An Archaeological Evaluation of Land Adjacent to Holywell Park, Loughborough University, Loughborough, Leicestershire (NGR SK 512 179)

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Summary

University of Leicester Archaeological Services were commissioned by Loughborough University Estates Development Unit to undertake an archaeological evaluation of land adjacent to Holywell Park, Loughborough, where outline planning permission has been granted for the development of the area as playing fields. A geophysical survey identified a number of potentially archaeologically significant anomalies (Smalley 2007).

Thirteen evaluation trenches were excavated across the proposed development area. The two southernmost trenches contained a number of small undated pits while three charcoal clamps were recorded in other trenches, mostly to the north of the proposed development area, again undated. Otherwise, there was no evidence of earth-fast archaeology within the proposed development area.

The geophysical anomalies all appeared to have been caused by modern disturbance and intrusions. The archive for the geophysical survey and trial trenching will be held by Leicestershire County Council, under the accession number X.A3.2008

1. Introduction

University of Leicester Archaeological Services were commissioned by Loughborough University Estates Development Unit to undertake an archaeological evaluation in advance of the proposed development. Outline planning permission has been granted for the development of the area as playing fields (Planning Application Number 07/2278/2). A previous archaeological desk based assessment (ULAS Report Number 2006-026) which dealt with the University's land holdings in general, but not this site specifically, identified the westernmost extent of the campus as having some archaeological potential. The site is located to the east of Holywell Hall, a multi-period hall, presently a farmhouse (MLE637), which has long-standing associations with the Garendon estate. Until recent times, Holywell Hall and much of the surrounding area formed part of the vast estates of Garendon Abbey, the site of which is located approximately 1.5km to the north of the assessment area (MLE578). The Abbey was founded in 1133, when Robert le Bossu is reported to have granted 5 carucates and 3 virgates (about 550 arable acres) of land at Garendon to Cistercian monks from L'Aumone in France, for this purpose (Humphrey 1982, 17). By the time of the Dissolution of 1538, the Abbey had acquired extensive properties totalling some 10,000

acres across numerous counties, their assets listed in the Lansdown Cartulary including a coal mine, three stone quarries, four water mills.

The site has been subject to a geophysical survey (Smalley, 2007) which has identified a number of anomalies of possible archaeological origin. In view of this a programme of intrusive investigation through trial trenching was requested by Leicestershire County Council, as archaeological advisors to the planning authority, to confirm whether archaeological remains are present within the application area and, if necessary, formulate a mitigation strategy (Appendix 1).

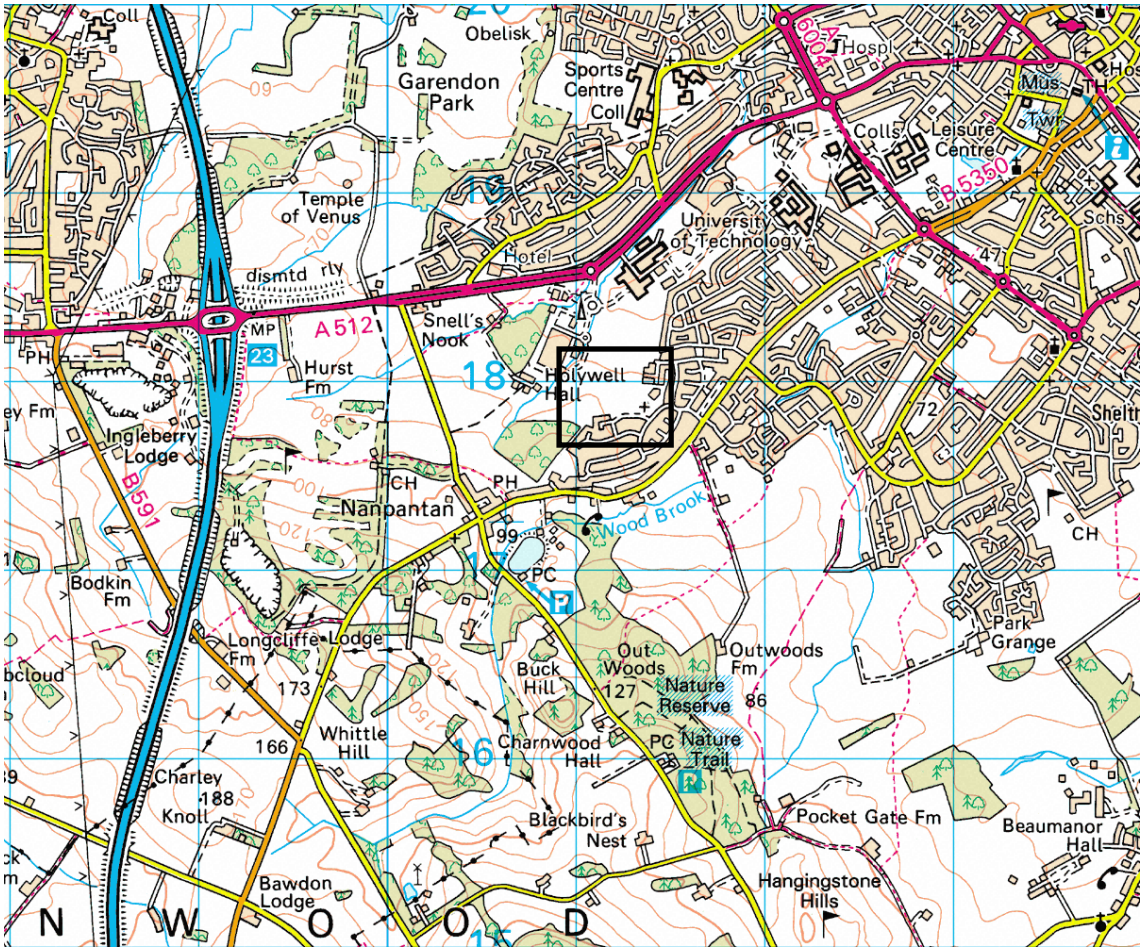

Figure 1. Site location Scale 1:50000

2. Aims and Methodology

The aim of the archaeological work was to ascertain whether any significant archaeological remains were present within the area to be developed. If identified a sufficient sample was to be excavated and recorded to establish their extent, date, quality, character, form and potential including environmental data. Further

archaeological recording would be undertaken, if required, in the light of the results of this programme.

The Planning Archaeologist of Historic and Natural Environment Team, Leicestershire County Council as advisor to Charnwood Borough Council following Planning Policy Guidelines 16 (PPG 16, Archaeology and Planning para. 30) has requested a *c.* 1% sample. Thirteen 30m long trenches, 1.9m wide were to be excavated by a back actor with a ditching bucket totalling *c.* 585m^2 (*Figure 4*). The evaluation took place between January 10th & 17th 2008. The evaluation followed the *Design Specification for archaeological evaluation* (08/575 Appendix 2) which addressed the requirements of the *Brief for Archaeological Evaluation of the 13 acre site, Loughborough University, Loughborough, Leicestershire* (LCC HNET 18.12.2007; Appendix 1).

3. Results

3.1 Trench 1

Trench 1 was the most southerly of the excavated trenches, located approximately 20 metres from the south-easternmost boundary, to sample an area showing few anomalies in the geophysical survey. The trench was aligned north north-east, south south-west and 30metres long and 1.9metres wide.

Approximately 250mm to 300mm of topsoil was removed revealing an horizon of weathered clay substratum, red at the southern end turning to grey to the north (down slope). A single small sub-angular pit/post hole [100] towards the southern end of the trench (*Figure 4*), approximately 400mm in diameter, was located. Excavation of this feature revealed a dark charcoal rich silty clay fill (101), with frequent fire cracked pebbles and very badly degraded cows tooth (not retained), and proved to be only 150mm deep. Unfortunately no dating evidence was recovered. A tentative prehistoric date could be suggested because of the abundance of fire cracked pebbles in this very small feature.

The trench was recorded and released for backfilling.

3.2 Trench 2

Trench 2 was located in the south-westernmost corner of the proposed development area, approximately 40metres from the boundary, to sample a large amorphous anomaly recorded by the geophysical survey.

