershire County Council) under accession number X.A183.2009

1. Introduction

A planning application is proposed for the construction of an anaerobic digestion plant on land at Stoney Bridge, Broughton Astley, Leicestershire (SP504 927). The development comprises the construction of the anaerobic digestion plant and associated landscaping and access road covering *c.* 3.4 ha.

An archaeological field evaluation (AFE) was undertaken as part of the requirements identified by the County Archaeologist Leicester County Council as archaeological advisor to planning authority following Planning Policy Guidelines 16 (PPG16, Archaeology and Planning para.30). The AFE was undertaken to provide any archaeological remains of significance were present within the development site and propose suitable treatment to avoid or minimise damage by the development.

2. Site Description, Topography and Geology

The site is located on land close to Stoney Bridge, Broughton Astley at NGR SP 504 927 (Figure 1). It comprises a broadly rectangular field orientated.

The development area lies at height of *c.*118m appears to fall from west to east, and the land slopes down slightly to the south. The Ordnance Survey Geological Survey of Great Britain Sheet 155 indicates that the underlying geology is likely to consist of sand and gravel overlying Boulder Clay.

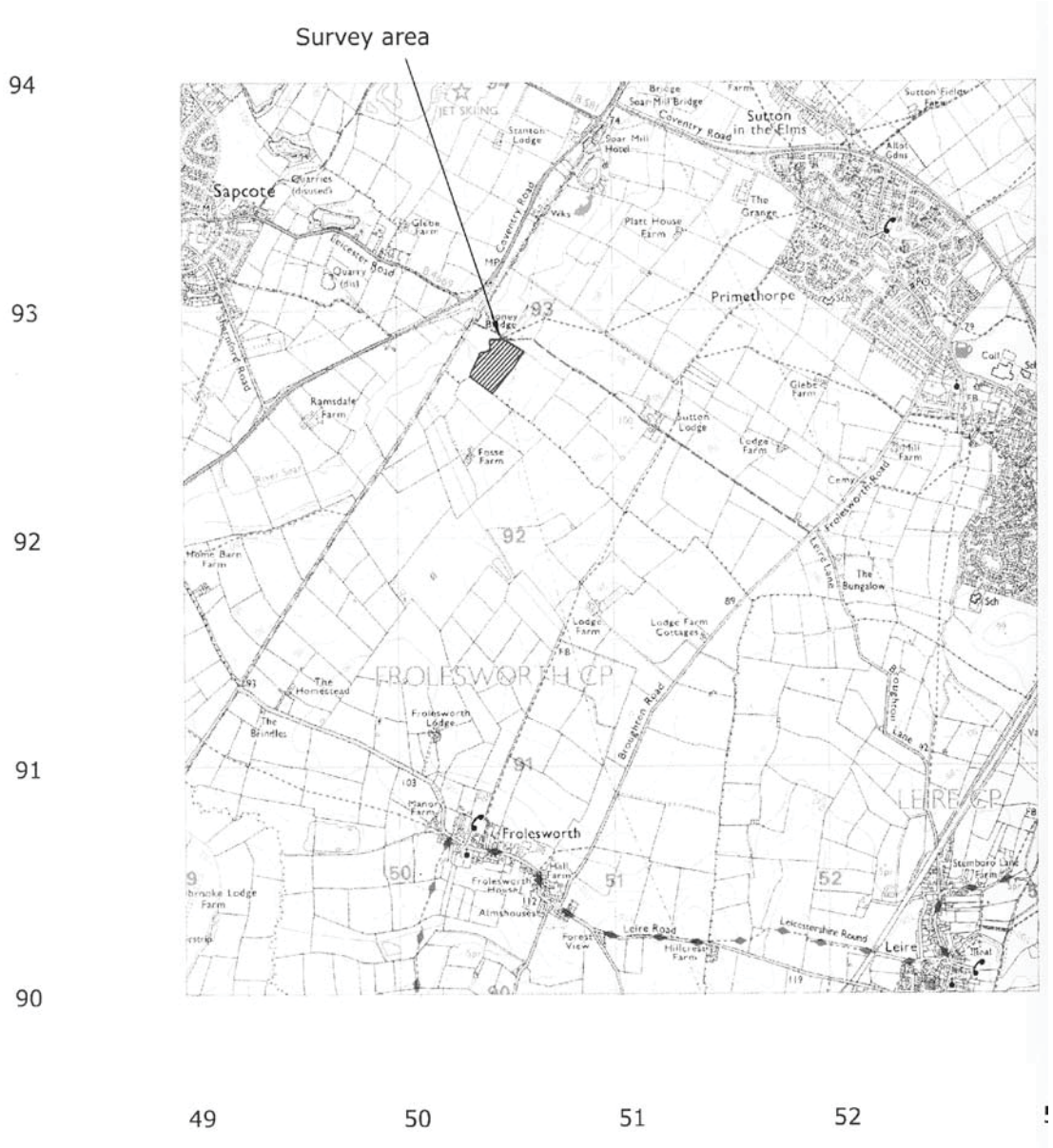

Figure 1: Location of the proposed development

3. Historical and Archaeological Background

An archaeological desk-based assessment, previously prepared by the University of Leicester Archaeological services for the development (Hunt 2007) had highlighted the archaeological potential of the site's surrounding environs.

The Leicestershire and Rutland Historic Environment Record (HER) shows that the application site lies in an area of archaeological interest. The proposed development site consists of rectangular field currently under pasture, which lies at the very south-western edge of the Parish of Broughton Astley, close to the line of known Roman Road known as the Fosse Way (HER Ref MLE1380) and also close to other sites of archaeological interest

including the findspots for prehistoric flint (MLE9382) and Roman artefacts (MLE9894 & MLE7822).

A geophysical survey was undertaken on the site in 2008 (Stratascan 2008) and this indicated a few linear discrete anomalies interpreted as pertaining to land drainage. However there were some anomalies suggesting cut features of possible archaeological origin.

4. Aims and Objectives

The main aims of the evaluation were:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed new school buildings.
- To produce an archive and report of any results

Within the stated project objectives, the principal aim of the evaluation is to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits on the site in order to determine the potential impact upon them from the proposed development.

5. Methodology

The *Design Specification* (Appendix 3) agreed with the Senior Planning Archaeologist of Leicestershire County Council, Historic and Natural Environment Team (LCCHNET) proposed a *c*. 2% sample of the area: the equivalent of c. 15 30m x 1.5m trenches, totalling c. 675 sq m. The majority of the trenches were to be concentrated in the eastern half of Field 1 where the digester is to be constructed. A total of four trenches were to be used to target geophysical anomalies located in the western half of the site that is likely to be subject to landscaping. Two further trenches were also located along the route of the access road close to the Fosse Way. It was recognised that the exact location of the trenches may have to be modified depending on the constraints of the site.

The topsoil and underlying layers were removed under full archaeological supervision until either the top of archaeology or the natural substratum/undisturbed ground was reached, or to a maximum depth of 1.2m.

The bases of the trenches were cleaned in areas where potential archaeological deposits were observed. If archaeological remains were identified, they were to be planned to scale and recorded. Limited excavation would also be undertaken in order to determine the character and date of any deposits.

The trenches were located using a Leica EDM and the final plans completed with the aid of TurboCad v.11 design software.

All the work followed the Institute for Archaeologists (IfA) *Standard and Guidance for Archaeological Field Evaluations*, and the *Guidelines and Procedures for Archaeological Work in Leicestershire and Rutland* (Leicestershire County Council).

