

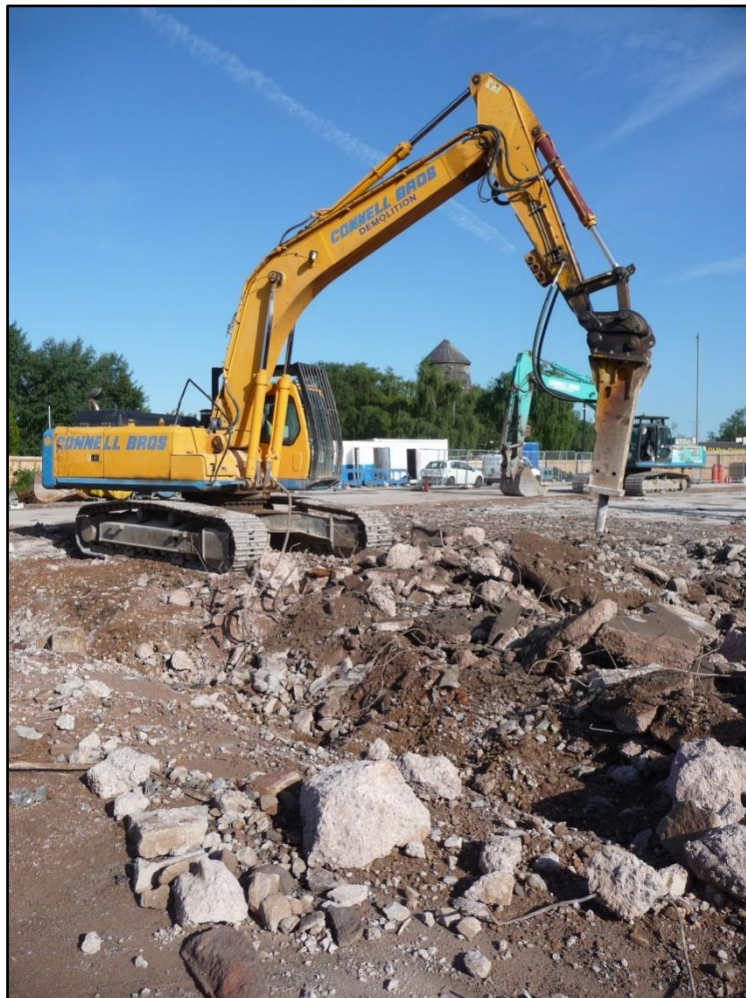


University of
Leicester

Archaeological Services

**An Archaeological Strip, Map and
Sample and Watching Brief at
Stafford College, Earl Street,
Stafford NGR SP 460 965**

Dr. Roger Kipling




ULAS Report No 2011-122
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**An Archaeological Strip, Map and Sample
and Watching Brief at Stafford College,
Earl Street, Stafford
NGR SP 460 965A**

Dr. Roger Kipling

For: GVA/Stafford College

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An Archaeological Strip, Map and Sample and Watching Brief at Stafford College, Earl Street, Stafford [NGR SP 460 965A]

Dr. Roger Kipling

Summary

An archaeological strip, map and sample and watching brief exercise was undertaken in June and July 2011 by University of Leicester Archaeological Services on behalf of GVA/Stafford College as a condition upon the granting of planning permission for the construction of a new teaching facility on the site of Stafford College, Earl Street, Stafford.

The evaluation work did not reveal any archaeological deposits or features, likely explained by the unexpectedly substantial character of the foundations of the recently-demolished college buildings.

Introduction

An archaeological strip, map and sample and watching brief exercise was undertaken on land at Stafford College, Earl Street, Stafford. A preliminary desk-based assessment had established that the application site lies within the medieval settlement core of Stafford and in close proximity to several archaeological interventions. Hence the development site was deemed to represent an area of archaeological potential for the survival of Anglo-Saxon and medieval remains relating to the historic urban core.

In view of the potential impact of the development upon archaeological remains, the archaeological evaluation was undertaken as a post-determination planning requirement following recommendations by the Staffordshire County Council Principal Archaeologist acting as advisor to Stafford Borough Council and detailed in the *Brief for an Archaeological Strip, Map And Record Exercise. New Teaching Facility, Stafford College, Earl Street, Stafford* (Staffordshire County Council April 2011 hereinafter the 'brief'). The requirements of the brief were addressed in the Written scheme of investigation (ULAS 16.6.2011; Appendix)

Fieldwork was carried out between 27th June and 21st July 2011 and involved the controlled machine excavation of overburden to formation level in order to assess the presence/absence of archaeological remains across development area.

The archaeological work was undertaken in accordance with Planning Policy Statement 5 (PPS5, Planning and the Historic Environment HE12) and with the Institute for Archaeologist's (IfA) *Code of Conduct* (2010) and *Standard and Guidance for Archaeological excavations and watching briefs* (2008).

Site Description, Topography and Geology

The site is located in the Broadeye area of Stafford, (SP 460 965) and covers an area of *c.*1.72 ha. until recently occupied by college buildings dating to the 1960.

The Ordnance Survey Geological Survey of Great Britain Sheet 141 indicates that the underlying geology is likely to consist of the Devensian Geofluvial sheet deposits, Sand and Gravel overlying Mercia Mudstone Group to the west of the site towards the River Sowe. The development area lies in the north-east corner of the historic town towards the summit of a slight ridge on the east side of the River Sowe which flows north-west to south-east *c.*100m to the west. The land slopes gently westwards down towards the river on a slight rise 0.5m above the roads to the south-east at an approximate height of 79.5m above Ordnance Datum.

