WV Living, Lakefield Road, Wednesfield, Wolverhampton
Archaeological Evaluation Report

June 2019

Client: Willmott Dixon Construction Ltd

Issue No: V. 1
NGR: SJ 95207 00277
WV Living, Lakefield Road, Wednesfield, Wolverhampton

Archaeological Evaluation Report

Written by Stephen Morgan

With illustrations by Mark Tidmarsh

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Summary

Oxford Archaeology (OA) North were commissioned by Willmott Dixon Construction Ltd to undertake an archaeological evaluation at the site of a proposed residential development on the former Wednesfield High School, Lakefield Road, Wednesfield, Wolverhampton, West Midlands (NGR SJ 95207 00277). The work was undertaken as a condition of Planning Permission (planning ref. 17/01089/FUL). Although the Local Planning Authority had not set a brief for the work, discussions with Eleanor Ramsey, Archaeology and Historic Environment Officer for the City of Wolverhampton Council, established the scope of work, which included recording of potential ridge and furrow, and the excavation of two 50m archaeological evaluation trenches across two putative crop makes identified on aerial photography. OA North were subsequently commissioned to produce a Written Scheme of Investigation (WSI; Appendix D) and undertake the fieldwork. The fieldwork was completed over two days on 13th and 14th May 2019.

Only one potential agricultural ridge was observed, during the ridge and furrow survey, and this was fairly ephemeral. There was no significant archaeology identified in the evaluation trenches, with one of the circular cropmarks potentially being explained by the presence of a modern levelling deposit. Due to the negative results, it has been suggested that no further archaeological works be undertaken.
Acknowledgements

Oxford Archaeology would like to thank Willmott Dixon Construction Ltd for commissioning this project. Thanks are also extended to Eleanor Ramsey who monitored the work on behalf of Wolverhampton City Council for her advice and guidance.

The project was managed for Oxford Archaeology by Paul Dunn. The fieldwork was directed by Aidan Parker, who was supported by Stephen Morgan. Survey and digitizing was carried out by Stephen Morgan. Illustrations were produced by Mark Tidmarsh.
1 INTRODUCTION

1.1 Scope of work

1.1.1 OA North was commissioned by Willmott Dixon Construction Ltd to undertake an archaeological evaluation at the site of a proposed residential development on the former Wednesfield High School, Lakefield Road, Wednesfield, Wolverhampton, West Midlands (NGR SJ 95207 00277; Fig 1).

1.1.2 The work was undertaken as a condition of Planning Permission (planning ref. 17/01089/FUL). Although the Local Planning Authority had not set a brief for the work, discussions with Eleanor Ramsey, Archaeology and Historic Environment Officer for the City of Wolverhampton Council, established the scope of work, which included recording of potential ridge and furrow, and the excavation of two 50m archaeological evaluation trenches across two putative crop marks identified on aerial photography. OA North were subsequently commissioned to produce a Written Scheme of Investigation (WSI; Appendix D) and undertake the fieldwork. The fieldwork was completed over two days on 13th and 14th May 2019. This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

1.2.1 The site lies to the north-east of the village of Wednesfield, c 4.25km east-north-east of Wolverhampton city centre (centered on NGR SJ 95207 00277; Fig 1). The development area is bounded by playing fields of Wednesfield High School to the north, Lakefield Road to the west, to the south by properties on the north side of March End Road, and to the east by an area of open land off the western side of Heather Close. The area of proposed development consists of the levelled remains of the former Wednesfield High School and its now disused playing fields.

1.2.2 The solid geology of the majority of the area is mapped as Microgabbro, an unnamed Westphalian igneous intrusion, whereas the south-eastern part of the site is mapped as Mudstone, Siltstone and Sandstone of the Pennine Lower Coal Formation. Both of these formed during the Carboniferous Period (BGS 2019). The superficial geology of the area is mapped as Diamicton, Devensian Till, formed during the Quaternary Period (ibid). The soils of the site are mapped as slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (Cranfield 2019).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site has been described in detail in the Archaeological Desk-Based Assessment (DBA) produced by Birmingham Archaeology (2010) and will not be reproduced here. Since the production of the DBA, two circular cropmarks had been identified within the site and recorded as Sites and Monuments Record Number 14917. These are visible on a black and white aerial photograph from the 1950s, as well as on LiDAR datasets (SMR 14917). The SMR identifies the circular cropmark as being approximately 17m in diameter and potentially being the remains of a barrow, whilst the second cropmark to the south-
west also being identified on LiDAR as a slightly raised area, 0.2m higher than the surrounding area (ibid). There is also a cropmark of a potential linear ditch.
2 AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The project aims and objectives were as follows:

i. to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;

ii. to determine or confirm the general nature of any remains present;

iii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;

iv. to inform a decision as to whether further archaeological investigation will be required during the construction phase of works;

v. to establish the significance of any archaeological remains present;

vi. to fully record, via photography and in plan, the surviving ridge and furrow on the site;

vii. to determine or confirm the nature of cropmarks identified on the 1950’s aerial photography and LiDAR;

viii. to compile a professional archival record of any archaeological remains within the site.

2.2 Methodology

2.2.1 The full methodology is outlined in the Written Scheme of Investigation and was adhered to in full, and, as such, was fully compliant with prevailing guidelines and established industry best practice (CIfA 2014a: 2014b: 2014c: Historic England 2015). A programme of field observation accurately recorded the character of deposits within the excavations.

2.2.2 The works, in the first instance, recorded the ridge and furrow identified on site through photography and differential Global Positioning System (dGPS) planning, accurate to within 0.02-0.03m, with altitude information being established with respect to Ordnance Survey Datum.

2.2.3 The topsoil and overburden were removed using a JCB 3CX excavator (fitted with a toothless ditching bucket) to the surface of the first significant archaeological deposit, under direct archaeological supervision at all times. Subsequent cleaning and investigation of all archaeological deposits were undertaken manually, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions. All features of archaeological interest were investigated and recorded.

2.2.4 The trenches were located by use of a differential Global Positioning System (dGPS), accurate to within 0.02-0.03m, and altitude information was established with respect to Ordnance Survey Datum. Prior to excavating, the trenches were scanned using a Cable Avoidance Tool (CAT) and Signal Generator (Genny), to identify any potential services. All trenches were excavated in a stratigraphic manner.

2.2.5 All information identified during the site works was recorded stratigraphically, using a system adapted from that used by the former Centre of Archaeology of English
Heritage, with an accompanying pictorial record (plans, sections, and digital photographs). Primary records were available for inspection at all times.

2.2.6 Results of all field investigations were recorded on pro forma context sheets. The site archive includes a photographic record. The site archive includes both a photographic and accurate large-scale plans and sections at appropriate scales (1:50, 1:20 1:10).

2.2.7 A full professional archive has been compiled in accordance with the Written Scheme of Investigation, and in accordance with current CIIfA (2014c) and Historic England guidelines (Historic England 2015). The archive will be deposited with Wolverhampton City Council.
3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A. The results of the ridge and furrow survey will be discussed first, followed by the results of the evaluation trenching.

3.2 Ridge and furrow survey

3.2.1 Only one example of potential ridge and furrow was encountered on the site, situated at the location of the north-eastern end of Trench 2 (Fig 2 and Plate 1). However, this north-west/south-east aligned ridge, which was approximately 9.5m wide and 0.56m high, was very ephemeral and no other examples were observed on the site. This lack of further ridge and furrow remains is probably due to the development area’s previous use as a school playing field. The strong light conditions and vegetation also made any subtle changes in relief difficult to ascertain.

Plate 1: Potential ridge, looking south-east
3.3 Evaluation trenching

3.3.1 The soil sequence in the trenches was fairly uniform. The natural geology of orange sandy clay was overlain by a mid grey brown sandy clay subsoil, which in turn was overlain by topsoil.

3.3.2 Ground conditions throughout the evaluation were generally good, and the site remained dry throughout. Had any archaeological features been present they would have been easy to identify against the underlying natural geology.

3.3.3 **Trench 1**: located in the north-eastern part of the site, targeting a circular and linear crop mark identified on aerial photography (Fig 2 and Plate 2). The trench was aligned north-north-west/south-south-east and measured 60m long by 1.6m wide and excavated to a maximum depth of 0.5m. Natural geology 102 was identified at a depth of 0.5m below ground level (bgl). 102 was overlain by subsoil 101, a mid grey brown silty clay, which was 0.20m thick, which was, in turn, overlain by topsoil 100, which was 0.2m thick. No archaeological features were present in this trench.