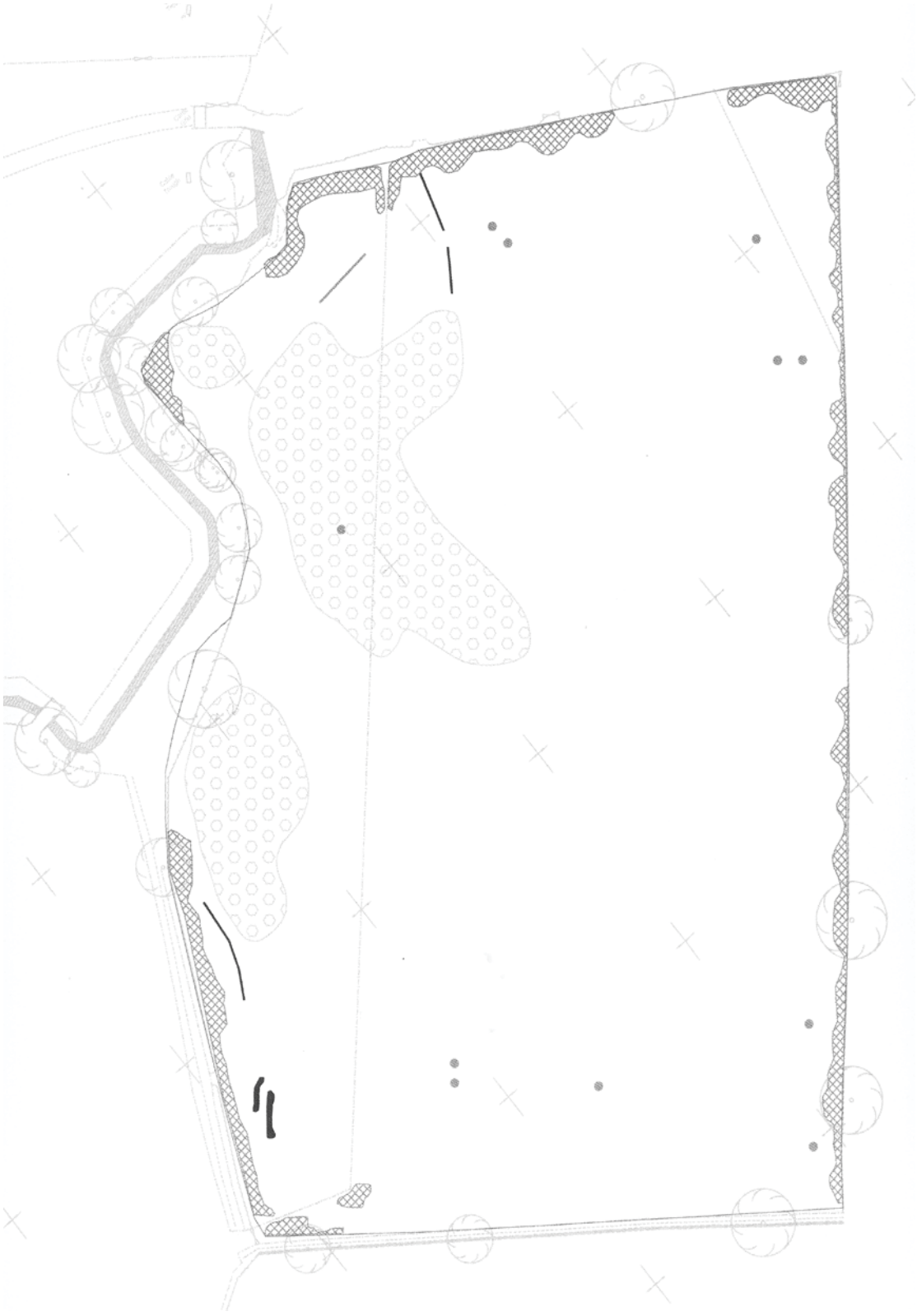

Figure 2: Interpretive plot of geophysical data (from Smalley 2009) showing geophysical anomalies

6. Results

A total of 17 trenches was excavated within the proposed development area. Four of the trenches targeted specific anomalies identified in the geophysical survey.

Trenches 1-17

Unless otherwise stated machining of trenches in the field removed a layer of dark greyish brown clayey silt topsoil to a depth varying between 0.20m and 0.35m. Below the topsoil was a pale orange brown sandy silt subsoil which was interpreted as a possible colluvial deposit which varied in depth from 0.15m to 0.88m deep. The subsoil overlay the natural substratum which comprised alluvium overlying Glacial till and Mercia Mudstone Group Clay. Archaeological deposits, where present, were below the subsoil/colluvium and cut into the natural glacial till substratum.

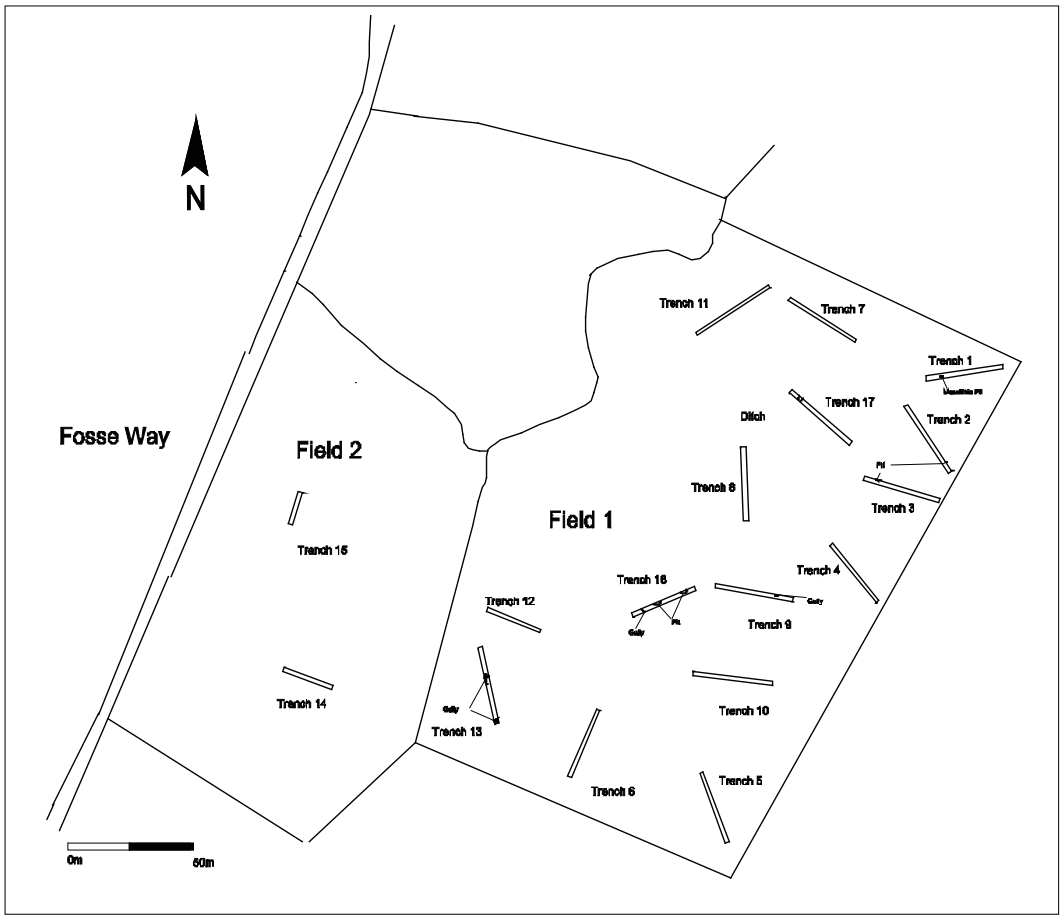

Figure 3: Location of Trenches

Trench 1

Length: 30.00m
Width: 1.6m
Depth: 0.50m (min) 1.00 (max)

Orientation: E-W

Trench 1 was located in the north-east corner of the field 1 (Figure 3) and natural substratum was reached at minimum depth 0.40m below the surface at the east end of the trench. Towards west end of the trench a small sub-circular feature [4] was observed (Figure 4). The feature measured 0.62m long, 0.57m wide and 0.20m deep. The sides of the shallow feature were relatively steep breaking gradually into flat sloping base. The feature contained a leached mid-brownish grey sandy clay fill (3) mixed with occasional small round pebbles which also included a significant group of Mesolithic flint. The feature could be the base of small pit / post-hole or perhaps a re-used natural feature. At the east end a modern small rectangular post-hole [31] was found and measured 0.18m long, 0.15m wide and 0.12m deep. The fill comprised dark greyish brown sandy clay (30) mixed occasional pebbles and a tile fragment.

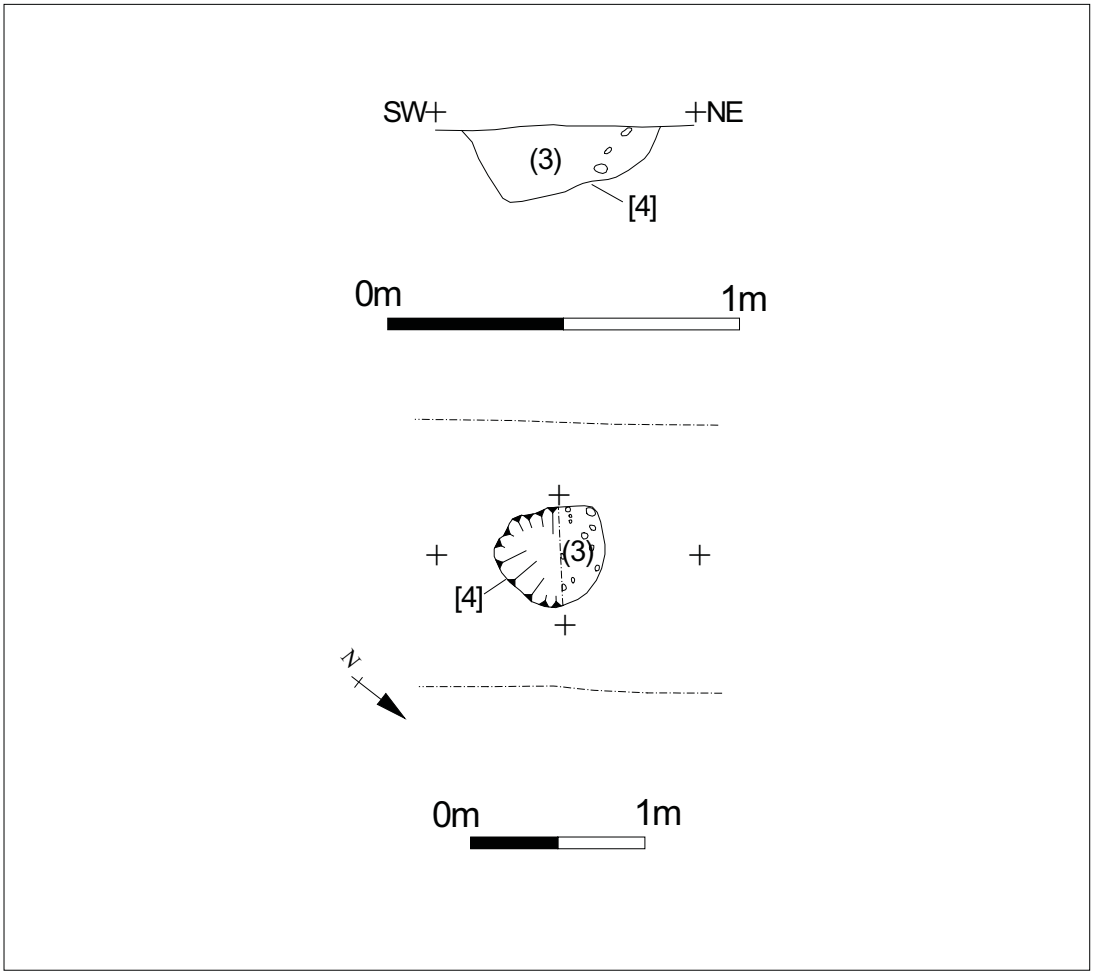

Figure 4: Trench 1, Pit/post-hole (3) [4]