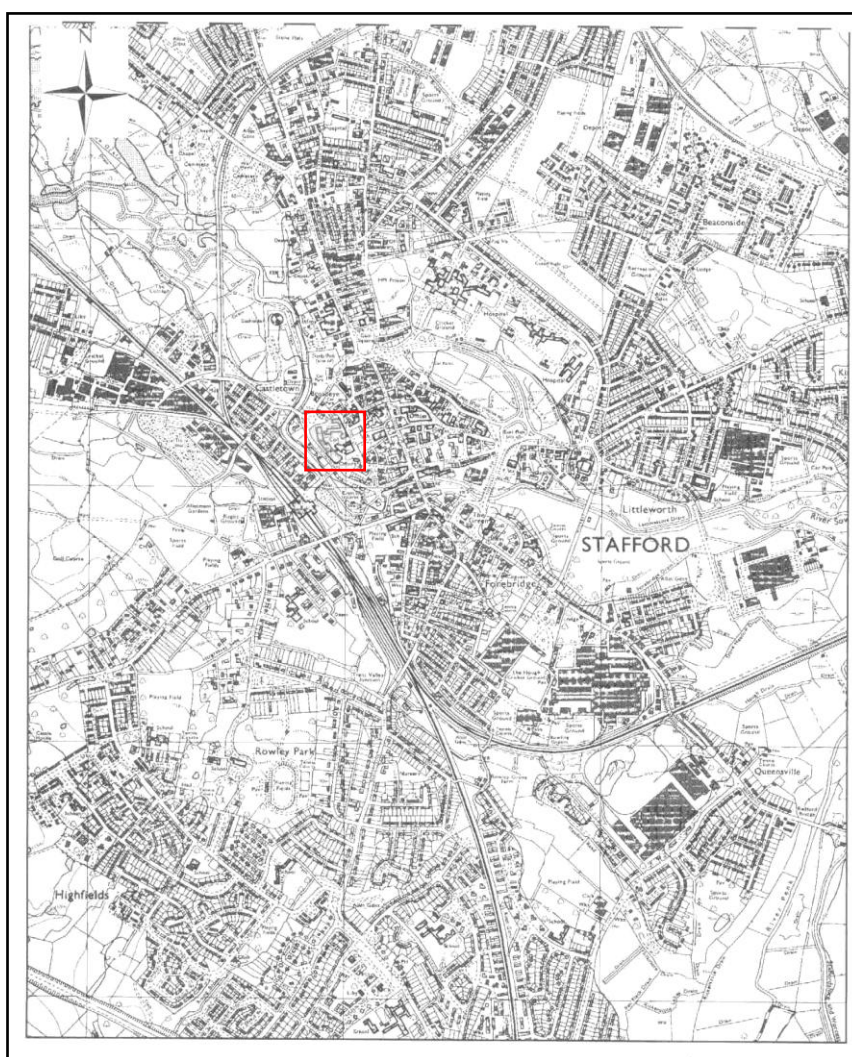


Figure 1: Site location (scale 1:50 000)

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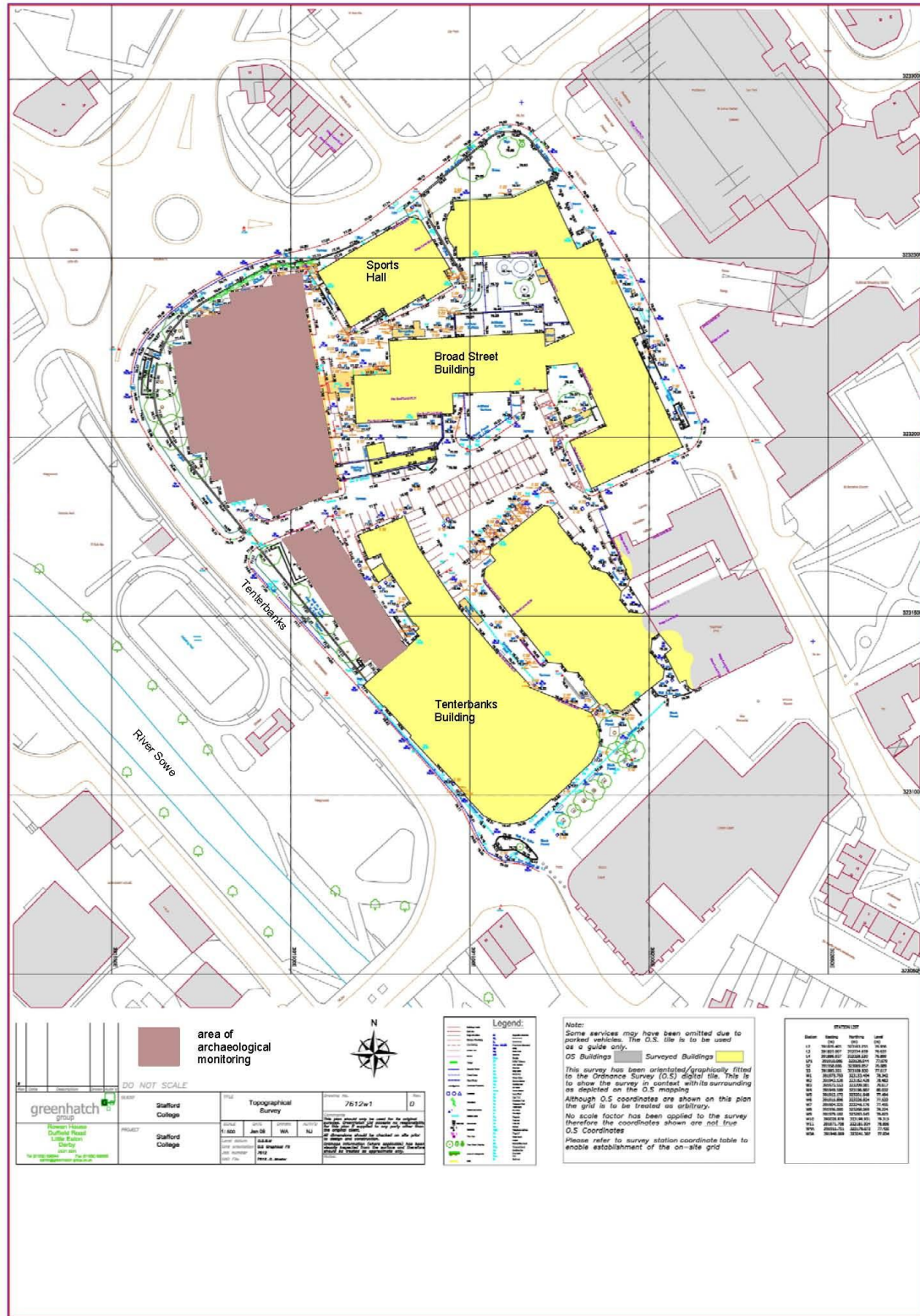


Figure 2: Plan of development area; scale 1:500

Archaeological and Historical Background

A desk-based assessment (DBA) of the development area undertaken prior to fieldwork indicated the site lies within the medieval urban settlement core of Stafford,

whilst a review of the Historic Environment Record (HER) indicates that little new fieldwork has subsequently been undertaken (Kelleher 2008). Several archaeological interventions are, however, known from the DBA for the college site and its environs, the majority of which produced Anglo-Saxon and medieval deposits, whilst evidence for two or possibly three Iron Age granaries and pre-burh occupation was recovered from St. Mary's Grove.