A similar depth of topsoil as Trench 1 was excavated revealing a similar horizon of weathered clay substratum, although unlike Trench 1 there was a layer of subsoil present. A number of possible archaeological features were observed towards the western end of the trench (*Figure 4*).

Further hand cleaning of this part of the trench confirmed four distinct features, three semi circular pits, approximately 0.5m in diameter [201], 350mm in diameter [203], and 900m in diameter [207], and either an elongated pit or the butt end of a liner feature,

[204]. Both [201] and [203] were excavated to reveal shallow pits, approximately 150mm and 90mm deep respectively. Both fills consisted of dark silty clay but with no dating evidence. [204] was the largest of the features, approximately 180mm by 840mm, which on excavation, however, was revealed to be the shallowest, only 60mm deep. The fill was the same as that of the other features and again, no dating evidence was recovered.

Unfortunately heavy rain caused the trench to flood before [207] could be excavated.

There was no clear source for the anomaly recorded by the geophysical survey visible within the trench. During the machining, however, an unusually large amount of granite chippings were observed within the topsoil. Within other trenches it was observed that the more recent field drains were backfilled with these same chippings. It is likely, therefore, that the chippings were stockpiled here prior to use and the remnants ploughed in. It is possible that it was these chippings which caused the anomaly.

The trench was recorded and released for backfilling.

3.3 Trench 3

Trench 3 was excavated approximately 55metres to the north-east (down slope) of Trench 2, (*Figure 2*) aligned west north-west, east south-east, targeting an anomaly similar in appearance to that targeted by Trench 2. Between 200mm and 400mm of topsoil was excavated before weathered clay substratum was reached which, like that in trench 1, was grey in colour. Towards the centre of the trench the substratum was cut by a large modern intrusion:, this was excavated to a depth of *c*. 900mm without reaching its base. Due to the unstable nature of the material it was decided to cease excavation at this level. Weathered substratum was encountered towards the western end of the trench.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling. The geophysical anomaly was likely caused by the modern pit.

3.4 Trench 4

Trench 4 was excavated approximately 10 metres north of Trench 3 (*Figure 2*), aligned west north-west to east south-east, targeting a linear anomaly and a series of discreet anomalies recorded by the geophysical survey. Between 200mm and 400mm of topsoil was excavated revealing an horizon of weathered bedrock.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling. The geophysical anomaly was likely caused by a field drain.

3.5 Trench 5

Trench 5 was excavated towards the centre of the proposed development area, approximately 30metres north of Trench 4 (*Figure 2*), aligned east north-east to west south-west, targeting a series of indistinct anomalies. The trench also revealed what appeared to be a natural depression which crossed this part of the site. Between 200mm and 340mm of topsoil was removed and approximately 100m of subsoil. Towards the centre of the trench the natural depression contained a colluvial deposit *c*. 600m deep.

Towards the eastern end of the trench a large circular pit was observed against the south facing section cut into the substratum. The fill consisted of grey silty clay with a "halo" of charcoal; an examination of the section indicated that this feature was only sealed by the topsoil and was likely, therefore, to be comparatively recent in date. Unfortunately, heavy rain flooded the trench before this feature could be excavated. Nor was any obvious source for the geophysical anomalies observed.

The trench was recorded and released for backfilling.

3.6 Trench 6

Trench 6 was excavated towards the eastern edge of the proposed development area, approximately 30metres north of Trench 1 (*Figure 2*), aligned north north-east to south south-west, targeting an area with relatively few anomalies. Approximately 200mm to 350mm of topsoil was removed revealing weather bedrock and no discernable subsoil layer.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling.

3.7 Trench 7

Trench 7 was excavated approximately 10metres north of Trench 5, again near the centre of the proposed development area (*Figure 2*), aligned north-east to south-west targeting a linear anomaly identified by the geophysical survey. Approximately 200mm to 300mm of topsoil was removed revealing weather substratum, again with no discernable subsoil layer.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling. Nor was there any obvious source for the geophysical anomaly.

3.8 Trench 8

Trench 8 was excavated approximately 20metres east of Trench 7, towards the eastern edge of the proposed development area (*Figure 2*), aligned east north-east to west south-west, targeting a number of geophysical anomalies. Approximately 200mm to 300mm of topsoil was removed revealing weathered bedrock, and as with the nearby Trench 7, no discernable subsoil layer.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling. There was no obvious source for the geophysical anomalies.

3.9 Trench 9

Trench 9 was excavated approximately 30metres north of Trench 8 (*Figure 2*), the first of five trenches within the northern most part of the proposed development area, an area of relatively level ground at the base of the slope. Aligned north-west to south-east the trench was located within an area of few geophysical anomalies. Approximately 150mm to 300mm of topsoil was removed and further 100mm of subsoil before the weathered substratum was exposed.

Towards the southern end of the trench a substantial circular feature [001] was observed (*Figure 5*), identical in size and appearance to that seen in Trench 5. Excavation of [001] revealed a flat bottomed pit with steep, near vertical sides, approximately 1.9metres in diameter. The secondary fill (002) consisted of grey silty clay with frequent charcoal flecks, above the primary fill (003) which consisted almost exclusively of charcoal fragments. No dating evidence was recovered from [001].

In all likelihood, [001] is a charcoal clamp; until the industrial revolution this part of Leicestershire would have been heavily wooded, the growth in industry and population led to increased demands for fuel, this led to rapid deforestation. Charcoal clamps were temporary structures which after firing would have been abandoned, and all the high quality charcoal would have been removed leaving only the residue seen in the base of [001].

The trench was recorded and released for backfilling.

3.10 Trench 10

Trench 10 was excavated towards the far north-eastern corner of the proposed development area (*Figure 2*), approximately 60metres east of Trench 9, aligned north north-east, south south-west, targeting an area of relatively few geophysical anomalies. Approximately 220mm to 420mm of topsoil was removed and a further 200mm of subsoil in places before weathered bedrock was exposed.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling.

3.11 Trench 11

Trench 11 was excavated in the far north eastern corner of the proposed development area (*Figure 2*), approximately 37metres north east of Trench 10, aligned north north-east, south south-west, targeting a linear anomaly identified by geophysical survey. Approximately 230mm to 300mm of topsoil was removed and a further 100mm to 250mm of subsoil before weathered clay substratum was exposed.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling. Nor was there any obvious source for the geophysical anomalies. The EDM survey indicated that the trench, located using hand held GPS, unfortunately missed the linear anomaly.

3.12 Trench 12

Trench 12 was excavated near the northern edge of the proposed development area (*Figure 2*), approximately 18metres north of Trench 9 and 30metres south of the brook which forms the northern edge of the proposed development area. Aligned west north-west to east south-east, it targeted a linear anomaly identified by geophysical survey. Approximately 170mm to 250mm of topsoil was removed and a further 100mm to 200mm of subsoil before the weathered clay substratum was exposed.

The source of the geophysical anomaly was easy to identify; a substantial concrete feature was located at the western end of the trench, approximately 250mm below the current ground level. Using a probe it was possible to trace this concrete for some distance up slope as the geophysical survey indicates.

Further to the east within the trench a third charcoal clamp [303] was uncovered against the south-facing section. Again flooding prevented excavation of the feature, however, because of its location against the trench section it was possible to machine excavate the feature in order to record the very clear stratigraphy visible in the section. Excavation indicated that [303] was almost identical in appearance and size to [001] in Trench 9 and the unexcavated clamp in Trench 5. Examination of the exposed section (*Figure 7*) confirmed that the clamp was only sealed by topsoil, with only a small accumulation of subsoil/colluvium where the backfilled clamp had slumped. This suggests a relatively recent, post-medieval date.

The trench was recorded and released for backfilling.

3.13 Trench 13

The final trench excavated within the proposed development area was located towards the north-westernmost corner of the proposed development area (*Figure 2*), approximately 35metres west of Trench 12, aligned north-east to south-west targeting an area of relatively few geophysical anomalies. Because of its location, at the base of the slope adjacent to the brook it was anticipated that a considerable depth of colluvium of even alluvium would be encountered. Approximately 240mm to 360mm of topsoil was removed and between 200mm 300mm of colluvium was present, (less than predicted) before weathered substratum was exposed. Patches of gleyed deposits within the base of the trench indicates periods of prolonged water logging.