Plate 2: Trench 1, looking north-north-west with 1 x 1m scale and 1 x 2m scale
3.3.4 **Trench 2**: located in the central part of the site and targeting a circular cropmark identified on aerial photography (Fig 2 and Plate 3) was aligned north-east/south-west and measured 56m long by 1.6m wide and excavated to a maximum depth of 0.75m. The natural geology 204 was identified at a depth of 0.75m bgl in the south-western part of the trench, rising to 0.5m bgl in its north-eastern part. 204 was overlain by subsoil 203, a mid grey brown sandy clay, which varied in depth between 0.1m and 0.2m. 203 was overlain in the south-western part of the trench by modern levelling deposit 202, a dark greyish brown sandy silt which contained brick rubble, 0.25m thick. A 0.2m thick layer of redeposited natural soil 201 was found to overlay deposit 202. This redeposited natural soil was, in turn, overlain by topsoil 200, 0.2m thick. No archaeological features were present in this trench.

Plate 3: Trench 2, looking south-west, with 1 x 1m scale and 1 x 2m scale
4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 The ridge and furrow survey was hampered by strong light conditions leading to poor shadowing. It was also evident that the ground had been heavily disturbed in places leading to the presence of long grass.

4.1.2 The evaluation can be regarded as reliable as both trenches were excavated as originally intended. It was possible to site both trenches in their intended positions and the natural soils were of sufficient clarity that if any archaeological features had been present, they would have been seen. The weather was also favourable, with the trenches remaining dry throughout; however, the strong light conditions were not ideal.

4.2 Evaluation results and interpretation

4.2.1 Only one ephemeral ridge was identified during the ridge and furrow survey. It is likely that the site has been landscaped in the recent past, potentially carried out when the development area was converted to a school playing field. The one example identified may, in fact, relate to a modern levelling deposit identified in the south-western part of Trench 2.

4.2.2 No evidence of archaeological activity was observed in either of the evaluation trenches. This implies that the site was the location of only a low intensity of activity in the past, with only more recent attempts at landscaping, through levelling, being evident.

4.3 Significance

4.3.1 The results of the ridge and furrow survey suggest that any such remains have been lost due to landscaping. However, the strong light conditions and the over-grown nature of the site, made identifying any earthwork features difficult.

4.3.2 The results of the evaluation have shown that the cropmarks, identified on aerial photography, don’t appear to have survived. The features likely being truncated when the area was levelled for the use of a playing field.
Figure 1: Site location
APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

### Trench 1

**General description**
Trench devoid of archaeological features. Consists of topsoil and subsoil overlying natural geology.

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**Orientation**
NNE-SSW

**Length (m)**
60

**Width (m)**
1.6

**Avg. depth (m)**
0.50

### Trench 2

**General description**
Trench devoid of archaeological features. Consists of topsoil and subsoil overlying natural geology.

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**Orientation**
NE-SW

**Length (m)**
56

**Width (m)**
1.6

**Avg. depth (m)**
0.60

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APPENDIX B  BIBLIOGRAPHY


Chartered Institute for Archaeologists (CIfA), 2014a ‘Code of conduct’, Reading

Chartered Institute for Archaeologists (CIfA), 2014b ‘Standard and guidance for archaeological evaluation’, Reading

Chartered Institute for Archaeologists (CIfA), 2014c ‘Standard and guidance for the creation, preparation, transfer and deposition of archaeological archives’, Reading

Cranfield Soil and Agrifood Institute, 2019, National Soil Resources Institute, Soilscape of Britain Map, [Online], available at: http://www.landis.org.uk/soilscape/, Cranfield University (accessed June 2019)