Excavations conducted in advance of construction of a new sports hall at Stafford College adjacent to the present development produced a clear and lengthy sequence of occupation ranging from the Anglo-Saxon period to the 20th century. Anglo-Saxon activity consisted of a series of likely defensive ditches, likely representing either the Alfredian burh or the remains of an extramural seigneurial enclosure. This was followed by the cutting of a substantial ditch believed to represent the construction of William I's royal castle in the 11th century, subsequently believed to have fallen into disuse before being repaired and reused as the town gaol during the 13th/14th centuries. The 'castle' ditch appears to have been backfilled during the later medieval period and the area developed as a residential and commercial/industrial area. Evidence of pit digging and beam slots attest to this functional change during the late medieval and early post-medieval period. Between the 15th to 18th centuries the area became increasingly built up, as attested by the cartographic, documentary and archaeological evidence and became associated with the wool industry. The place name Tenterbanks attests to the tented structures erected to dry freshly-dyed cloth.

Eighteenth and 19th century cartographic sources attest to minimal building on the area of the new teaching building. The main building which until recently occupied the site was built in the mid-1960s. While the design of its foundations was not known until the time of demolition, it appeared to have been designed as a lightweight structure without cellarage, suggesting that the potential for intact archaeological stratigraphy or at least 'islands' of preservation to be within the area.

The location of the scheme within the Historic Urban Character Area (HUCA) 3: West of Gaolgate Street and the absence of post-medieval suggested that the site had the potential to contain medieval remains. Coupled with the scale of the proposed building, it was hence deemed likely that the proposed development would have a damaging effect on any archaeological deposits, and a programme of archaeological strip, map and sample, combined with a watching brief, was required by the planning authority following an approved written scheme of investigation. Consequently a archaeological monitoring programme was undertaken by ULAS in June and July 2011.

Aims and Objectives

The aims of the fieldwork as defined in the 'brief' were as follows:

- To determine the archaeological development of the site and if possible to fit this with the known historic growth of Stafford as detailed in cartographic and documentary sources.

- The strip, map and record exercise should aim to gather sufficient information to generate a reliable phased plan and report of past activity across the site taking into account the extent, character, date, state of preservation and depth of burial of important archaeological remains within the area of study. In this case the following specific objectives have been identified:
- To determine the nature and presence of Anglo-Saxon deposits across the site and inform understanding of development of the area during the late Saxon period.
- To determine the function and development of the site during the medieval period and identify evidence for ‘castle-related’ activity.
- To record the development of the site through the post-medieval period and its changing landuse from civic (with its use as a gaol) through the industrial and residential.
- To examine deposits for evidence of the impact of the vibro-compaction method of piling employed *c.* 1969-70 during the construction of two buildings to be replaced.

Methodology

The written scheme of investigation for the programme of archaeological fieldwork stipulated a two-stage process, namely an initial strip, plan and sample phase followed by an archaeological watching brief:

- **Strip, Plan and Sample**
The project will involve the controlled machine excavation of overburden to the depth of the formation level in order to determine the presence/absence of any archaeological remains. Machining will be with a toothless bucket under control and supervision of the archaeologist and will be undertaken in level spits. The strip, map and record exercise will directly follow the removal of the groundslab.
- **Watching Brief**
The watching brief will involve the supervision of the groundslab removal and other groundworks by an experienced professional archaeologist. Other groundworks are proposed in the area of the scheme including the, excavation of service trenches, the footings for a fountain and general landscaping.

In the event, the strip/plan/sample and watching brief stages did not form distinct, separate stages of work but rather formed a single, constant monitoring presence by the ULAS representative.

All work was undertaken in accordance with the Institute for Archaeologists (IfA) *Standard and Guidance for Archaeological Watching Briefs*, the standard policy and practice of ULAS. The University of Leicester’s Health and Safety policy was adhered to.

Results

Archaeological fieldwork involved monitoring of ground working activity, initially as a fulltime watching brief between 27th June and 14th July 2011, and subsequently on an intermittent basis between the 18th and 21st July 2011. The programme involved the monitoring of machine removal of the concrete floor slabs and groundworks associated with the recently-demolished college buildings (Figure 2). Results pertaining to the two buildings occupying the northern area and a third structure located in the southern part of the development area will be detailed separately.

Northern Area

Breaking and removal of the floor slab and groundworks associated with the 1960s college building were undertaken with a 360° mechanical excavator under archaeological supervision (Figure 3, Figure 4) between 27th June and 21st July 2011. Removal of the 0.30m-thick concrete slab was revealed to overlie very substantial foundations, consisting of a network of square concrete pads measuring 2m x 2m x 0.90m thick and representing the supporting bases for the building's structural steelwork (Figure 5).



Figure 3: Northern building floor slab breaking in progress; view northwest



Figure 4: Northern building floor slab breaking in progress; view northwest



Figure 5: Concrete foundation pads; 1m scale

Machine removal of the pads revealed bands of vibro-compacted roadstone and brick rubble (Figure 6). Sample excavation demonstrated that the pads were set upon this same material, which extended to a minimum depth of 1.60m below floor slab level, a depth substantially below that of the final formation level, 75.710m O.D. or 0.815m below slab level.



Figure 6: Vibro-compacted roadstone revealed in section flowing removal of foundation pad. View west; 1m scale

The building footprint was defined by a heavily-built ring beam comprising along the eastern building line of further substantial concrete blocks, measuring 2.5m x 2.5m x 2m (Figure 7), and to the western, Tenterbanks side, of a single continuous 2m x 1m beam (Figure 8). A dull pale yellow natural sand was observed intermittently beneath the foundations. There were no indications of archaeological deposits or features. The groundworks appeared to pertain to a subsequently partially-demolished structure, as they were partially overlain by the smaller, single-storey 21st century Skills Centre building, which occupied the western side of the site.