There was nothing of archaeological significance within the trench and it was recorded and released for backfilling.

4. Conclusion

The archaeological evaluation did uncover a few features, possibly of archaeological significance, most notably within trenches 1 and 2 at the southern edge of the proposed development area, also its highest point. Unfortunately, this was limited to a number of small undated pits; a very tentative prehistoric date could be suggested on the basis of the density of fire cracked pebbles recovered from one of them during excavation.

As well as the pits in trenches 1 and 2 a number of charcoal burning clamps were uncovered. Once again, however, these features remained undated, although given the history of the area it is likely that these are post-medieval in date and relate to the local deforestation which occurred during the industrial revolution. It is likely that other clamps are located within the proposed development area; it is also possible that some kind of temporary settlement activity associated with charcoal burning may also be within the area.

Unfortunately, most of the anomalies recorded by the geophysical survey could not be traced during trial trenching. Those which were located were revealed to be caused by modern intrusions and disturbance and not of any archaeological significance. The geophysical survey did, however, record a number of isolated anomalies approximately the same diameter as the excavated charcoal clamps, it is possible, therefore, that these anomalies represent other clamps within the proposed development area.

Until the industrial revolution, therefore, the area appears to have remained largely forested and would have remained largely unpopulated, with the possible exception of temporary settlements in smaller clearings perhaps linked to charcoal burning.

5. References

Clarke, S. 2006. *An Archaeological Desk-based Assessment Loughborough University Land holdings D & F, New Ashby Road, Loughborough, Leicestershire (SK 507 184*). ULAS Report 2006-026.

Hoskins, W.G.1955. *The Making of the English Landscape.* London: Hodder and Stoughton

Humphrey, W. 1982 *The Cistercian Abbey of St. Mary, Garendon*. East Midland Studies Unit, Loughborough University.

Mackie D. and Sharman, J. 1991 Holywell Hall, Loughborough: An Archaeological Evaluation' *Transactions of the Leicestershire Archaeological and Historical Society* **65,** 24 – 33.

Smalley, R., 2007 *Geophyscial Survey Report Loughborough University* Stratascan October 2007 J2397

http://www.fweb.org.uk/Dean/deanhist/charcoal.htm.

6. Archive & Publication

The site archive consists of

13 Trench recording sheets,
3 A2 permatrace sheets containing plans and sections
1 A3 permatrace sheet containing trench identification
38 Black and white negatives with contact sheets
1 CD of 38 Digital Colour Images
1 A4 Colour Contact Sheet
A4 photo index sheet.
Unbound Copy of This Report
The archive will be held at Leicestershire County Council, under the accession number X.A3.2008

A version of the summary (above) will be published in *Transactions of Leicestershire Archaeological and Historical Society* in due course.

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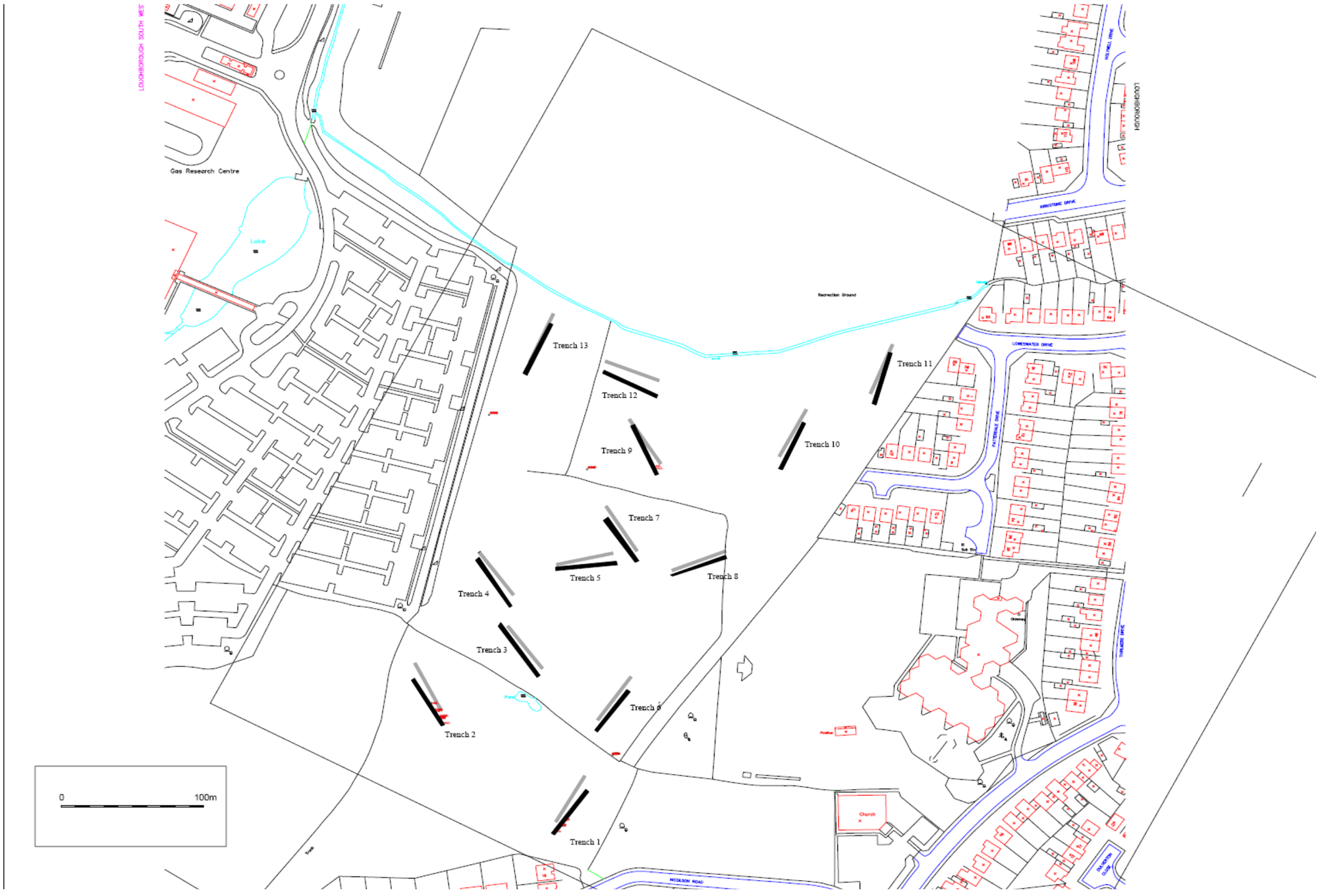

Figure 2 Trench Location Plan (Grey Proposed, Black Actual).

Figure 3 Geophysical and Proposed Trench Locations.

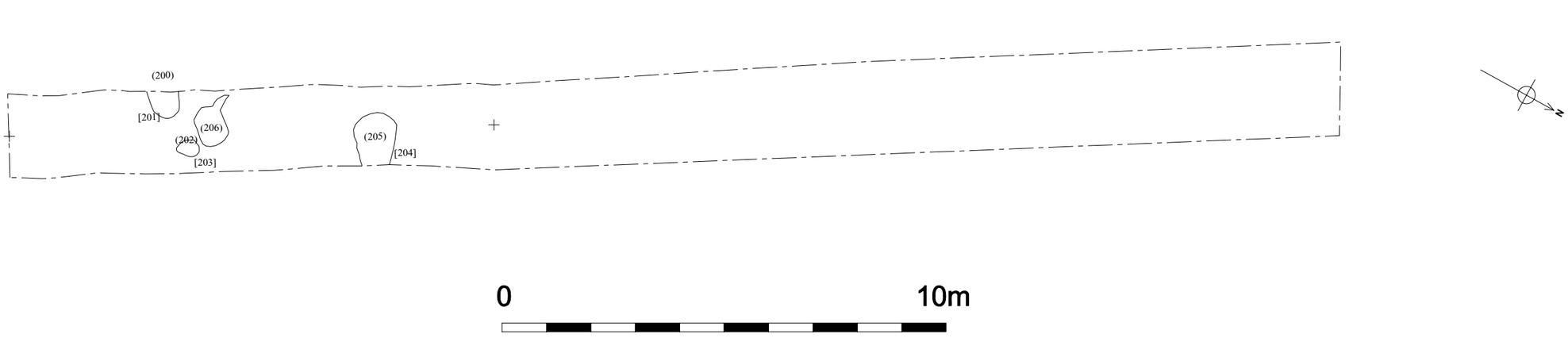

Figure 4 Trench Plans, Trench 1 (Top), Trench 2 (Below).