Figure 5: Trench 1, Detail of feature [4]

Trench 2

Length: 30.00m
Width: 1.6m Depth: 0.50m (min) 0.87m (max)
Orientation: SE-NW

This trench was locate to the south of Trench 1 and orientated in a south-east to north-west direction. The natural substratum was reached at depth 0.41m towards the south-east end with a maximum depth of 0.80m at the western end. A single feature [6] was observed at the east end of the trench and comprised a shallow sub-oval cut with steeply angled sides and a narrow rounded point. The feature was interpreted as a post-hole and measured 0.45m long, 0.30m wide and 0.15m deep. No finds were found associated with the feature which contained a mid-dark grey silty clay fill (5) mixed with frequent charcoal flecks and occasional pebbles.

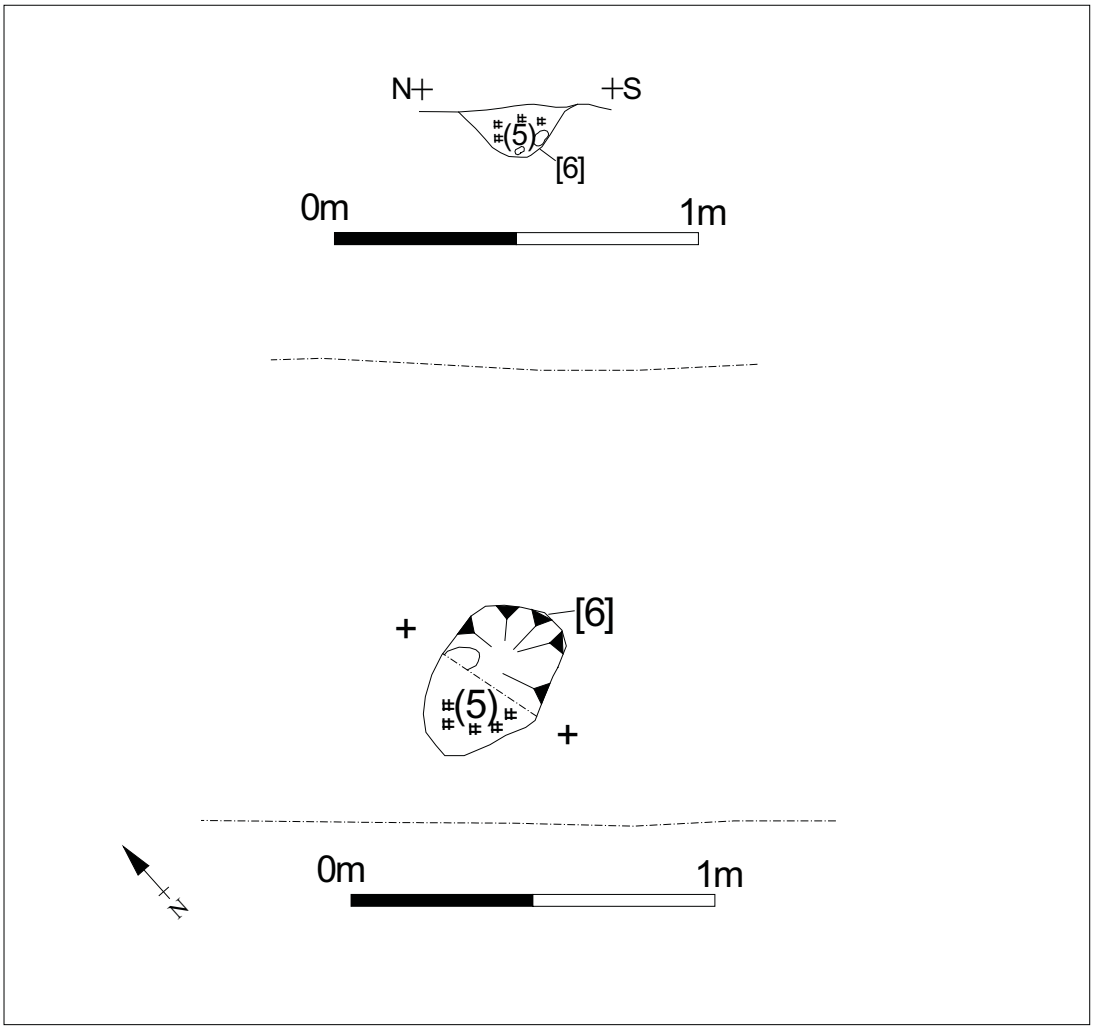

Figure 6: Trench 2, Post-hole (5) [6]

Figure 7: Trench 2, Post-hole (5) [6]

Trench 3

Length: 30.00m
Width: 1.6m
Depth: 0.47m (min) 0.71m (max)
Orientation: E-W

Trench 3 was located directly to the south of Trench 2 and orientated south-east to north-west. The natural substratum was reached at maximum depth of 0.66m below the surface towards the west end of the trench and at a minimum depth 0.47m deep at the east end of the trench. A single feature was observed at the west end of the trench running beneath the trench baulk. The irregular semi-circular cut had gradual sloping sides, breaking into a rounded base. The fill comprised mid-light brown grey sandy clay mixed with small and very large sub-rounded stones. The stones suggest a possible packing for a post-hole. No finds were found associated with this feature.

Figure 8: Trench 3, Pit [26]

Trench 4

Length: 30.00m
Width: 1.6m
Depth: 0.57m (min) 0.90m (max)
Orientation: SE-NW

This trench was excavated towards the centre of the Field 1 on the east side. The trench was orientated in a south-east to north-west direction and the natural substratum was reached at a depth of 0.77m at the west end of the trench and 0.56m towards the east end. The natural substratum had variable changes in colour which suggest possible features, but when excavated were found to be natural.

Trench 5

Length: 30.00m
Width: 1.6m
Depth: 0.40m (min) 0.68m (max)
Orientation: SE-NW

Trench 5 was located in the south-east corner of the Field 1 and orientated in a north-west to south-east direction. The natural substratum was reached at a depth 0.35m below the surface at the east end of the trench. Towards west end of the trench the natural substratum was reached at 0.60m depth. The natural substratum had variable changes in colour which suggested possible pits or linear features, which when excavated were found to be natural.

Trench 6

Length: 23.6m
Width: 1.6m
Depth: 0.85m (min) 1.22m (max)

Orientation: N-S

This trench was located towards the south end of the Field 1 and the natural substratum was reached at depths of between 1.01m and 0.80m. These deep levels appear to suggest that subsoil or colluvial deposits filled a possible natural hollow within this part of the field. Two linear variations in the natural substratum were detected at the northern end of the trench. When these features were examined they were found to be natural.

Trench 7

Length: 30.00m
Width: 1.6m
Depth: 0.40m (min) 0.86m (max)
Orientation: NNE-SSW

This trench was located at the northern of Field 1 and was orientated in north-east to south-west direction. The top of natural substratum was reach at depth of 0.78m below the surface at the south-east end of the trench. Towards west end of the trench the natural substratum was reached at depth of 0.40m below the surface. The natural was sealed by two types of subsoil. At the east end of the trench the subsoil was the typical mid-light brown sandy clay seen else where and thought to be colluvial layer. At the west end of the trench the subsoil comprised greyish brown clay silt which could be alluvial layer. The only feature observed was a modern land drain comprising a narrow linear cut filled with gravel.

Trench 8

Length: 30.00m
Width: 1.6m
Depth: 0.48m (min) 0.92m (max)
Orientation: N-S

Trench 8 was located in the centre of the Field 1 and orientated in a north to south direction. The natural substratum was reached at depth of 0.61m at the north end of the trench and at depth of 0.90m below the surface at the south end. The depth at the southern end perhaps suggests that a natural hollow was filled with colluvial deposit. The only features observed within this trench were three modern land drains.

Trench 9

Length: 30.00m
Width: 1.6m
Depth: 0.87m (min) 1.14m (max)
Orientation: E-W

Trench 9 was excavated in the centre of the Field 1 directly to the south of trench 8 and orientated in an east to west direction. The natural substratum was cut by a possible pit or gully [8] found towards the eastern end of the trench. The feature was irregular in shape but may be the butt end of gully. The east side of the cut had moderately sloping slides but the west side was slightly steeper and the base was narrow and rounded. The possible gully ran northward beneath the bulk and contained dark-brown grey silty clay fill (7) mixed with occasion charcoal flecks. The natural substratum was reached at depths between 1.14m and 0.80m below the surface suggesting that deep colluvial deposits had accumulated within this area.