## APPENDIX C
### SITE SUMMARY DETAILS

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<tr>
<td>Type:</td>
<td>Evaluation</td>
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<td>Date and duration:</td>
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<td>Area of Site</td>
<td>185.6m²</td>
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<td>Location of archive:</td>
<td>The archive is currently held at OA, Mill 3, Moor Lane Mils, Moor Lane, Lancaster and will be deposited with Wolverhampton City Council and ADS in due course.</td>
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<td>Summary of Results:</td>
<td>OA North were commissioned by Willmott Dixon Construction Ltd to undertake a ridge and furrow survey and archaeological evaluation of a residential development on the site of the former Wednesfield High School, Lakefield Road, Wednesfield, Wolverhampton, West Midlands (NGR SJ 95207 00277). Both elements of fieldwork were undertaken on 13th and 14th May 2019. One potential agricultural ridge was observed on the site prior to the excavation of the archaeological evaluation trenching. Two evaluation trenches were excavated. No significant archaeological features were identified during the fieldwork.</td>
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APPENDIX D  WRITTEN SCHEME OF INVESTIGATION
Client Name: Willmott Dixon Construction Ltd
Document Title: WV Living, Lakefield Road, Wolverhampton, West Midlands
Document Type: Written Scheme of Investigation for an Archaeological Evaluation
Grid Reference: SJ 952 007
Planning Reference: 17/01089/FUL
Site Code:
Invoice Code:

OA Document File Location: X:\Paul\Tenders\22947_Fomer_Wednesfield_High_School_Wolverhampton\WSI
OA Graphics File Location: X:\Paul\Tenders\22947_Fomer_Wednesfield_High_School_Wolverhampton\OAN_CAD

Issue No: V. 1
Date: April 2019
Prepared by: Paul Dunn (Project Manager)
Checked by: Paul Dunn (Project Manager)

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WV Living, Lakefield Road, Wolverhampton, West Midlands

Written Scheme of Investigation for an Archaeological Evaluation

Centred on SJ 95207 00277

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Fig. 2   Proposed Trench Locations
1 INTRODUCTION

1.1 Project details

1.1.1 Oxford Archaeology (OA) North has been commissioned by Willmott Dixon Construction Ltd to undertake an archaeological evaluation and recording of ridge and furrow at the site of a proposed residential development, WV Living, Lakefield Road, Wolverhampton, West Midlands (NGR SJ 95207 00277).

1.1.2 The work is being undertaken as a condition of Planning Permission (planning ref: 17/01089/FUL). Planning condition 9 states;

9. Prior to the commencement of development, a written scheme of archaeological investigation and recording shall be submitted to and approved in writing by the local planning authority. Thereafter, a programme of archaeological work and recording shall be implemented in accordance with the approved scheme and a copy of the record shall be submitted to the local planning authority.

Reason: - To ensure that below ground archaeological remains are recorded. Relevant policies are UDP policies HE24, HE26 and HE28 and BCCS policy ENV2.

1.1.3 Although the Local Planning Authority has not set a brief for the work, discussions with Eleanor Ramsey, Archaeology and Historic Environment Officer for City of Wolverhampton Council, have established the scope of work required. This scope required that the programme of work, in the first instance, would be to record ridge and furrow, and to excavate two 50m archaeological evaluation trenches across two putative crop marks identified on aerial photography. OA North were subsequently commissioned to produce this Written Scheme of Investigation (WSI). This document outlines how OA will implement those requirements.

1.1.4 All work will be undertaken in accordance with local and national planning policies referenced within this document.

1.2 Location, topography and geology

1.2.1 The site lies to the north-east of the village of Wednesfield, c 4.25km east-north-east of Wolverhampton city centre, and centred on NGR SJ 95207 00277 (Fig 1). The site is bounded by playing fields of Wednesfield High School to the north, Lakefield Road to the west, to the south by properties on the north side of March End Road and to the east by an area of open land off the western side of Heather Close. The site currently comprises the leveled remains of the former Wednesfield High School and its now disused playing fields.