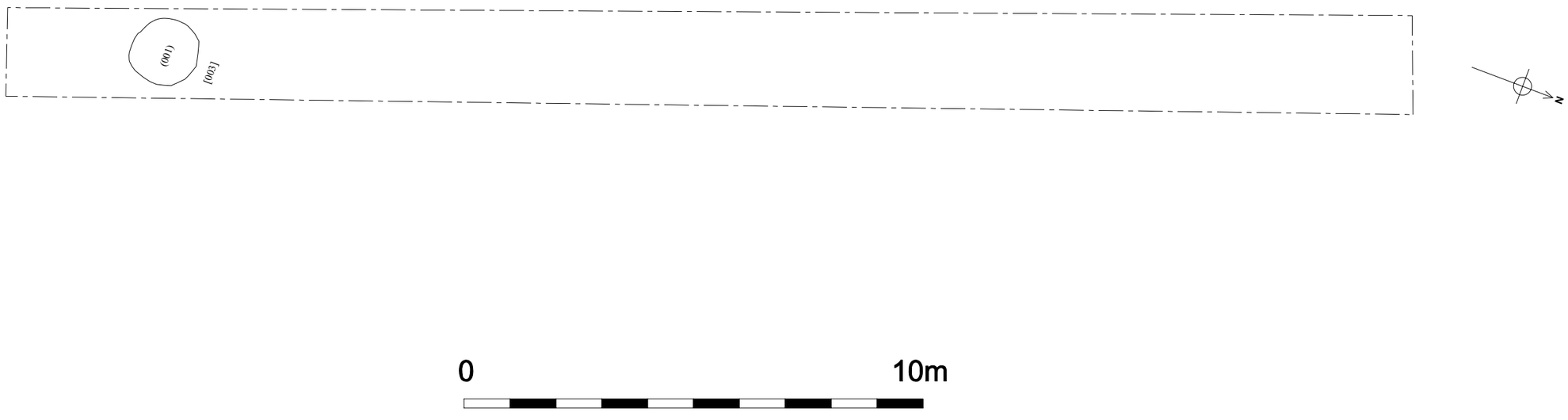

Figure 5 Trench 9 Plan.

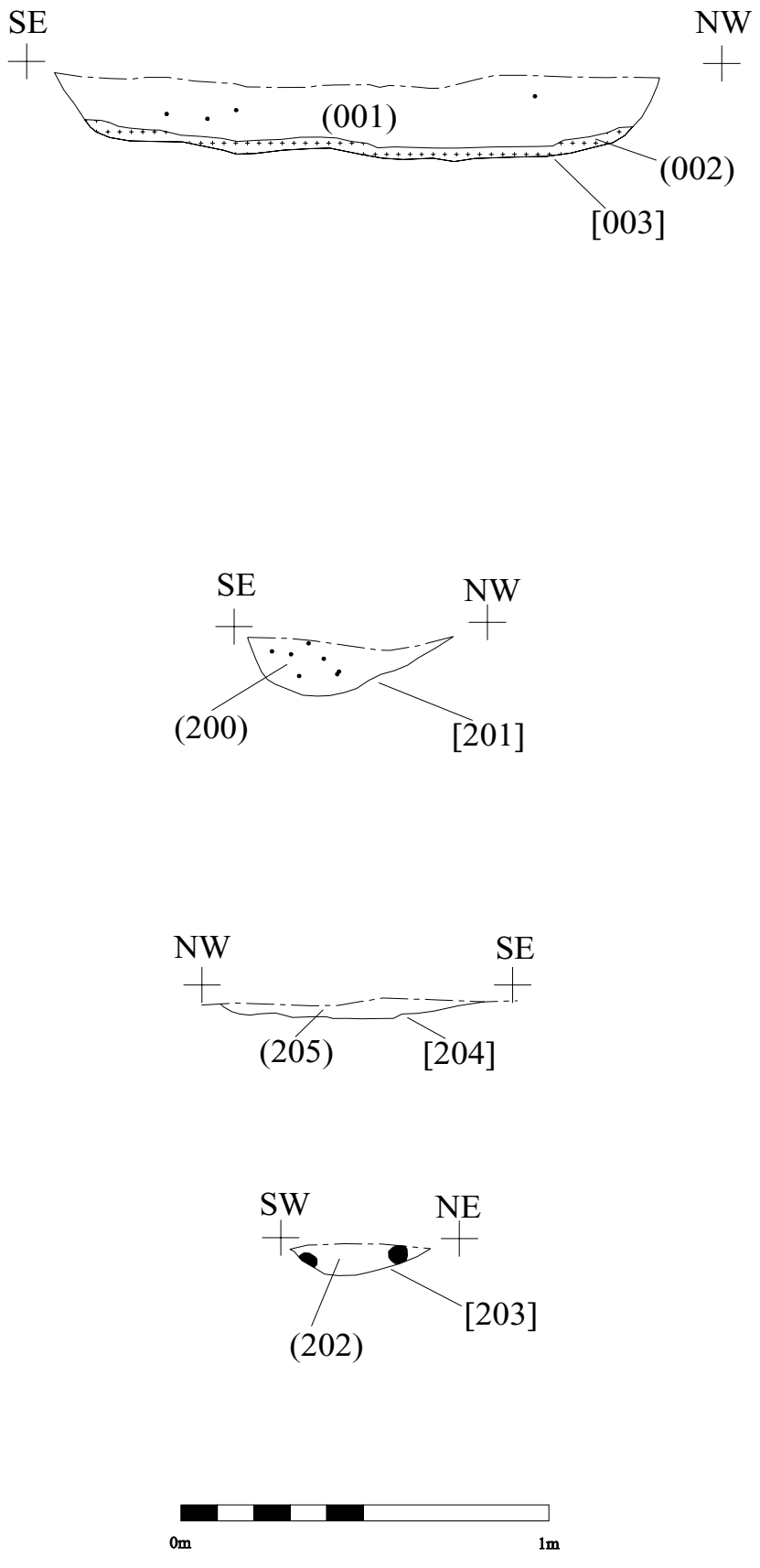

Figure 6 Sections.

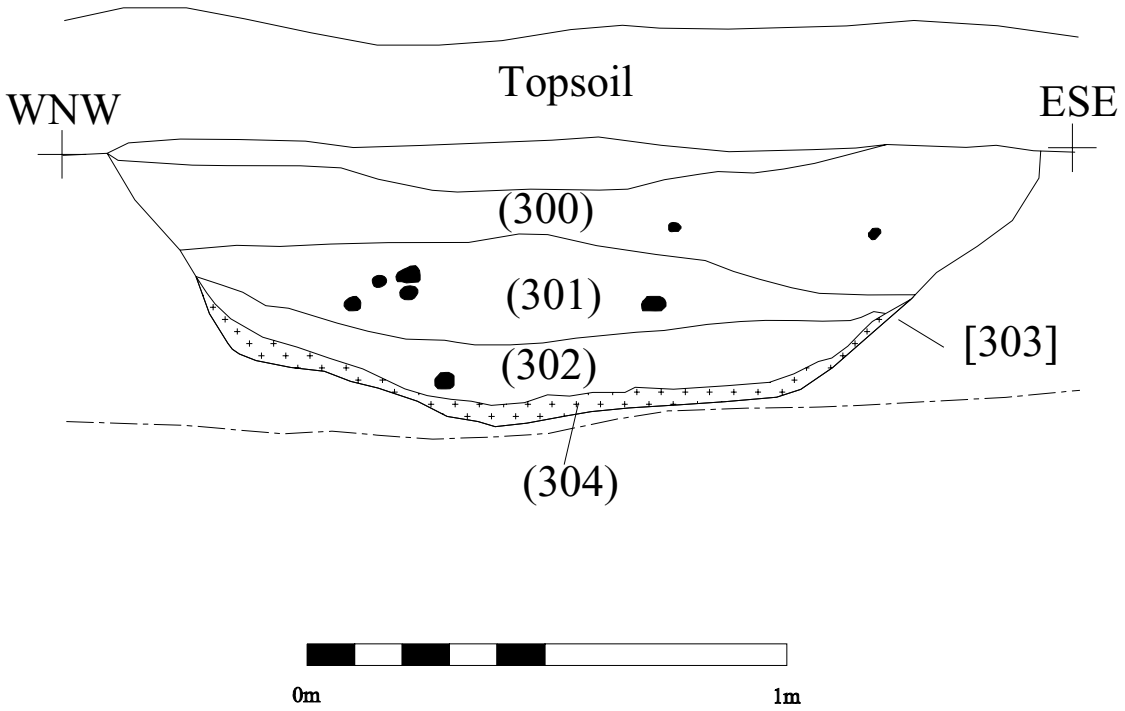

Figure 7 Section [303]