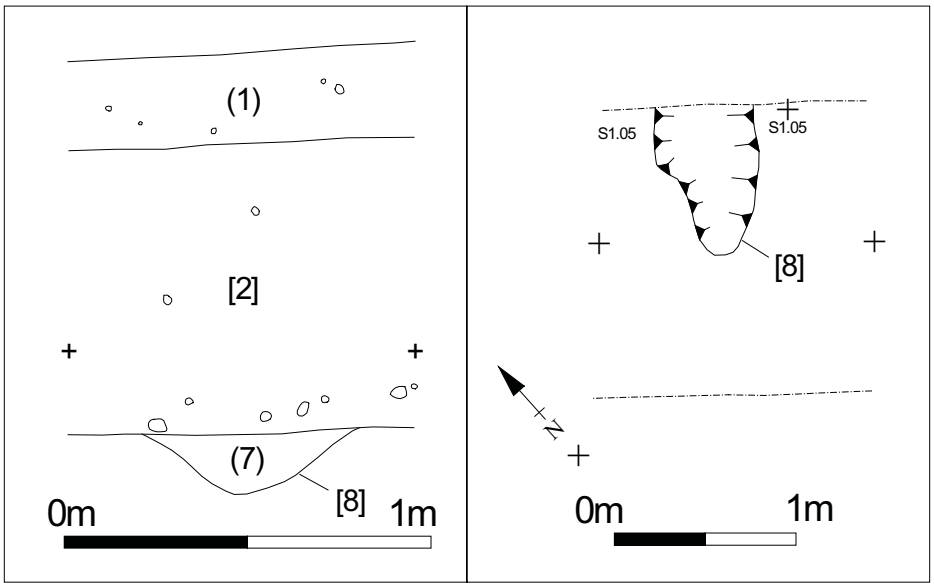

Figure 9: Trench 9, Gully (7) [8]

Figure 10: Trench 9, Gully (7) [8]

Trench 10

Length: 30.00m
Width: 1.6m
Depth: 0.85m (min) 1.09m (max)
Orientation: NE-SW

This trench was also located towards the centre of Field 1 and was orientated in a north-east to south-west direction. The natural substratum was reached at a depth of between 0.85m and 1.08m. The natural substratum had no features but the depth of the trench suggests that a deep colluvial deposit had accumulated in this area.

Trench 11

Length: 30.00m
Width: 1.6m
Depth: 0.45m (min) 0.56m (max)
Orientation: NE-SW

Trench 11 was located in the north-west corner of Field 1 and excavated in north-east to south-west direction. The natural substratum was reached at a depth of 0.39m below the surface, suggesting that no colluvial deposits had accumulated within this area. Towards the north-west corner of the trench a very dark grey organic clay layer deposited 0.24m deep was found and was thought to be a pond. The organic clay and natural substratum had been cut by modern land drains and plough scars.

Trench 12

Length: 24.00m
Width: 1.6m
Depth: 0.34m (min) 0.70m (max)
Orientation: E-W

This trench was excavated in the south-western corner of Field 1 and was orientated in an east to west direction. The natural substratum was reached at depth 0.60m below the surface and was sealed by a greyish brown clay silt subsoil. This subsoil was variation on the usual mid-orange brown silty clay colluvium seen in trenches located to east of this area. The trench was in close proximity to the River Soar tributary channel and the subsoil was thought to be alluvial deposit. The alluvial clay was cut by two modern field drains.

Trench 13

Length: 29.00m
Width: 1.6m
Depth: 0.70m (min) 0.94m (max)
Orientation: SE-NW

Trench 13 was excavated directly to the south of Trench 12 and was orientated in a south-east to north-west direction. The natural substratum was reached at depth of between 0.85m and 0.94m below the surface. The natural substratum was cut by three features. The first feature was located towards the east end of the trench and comprised a possible gully running north-east to south-west [10]. The gully had moderately sloping sides and a narrow rounded base and measured 2.00m long, 0.90m wide and 0.17m deep. The fill consisted of mid-brown grey silty clay mixed with occasional rounded pebble. Towards the centre of the trench two further features were observed. This comprised a gully feature [12] running east to west and

measuring 1.60m long, 0.66m wide and 0.26m deep. The gully had relatively steep sides that broke sharply into a wide flat base. The fill (11) consisted of a mid-brown silty clay mixed with occasional pebbles. A third gully [14] was found to either cut or be cut by gully [12] and ran in a north to south direction. This third feature was unexcavated but was linear in shape and its rounded butt end was suggestive of a possible gully. The feature contained a mid-grey clay fill (13) mixed with large rounded pebbles and measured 5.20m long by 0.40m wide. All three features were sealed under the same deep alluvial subsoil observed in trench 12.

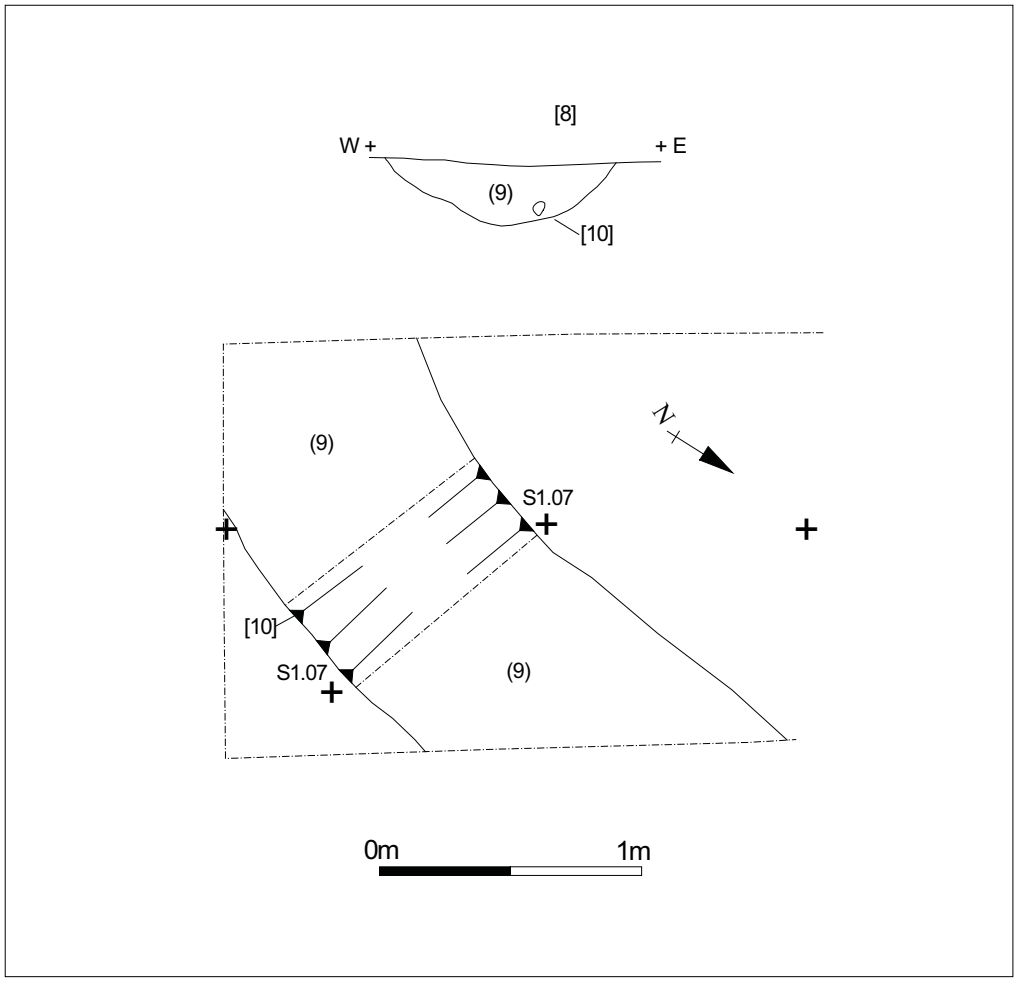

Figure 11: Trench 13, Ditch (9) [10]

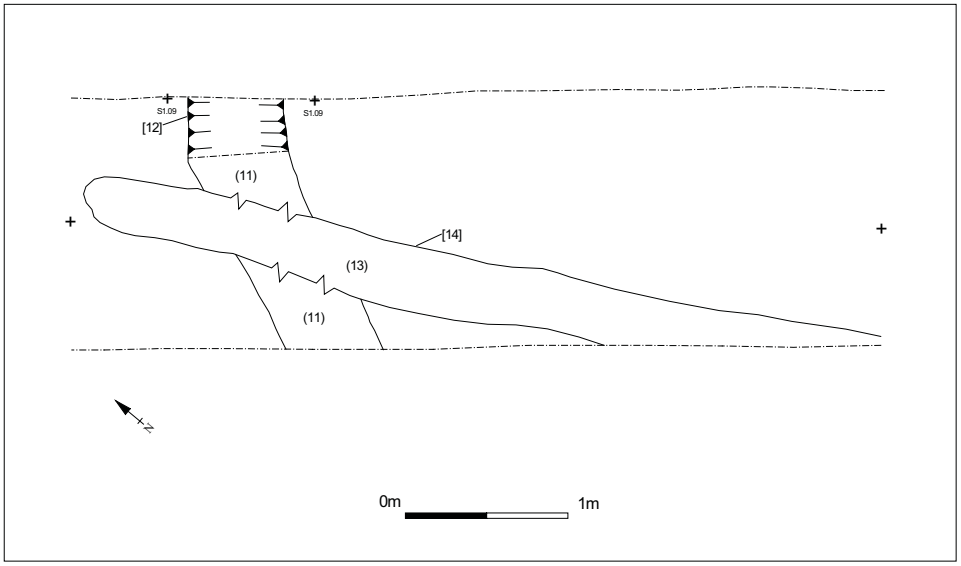

Figure 12: Trench 13, Gullys [12] and [13]

Trench 14

Length: 20.00m
Width: 1.6m
Depth: 0.41m (min) 0.48m (max)
Orientation: E-W

This trench was located close to the River Soar tributary channel towards the southern end of Field 2 and orientated on an east to west direction (Figs 3, 13 and 14). This trench was excavated to a maximum depth 1.00m below the surface. The natural substratum was yellowish brown clay and sandy gravel and was sealed by pale greyish clay silt alluvial deposit. Towards the east end of the trench the alluvial clay was cut by modern land drain.