Construction of the 1960s college building hence appears to have involved the cutting of a substantial box which was subsequently partially backfilled with vibro-compacted roadstone prior to the casting of concrete pads and ring beam, followed by final backfilling and floor slab construction. The sinking of these foundations down to the level of natural sand hence appear to have effectively destroyed any archaeological deposits and/or features that would have been present.

A 3m-5m strip of turf occupied the eastern site boundary between the former site of the Skills Centre and a brick retaining wall. Machine removal of the latter revealed garden soils (Figure 9).



Figure 7: Removal of foundation ring beam in progress; view north



Figure 8: Western ring beam foundation exposed; view south-west



Figure 9: Machine removal of western retaining wall; view west

Southern Area

Work in the southern part of the site initially involved the supervised machining on 29th July 2011 of three small trial pits (Nos. 1, 3 & 4) flush with the western external wall of the Tenterbanks Building in order to investigation by engineers of structural footings and also to ascertain whether archaeological deposits were present (Figure 10). A planned fourth pit was not excavated due to safety considerations.



Figure 10: Trial pit locations, southern area. Scale 1:100

Trial Pit 1 (Figure 11 & Figure 12) measured 1.50m x 1.50m and 1.60m deep. Garden soil containing 19th or 20th ceramic building material fragments was observed 0.90m below the floor slab of the recently-demolished 1960s building, overlain by mixed roadstone dump deposits likely associated with construction of the same building.

Trial Pit 3 (Figure 11 & Figure 13) measured 1.70m x 1.70m and 1.30m deep. Coarse pale brown natural sand with sparse gravel content was observed at 0.90m below demolished slab level, overlain by mixed silts containing 19th or 20th ceramic building material. The diagonal construction cut for the Tenterbanks Building was observed in the southeast side of the trench, cutting a 0.90m+ thick accumulation of sandy clay silt containing sparse ceramic building material fragments.

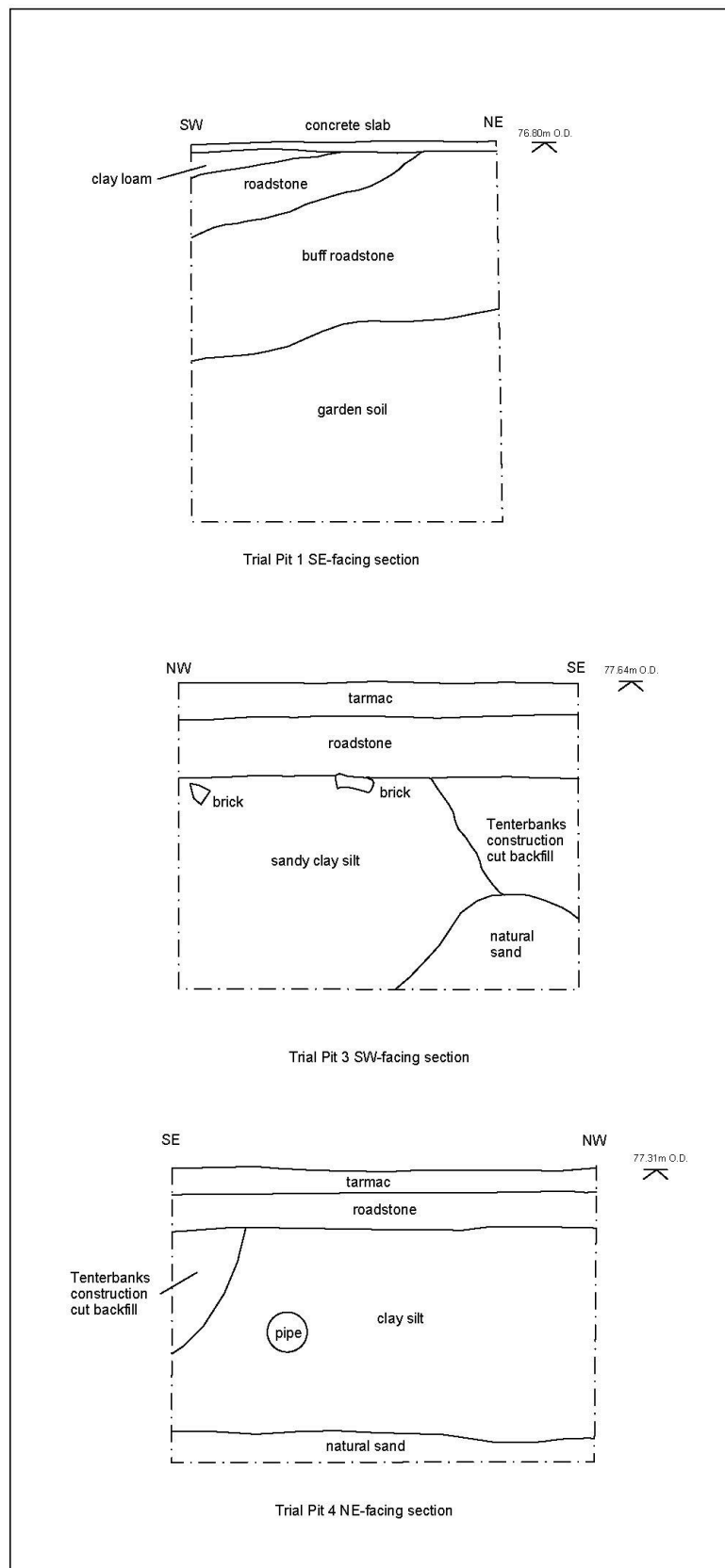


Figure 11: Trial pit sections



Figure 12: Trial Pit 1: southeast-facing section; 1m scale



Figure 13: Trial Pit 3: northeast-facing section; 1m scales



Figure 14: Trial Pit 4: southwest-facing section; 1m scales

Trial Pit 4 (Figure 11 & Figure 14): 1.8m x 1.8m x 1.25m deep. Natural sand was again observed, at a depth of 1.10m depth below the present ground slab. The Tenterbanks Building construction cut was visible in the southeast side of the trench section cutting a clay silt deposit containing a modern service pipe.

Following excavation, recording and backfill of the trial pits, breaking of the floor slab commenced on the 1st July 2011(Figure 15).