1.2.2 The solid geology of the majority of the area is mapped as Microgabbro, an Unnamed Igneous Intrusion, Westphalian, whereas the south-eastern part of the site is mapped as Mudstone, Siltstone and Sandstone of the Pennine Lower Coal Formation, both formed during the Carboniferous Period (BGS 2019). The Superficial geology of the area is mapped as Diamicton, Devensian Till, formed during the Quaternary Period (ibid). The soils of the site are mapped as slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (Cranfield 2019).
2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

2.1 Archaeological and historical background

2.1.1 The archaeological and historical background of the site has been described in detail in the Archaeological Desk-Based Assessment (DBA) produced by Birmingham Archaeology (2010), and will not be reproduced here. Since the production of the DBA, two circular cropmarks have been identified within the site and recorded as Sites and Monuments Record Number 14917. These are visible on a black and white aerial photograph from the 1950’s, as well, as on LiDAR datasets (SMR 14917). The SMR record identifies the circular cropmark as being approximately 17m in diameter and potentially being the remains of a barrow, whilst the second cropmark to the south-west also being identified on LiDAR as a slightly raised area, 0.2m higher than the surrounding area (ibid).

2.2 Potential

2.2.1 There is potential for remains to buried archaeological remains to survive relating to these cropmarks, which would be disturbed by the construction of the proposed development. The ridge and furrow would also be completely disturbed by the development.
3 PROJECT AIMS

3.1 General

3.1.1 The general aims of the project can be summaries as follows;

- to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;
- to determine or confirm the general nature of any remains present;
- to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
- to inform a decision as to whether further archaeological investigation will be required during the construction phase of works;
- to establish the significance of any archaeological remains present;
- to compile a professional archival record of any archaeological remains within the site.

3.2 Specific aims and objectives

3.2.1 The specific aims and objectives of the archaeological evaluation are;

i. to determine or confirm the general nature of any remains present;
ii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence.
iii. to fully record, via photography and in plan, the surviving ridge and furrow on the site;
iv. to determine or confirm the nature of cropmarks identified on the 1950’s aerial photography and LiDAR.
4  **PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY**

4.1  **Scope of works**

4.1.1  The works, in the first instance, will record the ridge and furrow identified on site through photography and plan. Two archaeological evaluation trenches, measuring 50m long by 2m wide, will then be excavated in the location of the two putative cropmarks (Fig 2). The trenches will be excavated by a mechanical excavator fitted with a toothless ditching bucket, supervised by a suitably experience archaeologist. The spoil will be checked for finds and if significant material is detected this will be retained. Once the trench is excavated to natural geology, the first significant archaeological horizon or a safe working depth of 1.2m below ground level, they will then be manually cleaned and recorded. If archaeological features are present, they will be excavated, cleaned and recorded. If potentially significant archaeological remains are identified, the archaeologist will inform the client and will then consult with the Archaeology and Historic Environment Officer for City of Wolverhampton Council.

4.1.2  Once the trenches have been fully recorded they will then be backfilled with the material arisings from the trench, in the reverse order to which they were excavated, *i.e.* subsoil first and then topsoil. There will be no further compaction other than that provided by the mechanical excavator on-site.

4.2  **Programme**

4.2.1  It is anticipated that the fieldwork will take two days to complete, by a team consisting of a Project Officer or Project Supervisor, to be confirmed, directing up to one Project Archaeologists, under the management of Paul Dunn, Project Manager.

4.2.2  All fieldwork undertaken by OA North is overseen by the Operations Manager, Alan Lupton MCIfA.

4.3  **Site specific methodology**

4.3.1  A summary of OA’s general approach to excavation and recording can be found in *Appendix A*. Standard methodologies for Geomatics and Survey, Environmental evidence, Artefactual evidence and Burials can also be found below (*Appendices B, C, D and E* respectively).

4.3.2  Site specific methodologies will be as follows;

i.  initially, the ridge and furrow will be recorded photographically and in plan, prior to any groundbreaking;

ii.  with the ridge and furrow recorded, the evaluation trenches will be set-out using a dGPS, accurate to 0.02m. The trenches will then be scanned using a Cable Avoidance Tool (CAT) and Signal Generator (Genny), operated by a suitably qualified and experienced person, the position of any potential services will be marked. Once the trench locations are identified as clear the mechanical excavation of the trenches can begin;

iii.  the trenches will be excavated by mechanical excavator, fitted with a toothless ditching bucket, under the direct supervision of the Project Officer or Project
Supervisor, in even spits to natural geology, the first archaeological horizon, or a safe working depth of 1.2m below ground level, whichever comes first;