Trench 15

Length: 14.00m
Width: 1.6m
Depth: 1.20m (min) 1.44m (max)
Orientation: N-S

This trench was located further to the west close to the River Soar tributary channel with Field 2. The trench was orientated in a north to south direction and had a maxmium depth of

1.44m. This was one of the deepest trenches and the natural substratum was sealed under 1.20m deep alluvial subsoil. No archaeological features were seen in this trench.

Trench 16

Length: 27.00m
Width: 1.6m
Depth: 0.85m (min) 0.95m (max)
Orientation: NE-SW

Trench 16 was located towards the centre of Field 1 close to trenches 9 and 10. The trench was orientated west to east and natural substratum was reached at maximum depth of 0.70m. Four features were observed cutting the natural substratum within this trench. The first feature comprised a gully [15] found at the west end of the trench running north to south. The linear shaped feature measured 1.60m long (minimum), 0.65m wide and 0.20m deep and had steep sloping sides and rounded base. The fill (16) consisted of dark grey clay silt mixed with the occasional pebble and flecks of dark yellowish brown iron-panning. Towards the centre of the trench a potential pit [17] was observed running beneath the north bulk of the trench. This was an irregular semi-circular cut with gradually sloping sides and flat base. The fill (18) comprised dark grey clay silt mixed with occasional pebble and flecks dark yellowish brown iron-panning. The feature had minimum length of 2.20m, width of 0.95m and depth of 0.25m.

Further eastward two inter-cutting features [19] and [21] were observed. The first feature cut [21] was of irregular linear form with a rounded southern edge that ran northwards beneath the trench baulk. This feature was a possible butt end of a ditch or gully with moderate sloping sides and flat base. The feature measured 0.95m long, 0.90m wide and 0.10m deep. The fill consisted of compacted dark grey clay silt mixed with occasional small round pebbles. A flint object was retrieved from this feature. The second feature was thought to be a pit or large post-hole [19] truncating the west side of gully feature [21]. The pit or post-hole had an irregular semi-circular plan running northward under the baulk. The feature had moderate sloping sides that broke gradually into a rounded base. The fill (20) comprised a compacted dark grey clay silt mixed with frequent large and small rounded pebbles. The large rounded pebbles were grouped together on the west side of the feature suggesting possible packing of a post-hole. A single flint artefact was also found within this fill. The features were sealed under a deep colluvial subsoil up to 0.60m deep.

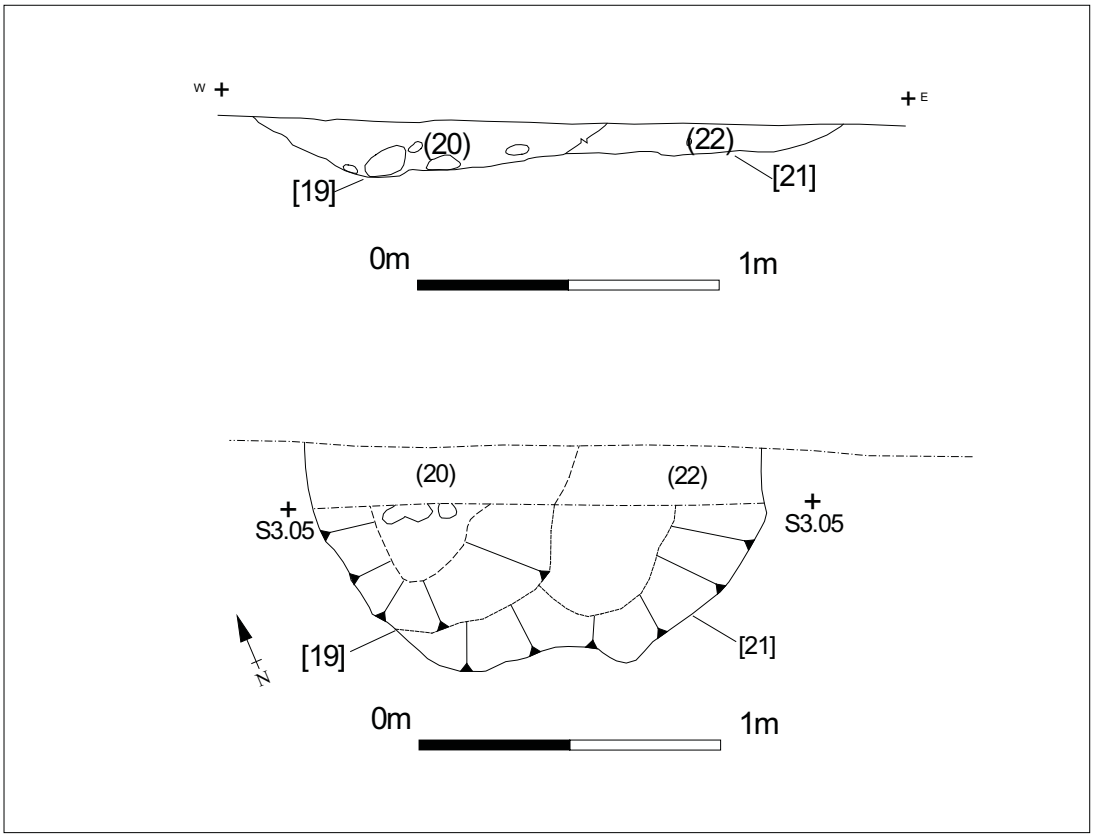

Figure 13: Trench 16, Features [19] and [21]

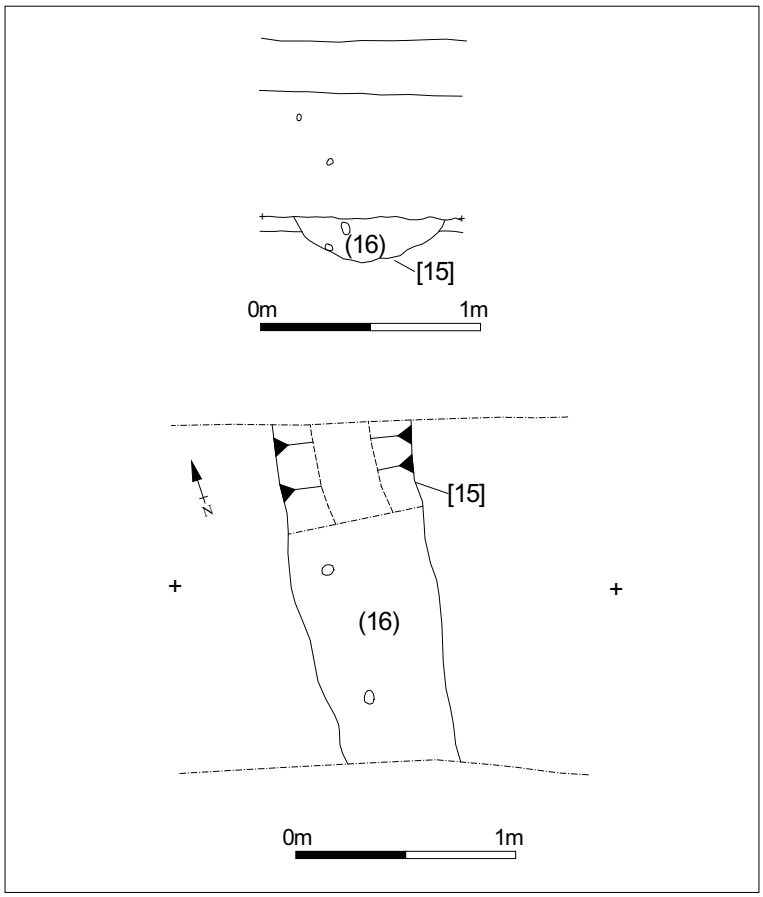

Figure 14: Trench 16, Gully (16) [15]

Trench 17

Length: 30.00m
Width: 1.6m
Depth: 0.80m (min) 1.20m (max)
Orientation: E-W

A possible large ditch [24] was observed within this trench that was located towards the northern end of Field 1 orientated in an east to west direction (Figure--). The natural substratum was reached at depth of 0.80m to 1.00m below the surface. The ditch was located at the west end of the trench running in a north to south direction. The linear cut had gradual sloping sides breaking gradually into narrow rounded base. The ditch dimensions were 1.70m long (minimum), 1.64m wide and 0.30m deep. The fill (23) consisted of dark grey compacted clay silt mixed with flecks yellowish brown iron-panning. The feature was sealed under colluvial subsoil up to 0.80m deep.