Work to bring the area of the footprint of the southern part of the new building to formation level was completed on 6th July 2011, with machine reduction to a final level of 76.31m O.D. or 1.59m below the ground slab of the recently-demolished college building. Foundations of the latter proved to be comparable to those of the northern building; namely a combination of concrete foot pads and an outer ring beam set on a roadstone base.

An examination of the freshly-stripped area revealed a series of diagonal bands of roadstone and stanchion disturbance running parallel to and associated with the 20th century college buildings and, on the western edge of the site, a narrow band of garden soil (Figure 16: Stripped southern area. Scale 1:100. The area was traversed by lines of stone-filled piles measuring *c.*0.30m in diameter.

There was no evidence of archaeological survival. A number of small, shallow (0.30m maximum) dark loam-filled oval features containing 19th or 20th century

ceramic building material likely represent truncated pits or features associated with activity pre-dating the recently-demolished college buildings.



Figure 15: Breaking of southern floor slab in progress; view looking south-east

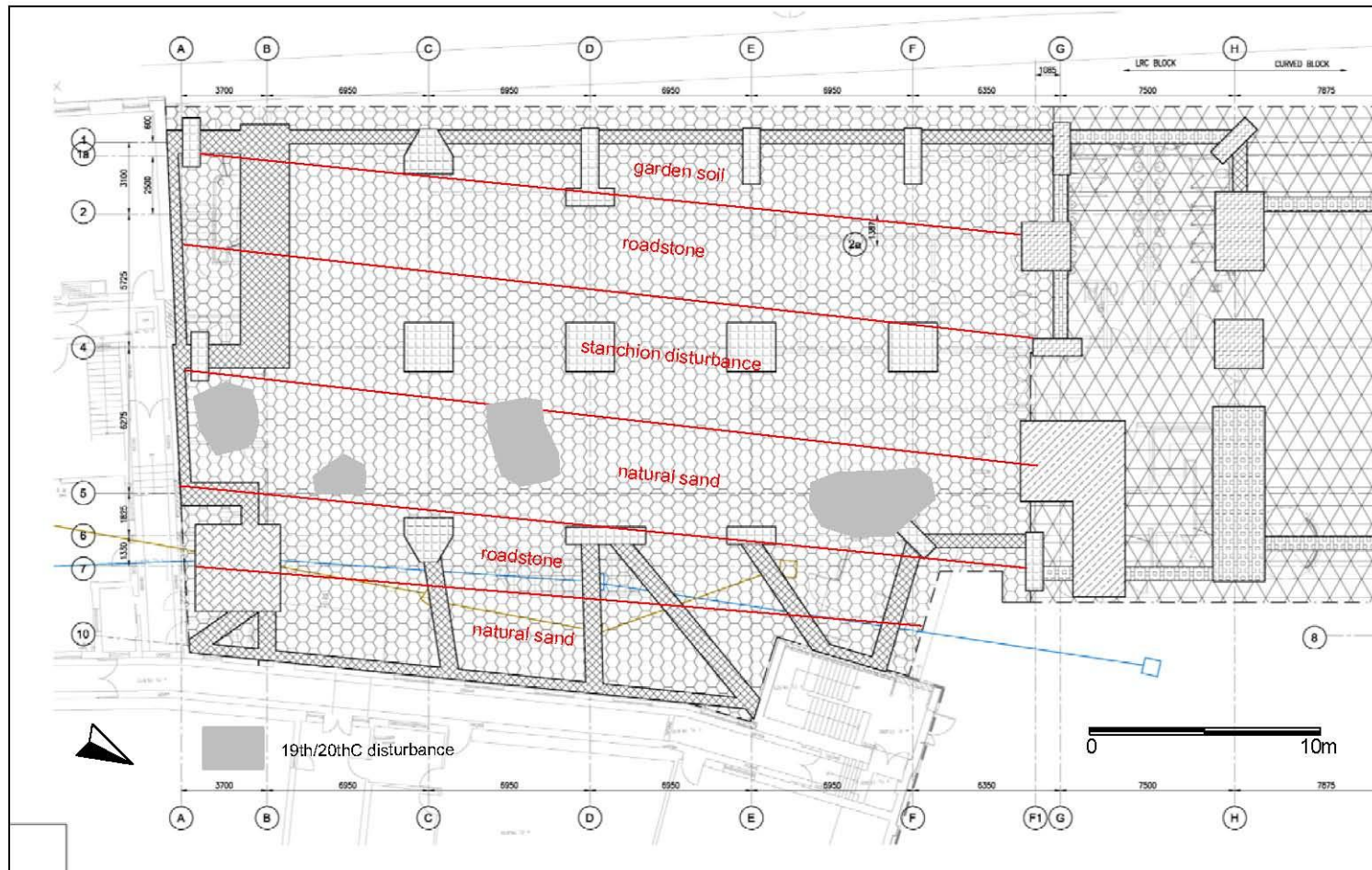


Figure 16: Stripped southern area. Scale 1:100



Figure 17: Southern area following machining to formation level. View looking south; 1m scales



Figure 18: Southern area following machining to formation level with western edge of site to right. View looking south; 1m scales

Conclusions

An archaeological strip, map and sample and watching brief exercise was undertaken in June and July 2011 by University of Leicester Archaeological Services on behalf of GVA/Stafford College during the course of the removal of groundworks associated with recently-demolished 20th century buildings.

The unexpectedly substantial character of the foundations of these structures, construction of which entailed ground reduction across the building footprint to the level of natural sand substratum, appears to have removed any traces of archaeological deposits or features, which may have been present.

Archive and Publications

The site archive consisting of paper and photographic records, will be deposited with the Potteries Museum, Stoke on Trent, Staffordshire County Council.

The archive consists of:

- 16 watching brief record sheets
- One drawing sheet
- 63 digital photographs
- 23 monochrome (film) photographs
- A risk assessment form

Publication

A version of the excavation summary (see above) will appear in due course in *West Midlands Archaeology*.