Figure 8 Section [303]

Appendix 1 Brief for Archaeological work

BRIEF FOR ARCHAEOLOGICAL EVALUATION OF THE 13 ACRE SITE, LOUGHBOROUGH UNIVERSITY, LOUGHBOROUGH, LEICESTERSHIRE

1. Summary of Brief

1.1 The development site has been identified as an area of significant archaeological potential based upon assessment of archaeological data held by the Leicestershire & Rutland Historic Environment Record (HER), *and the conclusions of a geophysical survey commissioned by the developer's archaeological contractor (ULAS) and undertaken by* Stratscan.

1.2 In consequence the Senior Planning Archaeologist (SPA), Historic & Natural Environment Team (HNET), Leicestershire County Council, has recommended the need for a further phase of archaeological investigation comprising a programme of evaluation trenching. The investigation is required to provide an adequate sample of the development area and assess the likely archaeological impact of the development proposals. The fieldwork will include provision for palaeoenvironmental sampling and the application of appropriate archaeological scientific techniques (e.g. radio carbon and archaeolmagnetic dating, etc.).

1.3 Following completion of the fieldwork, the current programme of archaeological work will include provision for appropriate analysis, publication and archiving. The results of the investigation, where positive, are likely to lead to further archaeological requirements including, as appropriate, preservation of deposits in situ, targeted archaeological excavation and/or a programme of monitoring and supervision of groundworks, etc.

2. Appendices for reference as part of this Brief

To be supplied by the developer:

I. General location plan.

II. The site location.

3. Site location and description

3.1 The application site comprises some 5.75ha of land, centred on NGR SK512179. Access can be gained off Kirkstone Drive and Loweswater Drive, on the western edge of Loughborough, Leicestershire. The site rises gently to the south, with ground level heights between 57m OD to 68m aOD. The eastern site boundary is defined by residential housing and the Holywell County Primary School, the western boundary by car parking for the adjacent officer development.

4. Geology

4.1 The soils are described as drift of the Whimple 3 Association, characterised as reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Some similar clayey soils on brows. Slowly permeable seasonally waterlogged fine loamy and fine silty over clayey soils on lower slopes. The geology comprises Triassic interbedded siltstone and mudstone to the north and sandstone to the south, both part of the Steinton Fomation and within the Mercian Mudstone Group (Geological Survey of England & Wales, Loughborough, Sheet 141).

5. Site Constraints

5.1 No constraints have been established by, or notified to HNET, Leicestershire County Council. Appropriate liaison and on site investigation should form part of any project specification, to ensure thorough understanding of any issues relevant to the completion of the archaeological investigation.

6. Historical and Archaeological Background

6.1 An appraisal of the application site has been undertaken by HNET, which indicates the site has an undefined archaeological potential.

6.2 The landscapes, villages and urban areas of Leicestershire and Rutland contain a unique and irreplaceable archaeological, architectural and historic resource. The current scheme may lead to truncation, loss or exposure of archaeological remains and as such a geophysical survey of the development area should be undertaken to assess the impact of the proposed scheme and any necessary subsequent archaeological mitigation strategy (e.g. trial trenching, excavation and/or design modification).

6.3 The Leicestershire and Rutland Historic Environment Record (HER) shows that the application site lies in an area of archaeological interest. A Desk-based Assessment was carried out for the adjacent university area in 2006 (ULAS Report No. 2006-104). The site is large, with little apparent disturbance. It is north facing with a stream at the base of the slope. Consequently, there is a likelihood that buried archaeological remains will be affected by the development.

7. Previous work and archaeological survey

7.1 The site has recently been the subject of a geophysical survey which identified a number of anomalies of possible archaeological origin as well as likely services, and other probable non-archaeological features. Positive area anomalies indicate the presence of cut features such as ditches whereas negative anomalies indicate the presence of former earthworks or banks. Discrete positive anaomalies evident within the survey area have been identified as possible pits.

8. Planning Background and Requirement for Work

8.1 In response to the applicant's submission to Charnwood Borough Council of a planning application P/07/2278/2 for development of agricultural land to playing fields and associated fencing, etc., the SPA advised that planning permission should be deferred until suitable archaeological field evaluation has been undertaken to assess the location, extent, significance and character of any buried archaeological remains.

8.2 The requirement for archaeological work is in accordance with PPG16 (Archaeology & Planning). The purpose of the work is to gather sufficient evidence to establish, supplement, improve and make available information about the archaeological deposits in relation to development proposals. A review of the results will be undertaken and an appropriate mitigation strategy, supported by a subsequent brief, agreed where necessary.

8.3 Post-excavation assessment and publication of the results of this and any future fieldwork is required, together with the deposition of project archive.

9. Methodology

An accession number must be drawn prior to the commencement of this project. The accession number covers all components of the project, as defined by this brief.

9.1 An appropriate sample of the site will be undertaken targeting the recorded geophysical anomalies and testing the remaining blank/negative areas (at c. 0.5% sample) to confirm the results. This should provide an adequate sample of the archaeological features representing in total an approximate 1% sample by area of the site (c. 575m^2) should be evaluated in accordance with advice given for 'urban' excavation in "Guidelines and Procedures for Archaeological work Leicestershire and Rutland" (Leicestershire County Council, 1997).

9.2 Some flexibility in the actual size, number, orientation and location of some evaluation trenches may be required if made necessary by the location of service pipes, cables and earlier foundations.

9.3 Following the removal of any hard standing, etc., the trenches should be excavated by a machine using a toothless grading bucket and under the constant supervision of a professional archaeologist. Machine access to the site may be restricted and access should be discussed with the prospective developer.

9.4 The trenches should be excavated to the top of the natural or to the top of archaeological deposits, whichever is encountered first. Wherever archaeological deposits are encountered the trenches should be cleared by hand and the deposits planned and recorded to an acceptable standard (see 'Guidelines and Procedures for Archaeological Work in Leicestershire and Rutland', copies available on request). Excavation of archaeological deposits should be limited to resolving questions relating to their date, nature, extent and condition. If burials are encountered during the fieldwork these should not be excavated and recording should be limited to obvious detail such as position of the grave cut, alignment, burial position and stratigraphic relationships.

10. Site Access: Health and Safety

10.1 The archaeological Contractor will be responsible for ensuring that all works are conducted in accordance with a defined Health and Safety Policy. Contractors must observe all current safe working practices, whether required by their own policy or those of the principal development contractor (see SCAUM *Manual, Health & Safety in Field Archaeology, 1997*).

10.2 Before commencing work the Contractor **must** carry out a Risk Assessment and liase with the site owner, archaeological Consultants and the Senior Planning Archaeologist in ensuring that all potential risks are minimised. A copy of this must be given to the Senior Planning Archaeologist **before** commencement of Site works.

10.3 The prospective developer must provide all information reasonably obtainable on contamination and the location of live services before commencement of Site works.

10.4 No personnel are to work in deep unsupported excavations. Trench sides will be constantly assessed for stability and will have to be stepped, battered back or shored when there is risk of collapse.