Figure 15: Trench 17, Gully [24]

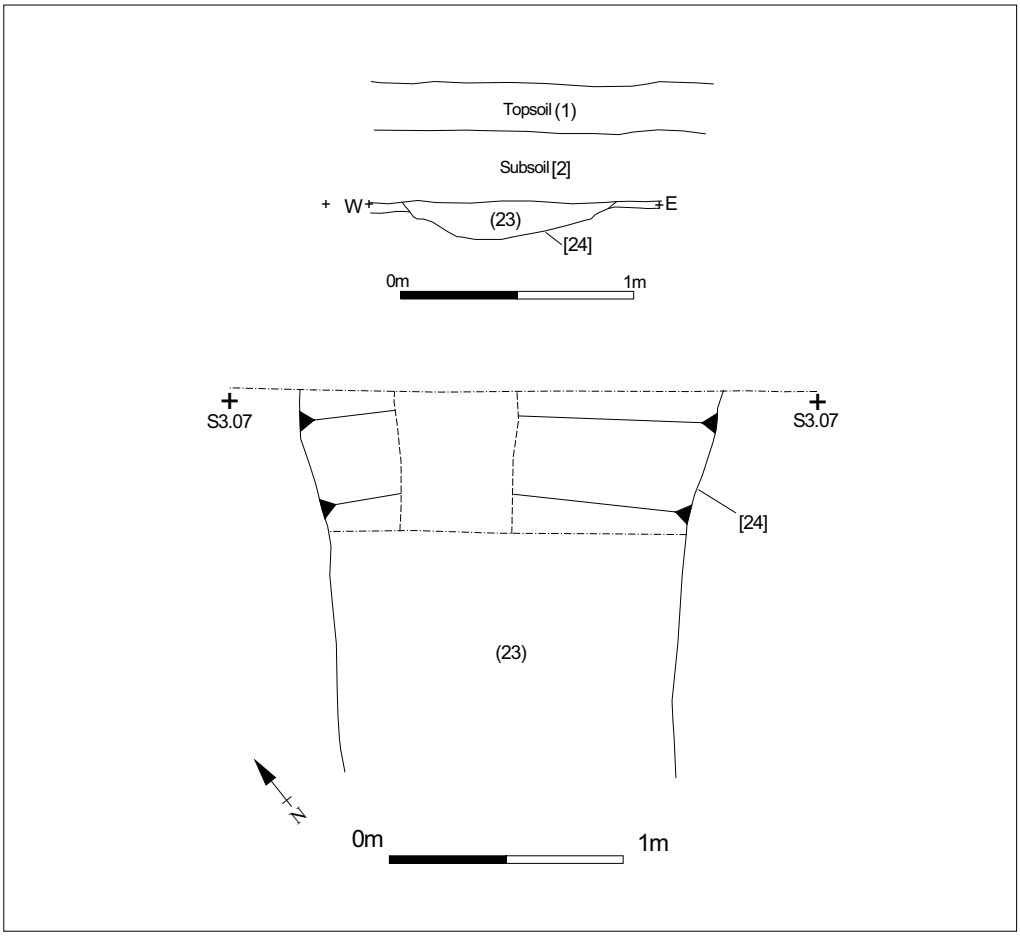

Figure 16: Trench 17, Gully [24]

7. Discussion

The trial trenching at the proposed anaerobic digestion plant revealed several archaeological features as well as number of field drains. These field drains are likely to be responsible for positive anomalies detected by geophysical prospection (Fig 2; Smalley 2009). The majority of the identified features were devoid of artefacts; however there were some notable exceptions.

In trench 1 a deposit of Mesolithic flints was recovered from a small shallow pit sealed under a deep layer of colluvium. The development site was at the base low grade slope rising upwards to the east. The lack of damage and typology of this material suggests in situ flint knapping of Mesolithic material. Sealed deposits containing Mesolithic flint have been identified as priority for research (Myers 2006). A light scatter of features were observed in trenches 2, 3 and 17 that were in close proximity to trench 1. Although these features were devoid of artefacts some of them could be contemporary of the pit with Mesolithic flint

A concentration of features was observed in area Trenches 9 and 16. These features included post-holes, pits and gullies. The majority of the features were again sterile but two possible Neolithic-Early Bronze Age flint artefacts were found in a post-hole and possible gully located in Trench 16. These features were in large natural depression sealed by a deep colluvial deposit.

A group of features was observed in trench 13 located in the south-west corner of Field 1 and may to be responsible for some of the anomalies detected by geophysical survey (Fig 2, Smalley 2009). The features were all gullies and again contained no finds but were sealed under deep alluvial deposit as they were located close a tributary channel to the River Soar. The colluvial and alluvial layers were generally sterile of finds and only a single medieval pottery sherd was retrieved from towards the top of a colluvial deposit.

The general survival of sealed deposits and lack of modern finds may reflect limited modern ploughing has taken place in the area.

8. Archive

A full copy of the archive as defined in Brown (2008) will usually be presented within six months of the completion of the fieldwork. This archive will include all written, drawn and photographic records relating to the investigations undertaken.

The archive consists of:

A copy of the report,

Indices

17 trench recording sheets

31 context sheets

3 primary plan/section drawing sheets

90 Digital and 56 B&W photos with contact prints, photographic index

Finds comprising 25 flint artefacts (Appendix1) 2 tile/brick fragments and 1 pottery sherd (Appendix 2)

The archive will be held with the Archaeology, Environment and Heritage Services (Leicestershire County Council Museums).under accession number X.A183.2009

A summary of the work will be published in the *Transactions of the Leicestershire Archaeological and Historical Society* in due course.

9. Acknowledgements

The fieldwork was carried out by the author, assisted by Steve Baker. Dr. Patrick Clay managed the project. I would like to thank Fisher German LLP for their help and assistance during the evaluation

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Smalley, R., 2009 *Broughton Astley,* Stratascan Geophysical Survey Report J2613

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29.10.2009

Oasis Record

INFORMATION REQUIRED	
Project Name	An Archaeological Evaluation by Trial Trenching Stoney Bridge, Broughton Astley Leicestershire
Project Type	Evaluation
Project Manager	Patrick Clay
Project Supervisor	Tim Higgins
Previous/Future work	Previous work: Desk-base assessment
Current Land Use	Agricultural pasture
Development Type	Anaerobic digestion plant
Reason for Investigation	PPG16
Position in the Planning Process	Pre planning enquiry
Site Co ordinates	NGR: SP 504 927
Start/end dates of field work	23rd to the 30th of September 2009
Archive Recipient	Leicestershire County Council
Study Area	*c*.3.4ha

Appendix 1: The Flint Artefacts Lynden Cooper

Flints sf 1-22 form a consistent lithic group from the Mesolithic period. They display a moderate blue to white patina. Although there are only three bladelets in the group there are other indicators of bladelet technology such as small core front trimming chips. The latter, other small chips and a core rejuvenation flake would suggest the group represents knapping activity.

The remaining three flints sf 23-25 are not patinated and are probably later in date.

Trench Context	Small Find	Type	Comment
Tr1/context 3	1	Flake	
Tr1/context 3	2	Chip	
Tr1/context 3	3	Badelet	Fragment
Tr1/context 3	4	Flake	
Tr1/context 3	5	Chip	Core front prep
Tr1/context 3	6	Chip	Core front prep
Tr1/context 3	7	Flake	
Tr1/context 3	8	Bladelet	
Tr1/context 3	9	Flake	
Tr1/context 3	10	Flake	
Tr1/context 3	11	Flake	Core rejuvenation
Tr1/context 3	12	Chip	
Tr1/context 3	13	Flake	
Tr1/context 3	14	Chip	
Tr1/context 3	15	Chip	
Tr1/context 3	16	Chip	

Tr1/context 3	17	Chip	
Tr1/context 3	18	Chip	
Tr1/context 3	19	Chip	Core front prep
Tr1/context 3	20	Flake	
Tr1/context 3	21	Chip	
Tr1/context 3	22	Bladelet	
Tr16/context 22	23	Shatter	
Tr16/context 20	24	Flake	
Tr 7/context 27	25	Flake	

Appendix 2 The Pottery and Tile

Nicholas J. Cooper

Medieval Pottery

A single sherd of Potters Marston ware (Fabric PM) weighing 5g and dating 1100-1300, was retrieved from subsoil layer (29) in Trench 3.

Post-medieval or modern brick

Two fragments came from Trench 1, one weighing 17g from subsoil layer (28) and the other from fill (30) of cut (31) weighing 2g.

Appendix 3

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES

Design Specification for archaeological work

Job title: Stoney Bridge, Broughton Astley, Leicestershire (SP 504 927)

Client: Fisher German LLP

Planning Authority: Harborough District Council

Planning application No. pre-planning enquiry

1 Introduction

1.1 ***Definition and scope of the specification***

This document is a design specification for an initial phase of archaeological field evaluation (AFE) at the above site, in accordance with DOE Planning Policy Guidance note 16 (PPG16, Archaeology and Planning, para.30). The fieldwork specified below is intended to provide preliminary indications of character and extent of any buried archaeological remains in order that the potential impact of the development on such remains may be assessed by the Planning Authority.

1.2 The definition of archaeological field evaluation, taken from the Institute of Field Archaeologists Standards and Guidance: for Archaeological Field Evaluation (IFA S&G: AFE) is a limited programme of non-intrusive and/ or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.

2. Background

2.1 ***Context of the Project***

2.1.1 The site is at Stoney Bridge, Broughton Astley, Leicestershire (SP 504 927).

2.1.2 An application has been made for the construction of an anaerobic digestion plant and associated landscaping and access road covering *c*. 3.4 sq metres (Figures 1-3).

2.1.3 Leicestershire County Council, Historic and Natural Environment Team (LCCHNET) as archaeological advisors to the planning authority have agreed that an evaluation by trial trenching is required to identify and locate any archaeological remains of significance and propose suitable treatment to avoid or minimise damage by the development.