Acknowledgements

Dr. Roger Kipling of ULAS undertook the archaeological strip, map and sample exercise and watching brief on behalf of GVA and Stafford College. The project was managed by Dr. Patrick Clay. Stephen Dean, Principal Archaeologist with Staffordshire County Council, monitored the archaeological work on behalf of the planning authority

Bibliography

- Clay, P. 2011 *Written Scheme of Investigation, Stafford College, Earl Street, Stafford*. ULAS
- Keller, S. 2008 *Stafford College, Earl Street, Stafford: An Archaeological Desk-Based Assessment*. Birmingham Archaeology

Staffordshire County Council. 2011 *Brief for An Archaeological Strip, Map and Record Exercise, New Teaching Facility, Stafford College, Earl Street, Stafford* Staffordshire County Council April 2011

Oasis Information

Project Name	Stafford College, Earl Street, Stafford
Project Type	Archaeological strip, map and sample excavation and watching brief
Project Manager	Patrick Clay
Project Supervisor	Roger Kipling
Previous/Future work	Construction
Current Land Use	Educational
Development Type	Teaching facility
Reason for Investigation	PPG16
Position in the Planning Process	Post-determination requirement
Site Co ordinates	NGR SP 460 965
Start/end dates of field work	27th July and 21st July 2011
Archive Recipient	Staffordshire County Council
Study Area	c.1.72 ha.

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Appendix One: Written Scheme of Investigation

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES

Written Scheme of Investigation for archaeological work:

Strip, map and sample excavation and Watching Brief

Job title: New Teaching Facility, Stafford College, Earl Street, Stafford

NGR: SP 460 965

Client: Stafford College

Planning Authority: Stafford Borough Council

Planning application No. 10/0731/1/PX

1 Introduction

1.1 Definition and scope of the specification

This document is a design specification for archaeological work at the above site, in accordance with Planning Policy Statement 5: Planning for the Historic Environment, Policy HE12.3 (DCLG 2010). This specification provides a written scheme of investigation (WSI) for a phase of Strip, map and sample excavation and Watching Brief. The fieldwork specified below is intended to provide information on the character and extent of any buried archaeological remains which may exist on the site.

1.2 The definition of archaeological excavation, taken from the Institute for Archaeologists Standards and Guidance: for Archaeological excavations (IFA S&G) is a controlled programme of intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features, structures, and as appropriate, retrieves artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.

2. Background

2.1 Context of the Project

2.1.1 Planning permission has been granted for the construction of a new teaching facility on the site of Stafford College, Earl Street, Stafford (NGR SJ 919 233). Pre-application discussions between the applicant, their archaeological advisors and the Staffordshire County Council (SCC) Principal Archaeologist resulted in the preparation of a Desk-Based Assessment (DBA) of the whole site (Kelleher 2008). The aim of this work was to identify archaeological potential and inform the need for further targeted archaeological investigation. The DBA also formed the baseline evidence to inform the design process should preservation *in situ* be advised. Following on from the completion of the DBA the SCC Principal Archaeologist advised Stafford Borough Council that further archaeological work would be appropriate as a condition upon permission. The scope and extent of archaeological mitigation required in the area to be currently impacted is outlined in the *Brief for an Archaeological Strip, Map And Record Exercise, New Teaching Facility, Stafford College, Earl Street, Stafford* (Staffordshire County Council April 2011 – hereinafter the ‘brief’)

2.1.2 The Ordnance Survey Geological Survey of Great Britain Sheet indicates that the underlying geology is likely to be Devensian Geofluvial sheet deposits, Sand and Gravel overlying Mercia Mudstone Group

http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html.

2.1.3 The proposed development is for the demolition of three buildings and the construction of two new teaching facilities.

2.2 Archaeological and Historical Background (from the ‘brief’ 1.1-1.5)

2.2.1 The DBA indicated that the site was within the medieval settlement core of Stafford. A review of the Historic Environment Record (HER) indicates that little new work has been undertaken in the area since its production (Kelleher 2008). Several archaeological interventions are recorded in the DBA for the college site and the surrounding area most of which recovered Anglo-Saxon and medieval deposits. However, some work in St. Mary's Grove recovered evidence for two and possibly three Iron Age granaries as well as evidence for pre-burh occupation (although the dating for this last evidence has recently been called into doubt).

2.2.2 A recent excavation in advance of the construction of a new gymnasium at Stafford College revealed evidence of a distinct sequence of Anglo-Saxon – 20th century activity on the site. Anglo-Saxon activity focused upon the digging of a series of ditches possibly defensive in function and could be either the remains of the Aethfladian burh or the remains of an extra-mural seigneurial enclosure. This was followed by the cutting of a large ditch considered to represent the building of William I's royal castle in the 11th century. The castle appears to have fallen into disuse and was repaired before being used as the town gaol during the 13th/14th century. The 'castle' ditch appears to have been backfilled during the later medieval period and the area developed as a residential and industrial/commercial area of the town. Evidence of pit digging and beam slots attest to this change in function during the late medieval and early post-medieval period. Between the 15th – 18th century the area becomes increasingly built up (as attested by the cartographic, documentary and archaeological evidence) and is involved in the wool industry (Tenterbanks refers to the tented structures erected to dry freshly dyed cloth).

2.2.3 Cartographic sources from the 18th and 19th century while indicating the presence of roads and properties within the present day area of the college do indicate minimal building on the area of the New Teaching Centre. The main building which occupies the site and is to be demolished to make way for the centre appears to have been erected in the mid 20th century. While the design of its foundations is not currently understood it would appear to have been designed as a 'lightweight' structure with no cellarage. This would suggest the potential for intact archaeological stratigraphy or at least 'islands of preservation' to be present within the area.

2.2.4 The scheme lies within Historic Urban Character Area (HUCA) 3: West of Gaolgate Street as recorded in the Stafford Extensive Urban Survey (EUS) report (forthcoming). The area description supports the hypothesis that this area has at least the potential to contain medieval archaeological remains and indicates that a recent cellar survey indicates a lack of post-medieval cellarage and so an increased potential for the survival of archaeological remains.

2.2.5 The location of the scheme within an area of demonstrable archaeological potential coupled with the scale of the proposed building to be erected is likely to impact upon significant archaeological deposits.

3. Archaeological Aims and Objectives (from the 'brief' 2.2)

3.1 The aim of the fieldwork as defined in the 'brief' is as follows:

To determine the archaeological development of the site and if possible to fit this with the known historic growth of Stafford as detailed in cartographic and documentary sources.