iv. the topsoil and subsoil will be kept separate and bunded on either side of the trenches. The trenches will not exceed a safe working depth of 1.2m below ground level, if natural geology is not identified within the 1.2m, localised sondages will be excavated to test the depth of natural geology where appropriate;

v. once the mechanical excavation of the trenches is complete, they will then be cleaned and recorded by hand, where necessary, and any archaeological features will be hand excavated, cleaned and recorded. The hand excavation and recording methodology can be found in Appendix A;

vi. if any features of significance are identified during the evaluation trenching, the client will be informed, in the first instance, and then the Archaeology and Historic Environment Officer for City of Wolverhampton Council will be consulted. A decision whether to continue the trench or stop at that level and record will then be made;

vii. with the trenches fully recorded, they will be backfilled by the mechanical excavator. The spoil will be backfilled in the reverse order in which it was excavated, i.e. subsoil first and then topsoil. The trenches will be compacted by the mechanical excavator only and not by any other type of plant (Appendix A);

viii. the ultimate release of the planning condition will be dependent upon the successful completion of the archaeological aims, but also the production of a complete archaeological report detailing the results of the evaluation and an interpretation of their significance. If significant archaeological features are identified during the evaluation, there may be a requirement that further archaeological works, in the form of either a strip, map and record or watching brief, to be undertaken during construction works;

ix. at all times, the archaeologist will work under the Health and Safety directions of the principal contractor on-site.
5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY

5.1 Programme

5.1.1 An interim report will be made available to the client within 7 days of the completion of the fieldwork. The final report will then be completed within 6 weeks of the completion of the fieldwork.

5.1.2 A copy of the report in Adobe Acrobat (.pdf) format will be provided to the client. The report will also be provided to the Archaeology and Historic Environment Officer for City of Wolverhampton Council, for their comment prior to final issue. Paper copies can also be provided on request.

5.2 Content

5.2.1 The content of this report will be as defined in Appendix F.

5.3 Specialist input

5.3.1 OA has a large pool of internal specialists, as well as a network of external specialists with whom OA have well established working relationships. A general list of these specialists is presented in Appendix G; in the event that additional input should be required, an updated list of specialists can be supplied.

5.4 Archive

5.4.1 The site archive will be deposited with Wolverhampton City Archives following completion of the project. An OASIS summary will be produced once the archive is ready for deposition, with a digital copy of the final report being uploaded.

5.4.2 A summary of OA’s general approach to documentary archiving can be found in Appendix H.
6 HEALTH AND SAFETY

6.1 Roles and responsibilities

6.1.1 The Project Manager, Paul Dunn, will have responsibility for ensuring that safe systems of work are adhered to on site. Elements of this responsibility will be delegated to the Project Officer/Supervisor, who implements these on a day to day basis. Paul Dunn and the Project Officer/Supervisor are supported by OA North’s Health and Safety Advisor, Fraser Brown.

6.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore Tech IOSH (Chief Business Officer).

6.2 Method statement and risk assessment

6.2.1 A summary of OA’s general approach to health and safety can be found in Appendix I. A risk assessment has also been undertaken and approved and will be kept on site, along with OA’s standard Health and Safety file, which will contain all relevant health and safety documentation.

6.2.2 The Health and Safety file will be available to view at any time.

6.3 Monitoring of works

6.3.1 The archaeological investigations will be monitored where appropriate by the Archaeology and Historic Environment Officer for City of Wolverhampton Council. All such visits will be carried out under the auspices of the main contractors Health and Safety Plan and visitors will have a current CSCS card, wear appropriate PPE and be accompanied at all times.
7 BIBLIOGRAPHY


Cranfield Soil and Agrifood Institute, 2019, National Soil Resources Institute, Soilscape of Britain Map, [Online], available at: http://www.landis.org.uk/soilscape/, Cranfield University (accessed April 2019)
Figure 1: Site location
The following methods and terms will apply, where appropriate, to all OA fieldwork unless varied by the accompanying detailed Written Scheme of Investigation.
Copies of all OA internal standards and guidelines referred to below are available on request.

APPENDIX A  GENERAL EXCAVATION AND RECORDING METHODOLOGY

A.1  Standard methodology – summary

Mechanical excavation

A.1.1 An appropriate mechanical excavator will be used for machine excavation. This will normally be a JCB or 360° tracked excavator with a 1.5 m to 2 m wide toothless ditching bucket. For work with restricted access or working room a mini excavator may be used.