10.5 All archaeological trenches will be backfilled upon completion of the archaeological project, subject to any appropriate monitoring requirements (see 18.0 below). This is to be the responsibility of the archaeological Contractor, unless the prospective developer has given written instruction to the contrary.

11. Preservation in Situ

11.1 All excavation by machine and hand must be undertaken with a view to avoid damaging archaeological deposits or features which appear worthy of preservation in situ or more detailed investigation than for the purposes of evaluation.

11.2 The discovery of substantial structural remains requiring preservation in situ will entail detailed discussion between all relevant parties. The costs associated with excavating, conserving, and curation of other unforeseen objects or structures of national importance lie outside the scope of this evaluation.

11.3 Where structures, features or finds appear to merit preservation in situ, they must be adequately protected from deterioration.

12. Archaeological Sciences and Environmental Sampling

12.1 The minimum requirement for Archaeological Science and Environmental sampling during evaluation is that the archaeological contractor should commission programmes of investigation which are adequate to provide a sound basis for developing the Specification/Project Design for any subsequent excavation, or for other forms of mitigation strategy, in particular *in situ* preservation. The results of these investigations will be presented in the Evaluation Report.

12.2 General recommendation for minimum standards for archaeological science work have been produced by English Heritage. The document "Archaeological Science at PPG16 interventions: Best Practice Guidance for Curators and Commissioning Archaeologists" is available through the English Heritage

website (http://www.english-heritage.org.uk/server/show/nav.001002003009003). Subject specific guidelines produced by English Heritage are also available, and these provide recommendations for best practice for a range of archaeological science topics, including Archaeometallurgy (2001), Environmental Archaeology (2002), Dendrochronology (2004), Geoarchaeology (2004), Human Remains (2005), and X-radiography of archaeological metalwork (2006). All of these can be downloaded from the EH Guidance section of the HELM website, (www.helm.org.uk). ,

12.3 Advice on archaeological science can also be acquired from the English Heritage Regional Archaeological Science Advisor, Jim Williams, contact details provided at end of document.

12.4 All such investigations during evaluation should be undertaken in a manner broadly consistent with the English Heritage document **The Management of Archaeological Projects** (English Heritage 1991).

12.5 All specialists (both those employed in-house by the contracting field unit or those sub-contracted) should be named in project documents. Agreement of specialists must always be obtained before their names are listed. Their competence to undertake proposed investigations, and the availability of adequate laboratory facilities and reference collections should be demonstrated. There should be agreement in writing on time-tables and deadlines for all stages of work.

13. Treatment of Finds

13.1 All finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (or subsequent editions) and the recipient museum's guidelines.

13.2 Suspected human remains shall be investigated so as to achieve the objectives of the archaeological evaluation, i.e. to establish presence, character, state of preservation and significance. The lifting of human skeletal remains should, however, be avoided except where this is required to avoid potential loss to the archaeological resource. Where remains are lifted this should be undertaken in accordance with the appropriate legislation, and specifically in line with current guidance issued by the Ministry of Justice (MoJ), the Institute of Field Archaeologists (IFA), Association of Local Government Archaeological Officers (ALGAO), and English Heritage. At sites known in advance to be cemeteries, provision should be made for site inspection by a recognised specialist. Excavators must be aware of, and comply with, the relevant legislation and any MoJ and local environmental health concerns. Further guidance is provided in *Church Archaeology: its care and management* (Council for the Care of Churches 1999) and in English Heritage (2002 and 2002a), *Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England* (The Church of England & English Heritage, 2005). Recommendations for reporting the results of skeletal remains are covered in the following English Heritage document, *Human Bones from Archaeological Sites- Guidelines for producing assessment documents and analytical reports.*

13.3 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand, in accordance with the appropriate specialist advice. Separate samples (*c*. 10ml) should be collected for micro-slags (hammer-scale and spherical droplets). Reference should be made to the English Heritage guidelines on *Archaeometallurgy* (English Heritage 2001).

13.4 Subject to time constraints, samples should be taken for scientific dating (principally radiocarbon dating at the evaluation stage) in specific circumstances. This could apply where dating by artefacts is insecure or absent, ***and*** where dating is necessary for development of the Project Design/Specification for subsequent mitigation strategies.

13.5 Consideration should be given to the appropriateness of geoarchaeological assessment of buried soils and sediment sequences exposed during the evaluation. They should be inspected and recorded on site by a recognised geoarchaeologist, since field inspection may provide sufficient data for understanding site formation processes. Procedures and techniques presented in the English Heritage document Geoarchaeology should be applied (English Heritage 2004, *Geoarchaeology. Using earth sciences to*

understand the archaeological record). Samples for laboratory assessment should be collected where appropriate, following discussion with the Local Authority.

13.6 Deposits should be sampled for retrieval and assessment of the preservation conditions and potential for analysis of biological remains (English Heritage 2002, *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post-excavation*). The sampling strategy should include a reasoned justification for selection of deposits for sampling, and should be developed in collaboration with a recognised bioarchaeologist. Flotation samples and samples taken for coarse-mesh sieving from dry deposits should be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies if necessary, but also because processing a backlog of samples at a later stage causes delays. Sampling strategies for wooden structures should follow the methodologies presented in English Heritage's Waterlogged Wood (Brunning 1996, *Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood*).).

13.7 *All* finds which may constitute 'treasure' under the Treasure Act, 1996 must be removed to a safe place and reported to the local Coroner. Where removal can not take place on the same working day as discovery, suitable security will be taken to protect the finds from theft.

13.8 Unless otherwise agreed with the local authorities archaeological advisor, all identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is recommended by the recipient museum's archive curator.

14. Post-excavation Work

14.1 According to standard procedure, excavation will be followed by a period of post-excavation processing. This should involve the cataloguing and analysis of any finds and samples, utilising the appropriate specialist advice, and the preparation of the archive for the site report and deposition.

14.2 Artefacts, biological samples and soils should be assessed for evidence of site and deposit formation processes and taphonomy, and especially for evidence of recent changes that may have been caused by alterations in the site environment. Assessment should include x-radiography of all iron objects, (after initial screening to exclude obviously recent debris), and most non-ferrous artefacts (including all coins). Further advice and minimum requirements for x-radiography are given in recent guidance from English Heritage (English Heritage 2006 *Guidelines on the x-radiography of archaeological metalwork*). . Where necessary, active stabilisation or consolidation will be carried out, to ensure long-term survival of the material, but with due consideration to possible future investigations. Once assessed, all material should be packed and stored in optimum conditions, as described in **First Aid for Finds**. Waterlogged organic materials should be dealt with following the guidelines.

14.3 Assessment of any technological residues should be undertaken.

14.4 Samples for dating should be submitted to promptly, and prior agreement should be made with the laboratory on turn-around time and report production, so as to ensure that results are available to aid development of specifications for subsequent mitigation strategies.

14.5 Processing of all soil samples collected for biological assessment, or sub-samples of them, should be completed. The preservation state, density and significance of material retrieved should be assessed by recognised specialists. Special consideration should be given to any evidence for recent changes in preservation conditions that may have been caused by alterations in the site environment. Unprocessed sub-samples should be stored in conditions specified by the appropriate specialists.

14.6 Samples collected for geoarchaeological assessment should be processed as deemed necessary by a recognised specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment is to be undertaken. Where preservation *in situ* is a viable option, consideration should be given to the possible effects of compression on the physical integrity of the site and to any hydrological impacts of development.

14.7 Animal bone assemblages, or sub-samples of them, should be assessed by a recognised specialist.

14.8 Assessment of human remains will have been based partly on *in situ* observation, but where skeletal remains have been lifted assessment should be undertaken by a recognised specialist.

15. Reports

15.1 A full written report combining all stages of the evaluation should be prepared. At least two copies shall be sent to the Historic & Natural Environment Team, Community Services, Leicestershire County Council, and one or more copies to the relevant local authority Planning Officer and/or Conservation Officer. If this report is to form part of a planning application, it is in the developer's interest to ensure this report is prepared to an adequate standard (see 'Guidelines and Procedures for Archaeological Work in Leicestershire and Rutland') in order that a judgement of the archaeological value of the site can be made as quickly as possible.