3.2 The objectives of the fieldwork as defined in the 'brief' are as follows:

The strip, map and record exercise should aim to gather sufficient information to generate a reliable phased plan and report of past activity across the site taking into account the extent, character, date, state of preservation and depth of burial of important archaeological remains within the area of study. In this case the following specific objectives have been identified:

To determine the nature and presence of Anglo-Saxon deposits across the site and inform understanding of development of the area during the late Saxon period.

To determine the function and development of the site during the medieval period and identify evidence for 'castle-related' activity.

To record the development of the site through the post-medieval period and its changing landuse from civic (with its use as a gaol) through the industrial and residential.

To examine deposits for evidence of the impact of the vibro-compaction method of piling employed c. 1969-70 during the construction of two buildings to be replaced.

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 excavations and watching briefs* (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 Principal Archaeologist, the Planning authority and the Client.

4.2 Strip, Plan and Sample

4.2.1 The project will involve the controlled machine excavation of overburden to the depth of the formation level by an experienced professional archaeologist to determine the presence/absence of any archaeological remains. Machining will be with a toothless bucket under control and supervision of the archaeologist and will be undertaken in level spits. The strip, map and record exercise will directly follow the removal of the groundslab. If the proposed depths of the formation level are exceeded this may require further work not included in the current contingency arrangements

4.2.2 Should significant archaeological remains be identified this will be followed by a programme of excavation and recording, using additional personnel as necessary.

4.2.3 The archaeologist will co-operate at all times with the contractors on site to ensure the minimum interruption to the work.

4.2.4 Any archaeological deposits located will be hand cleaned and planned as appropriate. Samples of any archaeological deposits located will be hand excavated. Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan of 1:100. All plans will be tied into the National Grid using an Electronic Distance Measurer (EDM) where appropriate.

4.2.5 Archaeological deposits will be excavated and recorded as appropriate to establish the stratigraphic and chronological sequence of deposits, recognising and excavating structural evidence and recovering economic, artefactual and environmental evidence. Particular attention will be paid to the potential for buried palaeosols and waterlogged deposits in consultation with ULAS's environmental officer.

4.2.6 All excavated sections will be recorded and drawn at 1:10 or 1:20 scale, levelled and tied into the Ordnance Survey datum. Spot heights will be taken as appropriate.

4.2.7 Any human remains encountered will be initially left in situ and only be removed under a Ministry of Justice Licence and in compliance with relevant environmental health regulations. The developer and Staffordshire County Council will be informed immediately on their discovery.

4.2.8 In the event of significant archaeological remains being located there may be the need for contingency time and finance to be provided to ensure adequate recording is undertaken. On the discovery of potentially significant remains the archaeologist will inform the developer, the Principal Archaeologist at Staffordshire County Council and the planning authority. If the archaeological remains are identified to be of significance additional contingent archaeological works will be required.

4.3 Watching Brief

4.3.1 The watching brief will involve the supervision of the groundslab removal and other groundworks by an experienced professional archaeologist. Other groundworks are proposed in the area of the scheme including the, excavation of service trenches, the footings for a fountain and general landscaping.

4.3.2 Should significant archaeological remains be identified during the watching brief a programme of excavation and recording may be necessary, using additional personnel as necessary.

4.3.3 The archaeologist will co-operate at all times with the contractors on site during the watching brief to ensure the minimum interruption to the work.

4.3.4 The watching brief will also include the examination of the areas beneath the slab for evidence of the impact of vibro-compaction piling techniques undertaken during the construction of two buildings now demolished for the new scheme (English Heritage 2007). The EH scientific advisor for the West Midlands (Dr Lisa Moffat) will be consulted as appropriate.

4.4 Archaeological on-site recording

4.4.2 The archaeological features exposed by the machine stripping or foundation excavation will be planned and sample excavated to provide an adequate sample to address the objectives (3.1).

4.4.3 Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan of 1:100. All plans will be tied into the National Grid using a Total Station Electronic Distance Measurer (EDM). All excavated sections will be recorded and drawn at 1:10 or 1:20 scale, levelled and tied into the Ordnance Survey datum. Spot heights will be taken as appropriate.

4.4.4 The location of the excavation will be surveyed using a GPS or Total Station Electronic Distance Measurer (EDM) linked to a hand held computer.

4.4.5 Archaeological deposits will be excavated and recorded as appropriate to establishing the stratigraphic and chronological sequence of deposits, recognising and excavating structural evidence and recovering economic, artefactual and environmental evidence. Particular attention will be paid to the potential for buried palaeosols and waterlogged deposits in consultation with ULAS's environmental officer. A geoarchaeologist will also record and assess the impact of previous vibro-compaction on the site through available sections and compare these with un-impacted areas of the site; depending on the results of this work there may be a requirement for publication in a suitable journal.

4.4.6 Any human remains encountered will be initially left in situ, where appropriate the police and coroner shall be informed. Human remains will only be removed following appropriate liaison with the Ministry of Justice and in compliance with their requirements and in accordance with appropriate professional standards and guidance, as well as other relevant environmental health regulations. In all circumstances the developer and Staffordshire County Council, will be informed immediately upon the discovery of significant human remains.

4.4.7 Any material recovered which would be regarded as treasure following the Treasure Act 1996 will be reported to the coroner.

4.4.8 Internal monitoring procedures will be undertaken including visits to the site from the project manager. These will ensure that professional standards are being maintained. Provision will be made for monitoring visits for representatives of the developer, the Staffordshire County Council Principal archaeologist and the planning authority.

4.4.9 In the event of significant archaeological remains being located during the fieldwork programme there may be the need for contingency time and finance to be provided to ensure adequate recording is undertaken. On the discovery of potentially significant remains the archaeologist will inform the developer, the Principal Archaeologist at Staffordshire County Council and the planning authority. If the archaeological remains are identified to be of significance additional contingent archaeological works will be required.

4.5 Recording Systems

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

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

4.5.3 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.

4.5.4 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.

4.5.5 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.

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

5. Finds

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

5.2 All antiquities, valuables, objects or remains of archaeological interest, which may constitute treasure' as defined by the Treasure Act 1996 will be removed to safety and reported to the local Coroner. ULAS's terms and conditions include a transfer of title regarding the ownership of any other recovered artefacts to go to ULAS prior to transfer to a suitable Museum.