2.2 ***Archaeological and Historical Background***

2.2.1 An adjacent application has been subject to a desk-based assessment and geophysical survey (Hunt 2007; Stratascan 2008) which has identified potential for archaeological remains in view of its proximity tot the route of the Fosse Way Roman road and the presence of some geophysical anomalies of possible archaeological origin.

3. Archaeological Objectives

3.1 The main objectives of the evaluation will be:

- To identify the presence/absence of any archaeological deposits.

- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- To produce an archive and report of any results.

3.2 Within the stated project objectives, the principal aim of the evaluation is to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits on the site in order to determine the potential impact upon them from the proposed development.

3.3 Trial trenching is an intrusive form of evaluation that will demonstrate the existence of earth-fast archaeological features that may exist within the area.

4. Methodology

4.1 *General Methodology and Standards*

4.1.1 All work will follow the Institute for Archaeologists (IfA) Code of Conduct and adhere to their *Standard and Guidance for Archaeological Field Evaluation* (2008).

4.1.2 Staffing, recording systems, health and safety provisions and insurance details are included below.

4.1.3 Internal monitoring procedures will be undertaken including visits to the site by the project manager. These will ensure that project targets are met and professional standards are maintained. Provision will be made for external monitoring meetings with the Senior Planning Archaeologist the Planning authority and the Client.

4.2 *Trial Trenching Methodology*

4.2.1 Topsoil/modern overburden will be removed in level spits, under continuous archaeological supervision, down to the uppermost archaeological deposits by JCB 3C or equivalent using a toothless ditching bucket. A CAT Scan will be undertaken prior to the trenching commencing.

4.2.2 Trenches will be excavated to a width of 1.5m and down to the top of archaeological deposits. The area of the trenches will be protected by barrier fencing.

4.2.3 The trenches will be backfilled and levelled at the end of the evaluation.

4.2.4 The area covers *c.* 3.4 ha, where it is proposed that an anaerobic digester, landscaping and access roads will be constructed. A *c*. 2% sample of the area is the equivalent of *c.* 15 30m x 1.5m trenches totaling *c*. 675 sq m. (Fig. 2). The trenches will be concentrated in the eastern half of the field where the digester is to be constructed although geophysical anomalies will be tested to the west as this area is likely to be subject to landscaping. Two trenches will also be located along the route of the access road close to the Fosse way (Fig 3). The exact location of the trenches may need to be modified depending on constraints on site.

4.2.5 Trenches will be examined by hand cleaning and any archaeological deposits located will be planned at an appropriate scale and sample-excavated by hand as appropriate to establishing the stratigraphic and chronological sequence. All plans will be tied into the Ordnance Survey National Grid. Spot heights will be taken as appropriate.

4.2.6 Sections of any excavated archaeological features will be drawn at an appropriate scale. At least one longitudinal face of each trench will be recorded. All sections will be levelled and tied to the Ordnance Survey Datum, or a permanent fixed bench mark.

4.2.7 Trench locations will be recorded using an electronic distance measurer. These will then be tied in to the Ordnance Survey National Grid.

4.2.8 Any human remains will initially be left *in situ* and will only be removed if necessary for their protection, under Ministry of Justice guidelines and in compliance with relevant environmental health regulations.

4.3 *Recording Systems*

4.3.1 The ULAS recording manual will be used as a guide for all recording.

4.3.2 Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto pro-forma recording sheets.

4.3.3 A site location plan based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) will be prepared. This will be supplemented by a trench plan at appropriate scale, which will show the location of the areas investigated in relationship to the investigation area and OS grid.

4.3.4 A record of the full extent in plan of all archaeological deposits encountered will be made. Sections including the half-sections of individual layers of features will be drawn as necessary, typically at a scale of 1:10. The OD height of all principal strata and features will be recorded.

4.3.5 A photographic record of the investigations will be prepared illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include 'working shots' to illustrate more generally the nature of the archaeological operation mounted.

4.3.6 This record will be compiled and checked during the course of the excavations.

5. Finds and Samples

5.1 The IFA *Guidelines for Finds Work* will be adhered to.

5.2 Before commencing work on the site, a Site code/Accession number will be agreed with the Planning Archaeologist that will be used to identify all records and finds from the site.

5.3 During the fieldwork, different sampling strategies may be employed according to the perceived importance of the strata under investigation. Close attention will always be given to sampling for date, structure and environment. If significant archaeological features are sample excavated, the environmental sampling strategy is likely to include the following:

i. A range of features to represent all feature types, areas and phases will be selected on a judgmental basis. The criteria for selection will be that deposits are datable, well sealed and with little intrusive or residual material.

ii. Any buried soils or well sealed deposits with concentrations of carbonised material present will be intensively sampled taking a known proportion of the deposit.

iii. Spot samples will be taken where concentrations of environmental remains are located.

iv. Waterlogged remains, if present, will be sampled for pollen, plant macrofossils, insect remains and radiocarbon dating provided that they are uncontaminated and datable. Consultation with the specialist will be undertaken.

5.4 All identified finds and artefacts are to be retained, although certain classes of building material will, in some circumstances, be discarded after recording with the approval of the Senior Planning Archaeologist. The IFA *Guidelines for Finds Work* will be adhered to.

5.5 All finds and samples will be treated in a proper manner. Where appropriate they will be cleaned, marked and receive remedial conservation in accordance with recognised best-practice. This will include the site code number, finds number and context number. Bulk finds will be bagged in clear self sealing plastic bags, again marked with site code, finds and context numbers and boxed by material in standard storage boxes (340mm x 270mm x 195mm). All materials will be fully labelled, catalogued and stored in appropriate containers.

6. Report and Archive

6.1 The full report in A4 format will usually follow within eight weeks of the completion of the fieldwork and copies will be dispatched to the Client, Senior Planning Archaeologist; SMR and Local Planning Authority.

6.2 The report will include consideration of:-

- The aims and methods adopted in the course of the evaluation.
- The nature, location, extent, date, significance and quality of any structural, artefactual and environmental material uncovered.
- The anticipated degree of survival of archaeological deposits.
- The anticipated archaeological impact of the current proposals.
- Appropriate illustrative material including maps, plans, sections, drawings and photographs.

- Summary.
- The location and size of the archive.
- A quantitative and qualitative assessment of the potential of the archive for further analysis leading to full publication, following guidelines laid down in *Management of Archaeological Projects* (English Heritage).

6.3 A full copy of the archive as defined in Brown (2008) will usually be presented to LCC within six months of the completion of fieldwork. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken.

7 Publication and Dissemination of Results

7.1 A summary of the work will be submitted for publication in the *Transactions of the Leicestershire Archaeological and Historical Society*.

8. Acknowledgement and Publicity

8.1 ULAS shall acknowledge the contribution of the Client in any displays, broadcasts or publications relating to the site or in which the report may be included.

8.2 ULAS and the Client shall each ensure that a senior employee shall be responsible for dealing with any enquiries received from press, television and any other broadcasting media and members of the public. All enquiries made to ULAS shall be directed to the Client for comment.

9. Copyright

9.1 The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

10. Timetable

10.1 The evaluation start is proposed for w.c 14.09.2009 or 21.09.2009 with two staff. Further staff will be added if archaeological remains are discovered.

10.2 The on-site director/supervisor will carry out the post-excavation work, with time allocated within the costing of the project for analysis of any artefacts found on the site by the relevant in-house specialists at ULAS.

11. Health and Safety

11.1 ULAS is covered by and adheres to the University of Leicester Archaeological Services Health and Safety Policy and Health and Safety manual with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is attached as Appendix 1. The relevant Health and Safety Executive guidelines will be adhered to as appropriate. The HSE has determined that archaeological investigations are exempt from CDM regulations.

11.2 A Risks assessment will be completed prior to work commencing on-site, and updated as necessary during the site works.

12. Insurance

12.1 All ULAS work is covered by the University of Leicester's Public Liability and Professional Indemnity Insurance. The Public Liability Insurance is with St Pauls Travellers Policy No. UCPOP3651237 while the Professional Indemnity Insurance is with Lloyds Underwriters (50%) and Brit Insurances (50%) Policy No. FUNK3605.

13. Monitoring arrangements

13.1 Unlimited access to monitor the project will be available to both the Client and his representatives and Planning Archaeologist subject to the health and safety requirements of

the site. At least one weeks notice will be given to the LCCHS Planning Archaeologist before the commencement of the archaeological evaluation in order that monitoring arrangements can be made.

13.2 All monitoring shall be carried out in accordance with the IfA *Standard and Guidance for Archaeological Field Evaluations.*

13.3 Internal monitoring will be carried out by the ULAS project manager.

14. Contingencies and unforeseen circumstances

14.1 In the event that unforeseen archaeological discoveries are made during the project, ULAS shall inform the site agent/project manager, Client and the Planning Archaeologist and Planning Authority and prepare a short written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the Planning Archaeologist, ULAS shall, if required, implement an amended scheme of investigation on behalf of the client as appropriate.