15.2 The report/s ought to:

i) Include
a) All trench location plans tied into the Ordnance Survey data
b) Drawing and plans
c) A summary of artefacts by trench together with their interpretation
d) Any specialist reports
e) A concise non-technical summary of the project results
f) A full, quantified, site archive inventory to include both the documentary and finds archives.

ii) Assess
a) The archaeological significance of the development site and any archaeological deposits encountered during evaluation
b) The evidence in its setting, regional context and also aim to highlight any research priorities where applicable
c) The results from any archaeological science investigations

15.3 Wherever appropriate, outline the options for achieving the preferred option of preservation in situ of significant archaeological deposits.

15.4 Reports should include sufficient detail to permit assessment of potential for analysis. They should include tabulations of data in relation to site phasing and contexts, and include non-technical summaries. The objective presentation of data should be clearly separated from interpretation. Recommendations for further investigations, (both on samples already collected, and at future excavations) should be identified and separated from the results and interpretation.

15.5 Understanding the current state of preservation of an archaeological site is necessary in any attempt to ensure its future preservation *in situ* or adequate recording during excavation. It is advised that those involved in evaluations and excavations should take all necessary steps to ensure that sufficient information is collected to provide a firm basis for informed decisions. Techniques for assessing the state of preservation will vary, depending on the type of site and its perceived importance. A cost-effective method of assessing the preservation of buried archaeological remains is to make use of information that should be included within specialist assessment reports. For example:

- are pollen grains well preserved, or is there a high proportion of indeterminate grains and those of durable taxa?;
- are plant macrofossils preserved by waterlogging, mineral-replacement or only in a charred form? If present, do waterlogged macrofossils shows signs of degradation?

The artefact conservation assessment should identify the degree of preservation of each material class recovered, and identify whether there is evidence contained in, for example, the nature of corrosion products on metalwork to suggest that the burial environment is changing, or has changed recently. A clear and concise synthesis of such data in the Evaluation Report, combined with assessment of site hydrology, will help to inform future site-specific management, particularly with respect to vulnerable materials that might be at risk from proposed re-development schemes.

15.6 The final report/s will be deposited with the Leicestershire and Rutland HER no later than six months after completion of the project. This will be a paper copy of the report including its relevant accompanying plans.

15.7 Results of the project, even if negative, will be submitted for publication in the appropriate academic journals. Contractors are to provide a summary of findings to the 'Transactions of the Leicestershire Historical and Archaeological Society' (c/o Richard Buckley, School of Archaeological Studies, University of Leicester, University Road, Leicester, LE1 7RH).

15.8 A copy of the final report/s will be deposited in the National Monuments Record, English Heritage, Swindon. Where archaeological scientific investigation has formed an element of the project a copy of the report should be sent to: Dr J Williams, East Midlands English Heritage Regional Advisor for Archaeological Science.

16. Archive

16.1 The archive consists of all written records and materials recovered, drawn and photographic records. It will be quantified, ordered, indexed and internally consistent. It should also contain Site matrix, site summary and brief written observations on the artefactual and environmental data.

16.2 An accession number must be drawn prior to the commencement of archaeological works.

16.3 Archive will be prepared in line with UKIC Guidelines for the preparation of excavation archives for long term storage (1990) and "The Transfer of Archaeological Archives to Leicestershire Museums, Arts and Records Service" (LMARS 2001).

16.4 Archive Deposition

16.4.1 The integrity of the site archive should be maintained. All find and records should be properly curated by a single organisation, and be available for public consultation.

16.4.2 Arrangements for deposition of the full site archive will be made with Leicestershire County Council Museums Service. The archive will be presented to the Assistant Keeper (Archives) within 6 months of completion of the fieldwork, unless alternative arrangements have been agreed in writing with the Senior Planning Archaeologist and archive curator.

16.5 Copyright

16.5.1 It is required that the Leicestershire & Rutland HER and Leicestershire Museums Service be granted full rights to utilise the Documentary Archive under copyright. The first owner of copyright is the project archaeologist who created the archive, under the Copyright, Designs and Patents Act 1988 (SMA 1995, Appendix 2; IFA 1994a, c, Appendix 6; 1994b, 1996, Appendix 5; 1999). LCCEHS prefers to obtain an assignment of copyright in the archive from the copyright owner, but is prepared to acquire a licence allowing it to use the archive (MGC 1992, 2.11; SMA 1995). The project archaeologist should decide whether assignment or licence is to be granted, and in the latter case agree the details of such a licence with LCCEHS at the time of notification of intention to deposit the archive, if not earlier, so that the correct forms are available at the time of deposition.

17. Requirements (including responsibilities of prospective developer and Archaeological Contractor)

17.1 Appointment of Archaeological Contractors

17.1.1 The professional archaeological Contractors invited to tender for the work must be able to demonstrate within their Project Design that they can provide staffing and expertise with the appropriate experience in dealing with technology of the type and nature required in this Brief.

17.1.2 Contractors will operate in line with professional guidelines and standards as stated in the Institute of Field Archaeologists (IFA):

- Standard and Guidance for Archaeological Field Evaluations (1994, revised 1999),
- IFA Code of Conduct (1985, as revised 1997) and,
- IFA By-Law Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology (IFA, 1990 as revised, 1998).

17.2 Pre-tender site visit

The Contractor must visit the site before completing any Project Design, as there may be implications for accurately costing the project. This visit must be noted, along with any other relevant site details, within the Project Design.

17.3 Project Design

17.3.1 The Project Design will cater for full post-excavation analysis, reporting and deposition of the Site findings.

17.3.2 The Project Design must:

a) be supported by a research design, which sets out the site-specific objectives of the archaeological works,

b) detail the proposed works as precisely as is reasonably possible, and where appropriate, indicate clearly on plan their location and extent,

c) include details, including name, qualifications and experience of the Site director and all other key project personnel, including any specialist staff and sub-contractors, will be included in the Project Design. The ratio of on-site voluntary assistance must not exceed a ratio of more than 1:2 employed experienced staff,

d) detail archive deposition, publication and presentation,

e) provide a timetable for proposed works,

17.4 Checking of Project Designs

17.4.1 It is particularly important that all Project Designs, or those which the prospective developer wishes to consider, are forwarded to the Senior Planning Archaeologist for approval prior to the appointment of a Contractor.

17.4.2 Any changes the Senior Planning Archaeologist recommends to a preferred Project Design/s might have financial implications for the costing of the archaeological Contractor, changes to the Project Design will be discussed and agreed in writing by the Senior Planning Archaeologist and the archaeological Contractor.

17.5 Agreement

There must be a written archaeological agreement that satisfactorily implements the approved format and provides sufficient financial support for all aspects of the work including fieldwork, finds processing, conservation, specialist analysis, archiving, cataloguing, report work and long-term storage curation. The archaeological Consultant/Contractor must confirm in writing the Senior Planning Archaeologist that the prospective developer has signed such an agreement before the commencement of Site works.

18. Monitoring

18.1 The work undertaken by the archaeological Contractor, will be monitored under the auspices of the Leicestershire Senior Planning Archaeologist, or his representative, who is responsible for monitoring all archaeological work in Leicestershire and Rutland on behalf of the Local Planning Authority. Monitoring includes reviewing site work, the progress of excavation reports, archive preparation and final deposition.

18.2 Before the commencement of the project the Contractor must inform the Senior Planning Archaeologist, in writing, of the timetable of proposed works and ensure that the Senior Planning Archaeologist must be kept regularly informed about developments during Site and subsequent post-excavation work.

18.3 The Senior Planning Archaeologist will be given at least one weeks written notice of commencement of archaeological work.

19. Alterations to this Brief

19.1 This Brief is valid for three months (from the date below). If not tendered within this period the prospective developer will seek confirmation from the Senior Planning Archaeologist of its continued validity to the existing Site conditions. In addition the following apply:

19.2 Prior to the formal appointment of an archaeological Contractor, the Senior Planning Archaeologist reserves the right to alter this Brief if additonal information comes to light that may have a bearing on the scope and methods of work currently required. (e.g. Site construction constraints, foundation details etc).