5.3 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 Principal Archaeologist.

5.4 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. All materials will be fully labelled, catalogued and stored in appropriate containers.

6. Environmental Sampling

6.1. If features are appropriate for environmental sampling a strategy and methodology will be developed on site following advice and a site visit from ULAS's Environmental Specialist. Preparation, taking, processing and assessment of environmental samples will be in accordance with current best practice. Close attention will always be given to sampling for date, structure and environment. 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 preferred 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. Areas 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.

6.2 Appropriate contexts will be bulk sampled (40 litres or the whole context depending on size) for the recovery of carbonised plant remains and insects. All collected samples will be labelled with context and sequential sample numbers

6.3 Wet sieving with flotation will be carried out using a York Archaeological Trust sieving tank with a 0.5mm mesh and a 0.3mm flotation sieve. The small size mesh will be used initially as flotation of plant remains may be incomplete and some may remain in the residue. The residue > 0.5mm from the tank will be separated into coarse fractions of over 4mm and fine fractions of > 0.5-4mm. The coarse fractions will be sorted for finds. The fine fractions and flots will be evaluated and prioritised; only those with remains apparent will be sorted. The prioritised flots will not be sorted until the analysis stage when phasing information is available. Flots will be scanned and plant remains from selected contexts will be identified and further sampling, sieving and sorting targeted towards higher potential deposits.

6.4 Where appropriate specialist samples and sub-samples may be collected and retained for further study.

6.5 Recovery of small animal bones, bird bone and large molluscs will normally be achieved through processing other bulk samples or 40 litre samples may be taken specifically to sample particularly rich deposits.

6.6 Specific sampling relating to scientific dating and other specialist techniques will be reviewed as part of the first monitoring meeting after the initial site clean, when the scope and nature of the deposits can be properly assessed. The potential for scientific dating will also be reviewed as part of the Post Fieldwork Assessment. Samples will be obtained and prepared by suitably qualified staff under the direction of ULAS' Environmental Officer.

7. Report and Archive

7.1 Following completion of the site a brief summary report will be submitted to the Principal Archaeologist within two weeks of completion of work on site. The summary will comprise no more than two pages of text and be accompanied by photographs and a plan.

7.2 Expert advice and reporting in relation to cultural artefacts and ecofacts will be provided by individual specialists appointed as appropriate.

7.3 An assessment report will be produced in A4 format following guidelines laid down in Management of Archaeological Projects (MAP2) and Management of Research Projects in the Historic Environment (MoRPHE) (English Heritage) 2009. The assessment report will include:

Summary

The aims and methods adopted in the course of the excavation

The nature, location, extent, date, significance and quality of any structural, artefactual and environmental material uncovered.

Appropriate illustrative material including maps, plans, sections, drawings and photographs.

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,

7.4 If necessary an updated project design will be prepared and submitted within 3 months of the end of the fieldwork. This will form the basis for an agreed programme of work designed to lead to completion of the post-excavation programme through to full archive and publication reports within one years of completion of site works.

7.5 Following assessment, full analysis of the results will be presented to include consideration of:

Summary

The aims and methods adopted in the course of the excavation.

The nature, location and extent of any structural, artefactual and environmental material uncovered.

The date and interpretation of excavated features.

Analysis of finds, samples for environmental data and scientific analysis and dating.

Appropriate illustrative material including maps, plans, sections, drawings and photographs.

Discussion of the results in their local, regional and national context including relating the results to evidence from nearby sites.

The location and size of the archive.

7.6 A copy of the final report will be presented following acceptance of the draft report. A hard copy will be provided for the HER.

7.7 A full copy of the archive will usually be presented within six months of the completion of fieldwork. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken and will be compatible with *Archaeological Archives: A guide to best practise in creation, compilation, transfer and curation* (Archaeological Archive Forum 2007: Brown 2008). The archive will conform to the standards outlined in *MoRPHE Project Planning*.

7.8 The archive will be maintained and held by ULAS until storage in an appropriate museum (e.g the Potteries Museum Stoke on Trent) is available.

8. Publication and Dissemination of Results

8.1 University of Leicester Archaeological Services supports the Online Access to the Index of Archaeological Investigations (OASIS) project. On the completion of final report the on-line OASIS form at <http://oasis.ac.uk/project> will be completed.

8.2 A summary of the work will be submitted for publication in an appropriate local journal. A larger report will either be produced as a monograph publication or submitted for inclusion to a local or national journal if the results are of sufficient quality for this to be considered appropriate.

9. Acknowledgement and Publicity

9.1 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.

9.2 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.

10. Copyright

10.1 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.

11. Timetable and Staffing

11.1 The strip map and sample excavation will be undertaken following the archaeological watching brief of the slab removal. A start date during w.c 20.06.2011 is proposed. Initially machine stripping will be supervised by one member of staff; further staff will be brought in to record any deposits revealed..

11.2 Following the fieldwork 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.

11.3 The project will be managed by Dr Patrick Clay MIFA and the fieldwork director will be Dr Roger Kipling (Profiles supplied).

12. Health and Safety

12.1 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.

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

13. Insurance

13.1 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.

14. Monitoring arrangements

14.1 Unlimited access to monitor the project will be available to both the Client and his representatives and Principal Archaeologist subject to the health and safety requirements of the site. At least one weeks notice will be given to the Staffordshire Principal Archaeologist before the commencement of the archaeological fieldwork in order that monitoring arrangements can be made.

14.2 All monitoring shall be carried out in accordance with the IfA *Standard and Guidance for Archaeological, excavations or watching briefs* as appropriate.

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

15. Contingencies and unforeseen circumstances

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

16. Bibliography

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|-----------------------|--|
| Brown, D., 2008 | <i>Standard and guidance for the preparation of Archaeological Archives</i> (Institute for Archaeologists) |
| English Heritage 2007 | <i>Archaeology and Piling</i> London: English Heritage |
| Kelleher, S., 2008 | <i>Stafford College, Earl Street, Stafford: An archaeological desk-based assessment.</i> Birmingham Archaeology January 2008 |
| IfA, 2008 | <i>Standards and Guidelines for Archaeological excavations.</i> |
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| IfA, 2010 | <i>Code of Conduct</i> |

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