15. Bibliography

Brown, D., 2008 *Standard and guidance for the preparation of Archaeological Archives* (Institute for Archaeologists)

Hunt, L., 2009 *An Archaeological Desk-Based Assessment for land at Stoney Bridge, Broughton Astley, Leicestershire (SP 504 927).* ULAS Report 2009-063

Smalley, R., 2009 *Broughton Astley,* Stratascan Geophysical Survey Report J2613

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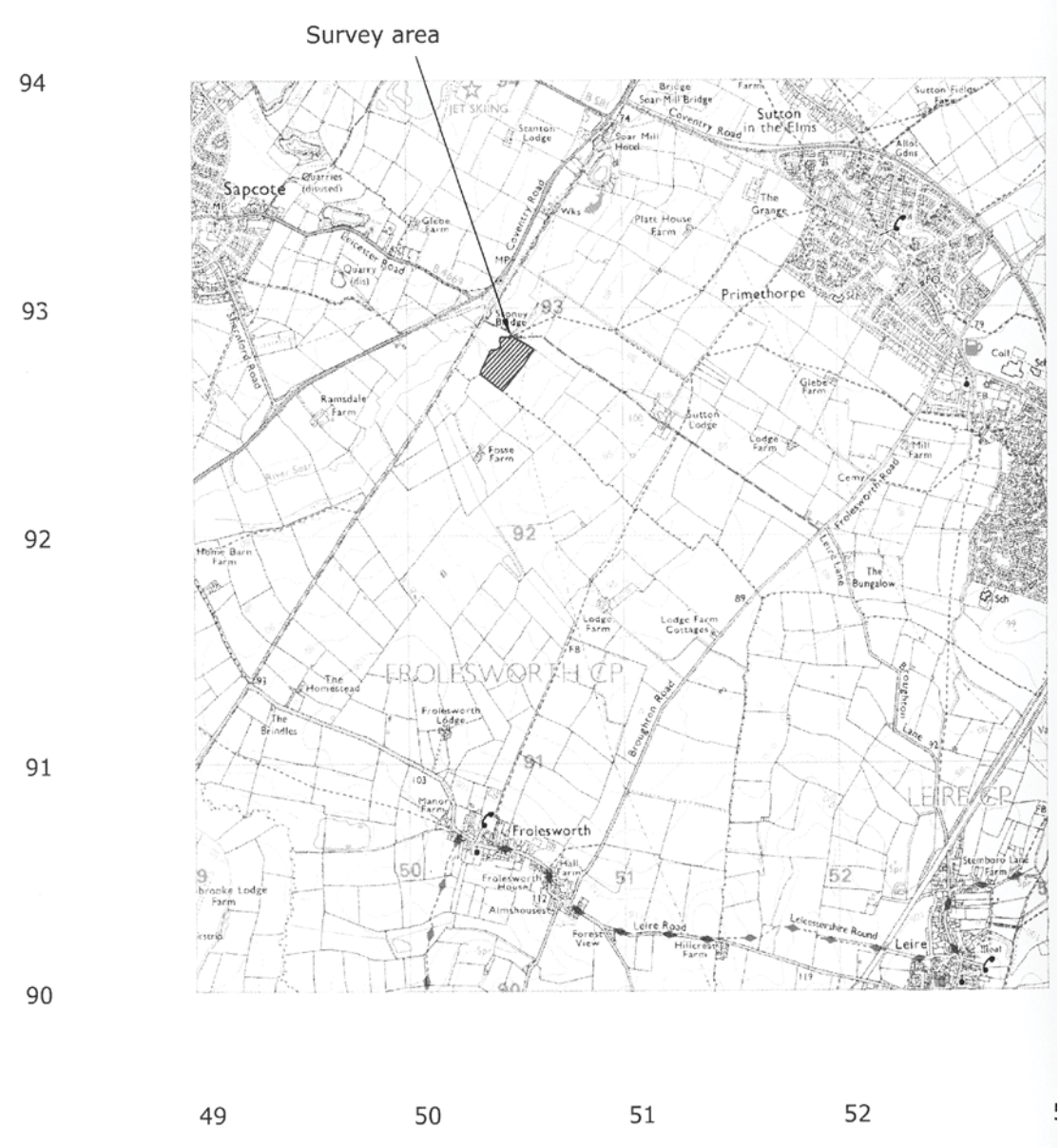

Fig 1 Location of proposed development

Fig 2 Suggested trench locations

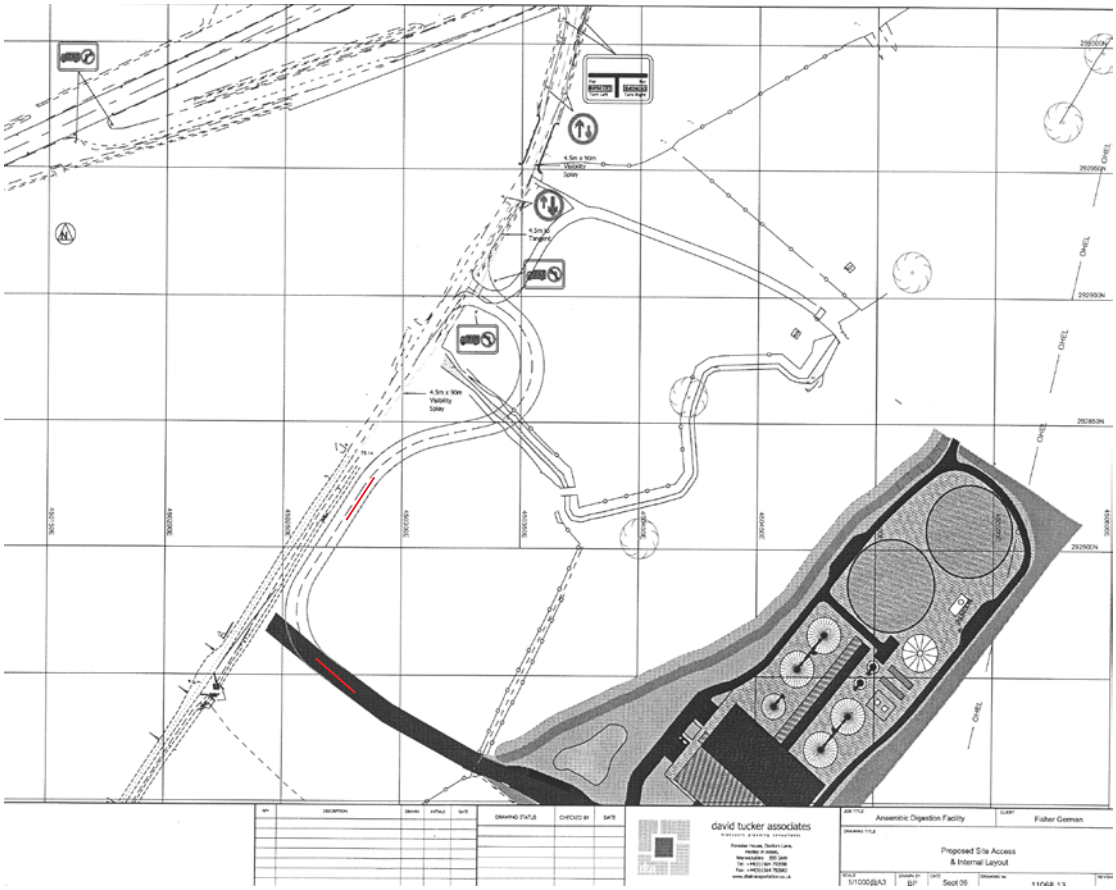

Fig 3 Suggested trench locations in relation to proposed access roads for the development (red).

APPENDIX 1

Draft Project Health and Safety Policy Statement

A risks assessment will be produced by on-site staff, which will be updated and amended during the course of the evaluation.

1. Nature of the work

1.1 Brief description of the work involved e.g.

The work will involve machine excavation by JCB 3C or equivalent during daylight hours to reveal underlying archaeological deposits. Overall depth is likely to be *c.* 0.5 m with possible features excavated to a depth of another 1m. Trenches will not be excavated to a depth exceeding 1.2m. Spoil will be stockpiled no less than 1.5 m from the edge of the excavation, the topsoil and subsoil being kept separate. Remaining works will involve the examination of the exposed surface with hand tools (shovels, trowels etc) and excavation of archaeological features. Deeper features will be fenced with lamp irons and hazard tape. Three staff will be used on the evaluation.

2 Risks Assessment

2.1 ***Working on an excavation site***.

Precautions. Trenches to not be excavated to a depth exceeding 1.2m. Spoil will be kept 1.5m away from the edge of the excavated area to prevent falls of loose debris. Loose spoil heaps will not be walked on. Protective footwear will be worn at all times. Hard hats will be worn

when working in deeper sections or with plant. First aid kit to be kept in site accommodation/vehicle. Vehicle and mobile phone to be kept on site in case of emergency.

2.2 ***Working with plant***.

Precautions. Archaeologists experienced in working with machines will supervise topsoil stripping at all times. Hard hats, protective footwear and hazard jackets will be worn at all times. Machine driver to be suitably qualified and insured. If services or wells are encountered machining will be halted until extent has been established by hand excavation or areas where it is safe to machine have been established.

2.3 ***Working within areas prone to waterlogging***.

If waterlogging occurs on site preventing work continuing it is proposed to excavate a sump, suitably fenced and clearly marked to enable the water to drain away. If this is insufficient a pump will be used. The sump will be covered when not in use and backfilled if no longer required. Protective clothing will be worn at all times and precautions taken to prevent contact with stagnant water which may carry Wiels disease or similar.

2.4 ***Working with chemicals.***

If chemicals are used to conserve or help lift archaeological material these will only be used by qualified personnel with protective clothing (i.e. a trained conservator) and will be removed from site immediately after use.

2.5 ***Other risks***

Precautions. If there is any suspicion of unforeseen hazards being encountered e.g. chemical contaminants, unexploded bombs, hazardous gases, work will cease immediately. The client and relevant public authorities will be informed immediately.

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