19.3 After formal appointment, any alterations recommended by the Senior Planning Archaeologist which may affect the archaeological Contractor's agreed Project Design (whether this be before commencement, or during the project), will be made in consultation with the archaeological Contractor and submitted to the Local Planning Authority. (This does not relate to the formal recommendations for further investigation (e.g. open area excavation) as a result of the findings of the project, for which the Senior Planning Archaeologist is responsible for advising staff on behalf of the Local Planning Authority).

20. Key Definitions

Senior Planning Archaeologist

Responsible for providing an archaeological curatorial planning service to Leicestershire districts. Advises on the nature of the work required and monitors projects from implementation to completion.

Archive Curator:
Responsible for the long-term curation of the archive in the recipient Museum.

Prospective Developer:
Person/group/developer commissioning the archaeological work.

Contractor:
Archaeological Contractor tendering to carry out the archaeological work and as appointed by the prospective developer.

Project Design:
Written document detailing the proposed work and as provided by a Contractor in line with the Written Brief provided by the Senior Planning Archaeologist.

The Senior Planning Archaeologist can be contacted at:

Historic & Natural Environment Team

Leicestershire County Council
Room 500, County Hall,
Leicester Road, Glenfield
Leicestershire
LE3 8TE

Telephone Number: 0116 3058322. Fax: 0116 3057965
Email: riclark@leics.gov.uk

The EH Regional Archaeological Science Advisor can be contacted at:
44 Derngate
Northampton
NN1 1UH
Tel: 01604 735451 / Fax: 01604 735401
Mobile: 07801 213300
email: jim.williams@english-heritage.org.uk

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES

Design Specification for archaeological work

Job title: Loughborough University, Loughborough, Leicestershire

NGR: SK 512 179

Client: Loughborough University, Estates Development Unit

Planning Authority: Charnwood Borough Council

Planning application No. 07/2278/2

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 located off Kirkstone Drive and Lowestoft Drive, Loughborough, Leicestershire (SK 512 179). The site comprises arable land covering *c*. 5.75ha..

2.1.2 An application has been made for the development of the land for playing fields.

2.1.3 Leicestershire County Council, Historic and Natural Environment Team (LCCHNET) as archaeological advisors to the planning authority have requested a field evaluation by trial trenching to identify and locate any archaeological remains of significance and propose suitable treatment to avoid or minimise damage by the development. This requirement is detailed in their 'brief' of 18.12.2007.

2.2 *Archaeological and Historical Background*

2.2.1 The site is has been subject to a geophysical survey (Stratascan 2007) which has identified a number of 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 of Field Archaeologists (IFA) Code of Conduct and adhere to their *Standard and Guidance for Archaeological Field Evaluation* (1999).

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 Prior to any machining of trial trenches general photographs of the site areas will be taken. A Cat scanner will be employed to attempt to locate underlying services.

4.2.2 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. Trenches will be excavated to a width of 1.5m and down to the top of archaeological deposits.

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

4.2.4 The application area covers *c.* 5.75 ha.. A *c*. 1% sample of the area of impact is requested ('Brief' 9.1), the equivalent of c. 13 30m x 1.6m trench totaling *c*. 585 sq m. (Fig 1). 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 *The Guidelines For The Preparation Of Excavation Archives For Long-Term Storage* (UKIC 1990), and *Standards In The Museum: Care Of Archaeological Collections* (MGC 1992) and *Guidelines for the Preparation of Site Archives and Assessments for all Finds* (other than fired clay objects) (Roman Finds Group and Finds Research Group AD 700-1700 1993) will usually be presented to 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*. A larger report will be submitted for inclusion if the results of the evaluation warrant it.

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 is scheduled to start during w.c 05.01.2008 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 Senior 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

MAP 2 The management of archaeological projects 2nd edition English Heritage 1991

MGC 1992 Standards in the Museum Care of Archaeological Collections 1992 (Museums and Galleries Commission)

RFG/FRG 1993 Guidelines for the preparation of site archives (Roman Finds Group and Finds Research Group AD 700-1700 1993)

SMA 1993 Selection, retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland 1993 (Society of Museum Archaeologists)

Smalley 2007 *Geophysical Survey report. Loughborough University* Stratascan Report J2397

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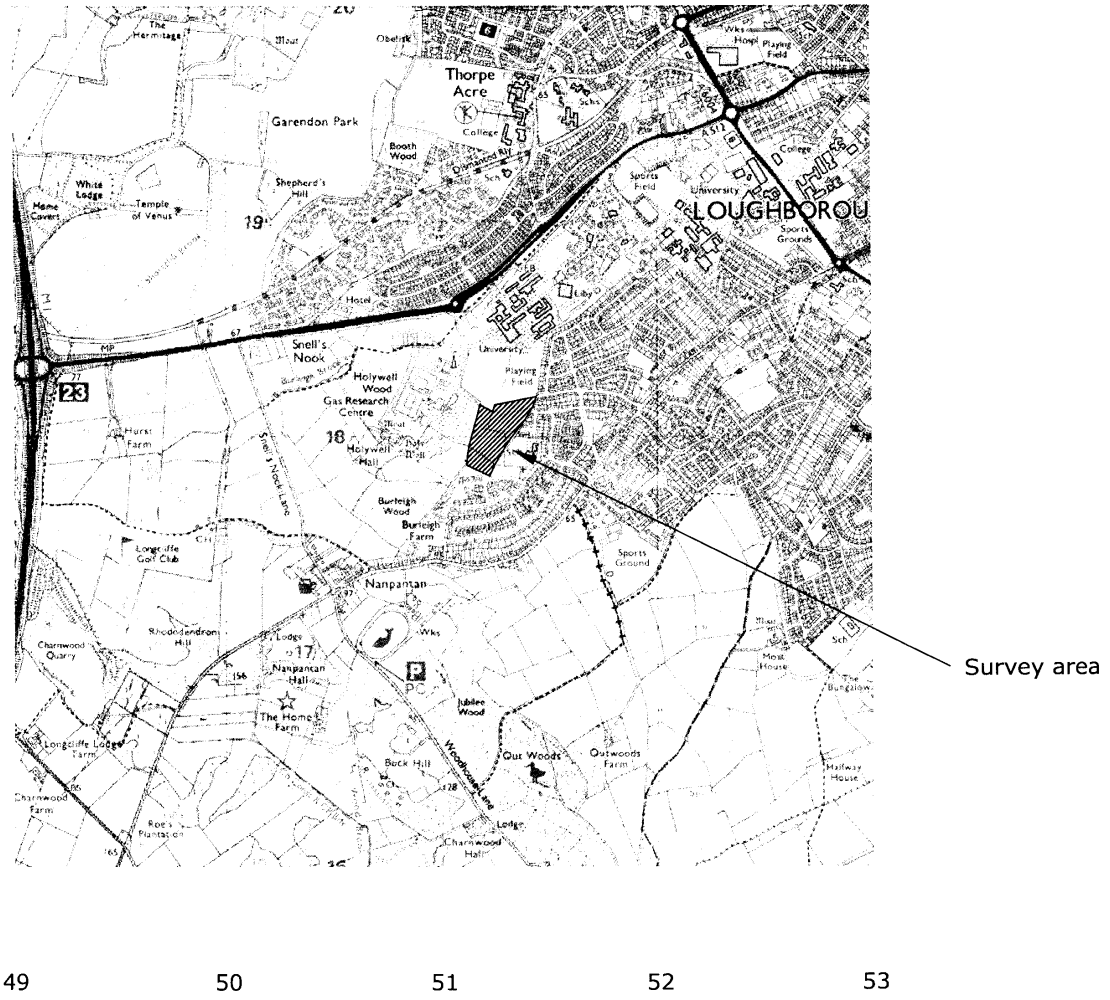

Fig 1 Site location (From Smalley 2007, Fig 1)

Fig 2 Proposed trench plan in relation to the geophysical anomalies (From Smalley 2007, Fig 7)

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. Overhead power lines are present to the south of the areas to be evaluated. The machine will maintain a distance of at least 10 m to the north of the powerlines.

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.