A.1.2 All mechanical excavation will be undertaken under direct archaeological supervision.

A.1.3 All undifferentiated topsoil or overburden of recent origin will be removed down to the first significant archaeological horizon, in successive, level spits.

A.1.4 Following mechanical excavation, all areas that require examination or recording will be cleaned using appropriate hand tools.

A.1.5 Spoil heaps will be monitored in order to recover artefacts to assist in the analysis of the spatial distribution of artefacts. Modern artefacts will be noted but not retained.

A.1.6 After recording, evaluation trenches and test pits will usually be backfilled with excavated material in reverse order of excavation, and compacted as far as is practicable with the mechanical excavator. Area excavations will not normally be backfilled.

Hand excavation

A.1.7 All investigation of archaeological levels will usually be by hand, with cleaning, examination and recording both in plan and section.

A.1.8 Within significant archaeological levels the minimum number and proportion of features required to meet the aims of the excavation will be hand excavated. Pits and postholes will usually be subject to a 50% sample by volume. Linear features will be sectioned as appropriate. More complex features such as those associated with funerary activity will usually be subject to 100% hand excavation.

A.1.9 In the case of evaluations, it is not necessarily the intention that all trial trenches will be fully excavated to natural stratigraphy, but the depth of archaeological deposits across the site will be assessed. The stratigraphy of a representative sample of the evaluation trenches will be recorded even where no archaeological deposits have been identified. Any excavation, both by machine and by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits, which appear to be worthy of preservation in situ.
Recording

A.1.10 Written descriptions will be recorded on proforma sheets comprising factual data and interpretative elements.

A.1.11 Where stratified deposits are encountered a Harris matrix will be compiled during the course of the excavation.

A.1.12 Plans will normally be drawn at 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Detailed plans will be at an appropriate scale. Burials will be drawn at scale 1:10 or recorded using geo-referenced digital photography.

A.1.13 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.

A.1.14 A register of plans will be kept.

A.1.15 Long sections of showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.

A.1.16 A register of sections will be kept.

A.1.17 Generally, all sections will be tied in to Ordnance Datum.

A.1.18 A full photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include working shots to illustrate more generally the nature of the archaeological work.

A.1.19 Photographs will be recorded on OA Photographic Record Sheets.

A.2 Relevant industry standards and guidelines

A.2.1 The Chartered Institute for Archaeologists Standard and Guidance notes relevant to fieldwork are:

- Standard and Guidance for Archaeological Field Evaluation
- Standard and Guidance for Archaeological Excavation
- Standard and Guidance for an Archaeological Watching Brief.

A.2.2 These will be adhered to at all times.

A.3 Relevant OA manual and other supporting documentation

A.3.1 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming).

A.3.2 Further guidance is provided to all excavators in the form of the OA 'Fieldwork Crib Sheets - a companion guide to the Fieldwork Manual'. These have been issued ahead of formal publication of the revised Fieldwork Manual.
APPENDIX B GEOMATICS AND SURVEY

B.1 Standard methodology - summary

B.1.1 The aim of OA methodology is to provide comprehensive survey cover of all investigation areas. Additionally, it is designed to provide coverage for any areas, beyond the original scope of the project, which arise as a result of further work. It provides digital plans of all required elements of the project and locates them within an overall grid.

B.1.2 It also maintains all necessary survey data and ensures that the relevant information is copied into the primary record, in order to ensure the integrity of the project archive. Furthermore, it ensures that all core data is securely stored and backed up. It establishes accurate project reference systems utilising a series of control stations and permanent base lines.

B.1.3 The survey will be conducted using a combination of Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM) where appropriate, hand-measured elements and GPS (Global Positioning System), or photogrammetry.

B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area. Control stations will be tied in to known points or existing features using rigorous metric observation. The control network will be set in using a TST to complete a traverse or using techniques as appropriate to ensure sufficient accuracy. A GPS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.

B.1.5 All control stations will be checked by closed traverse and/or GPS, as appropriate. The accuracy of these control stations will be assessed on a regular basis and re-established accordingly. All stations will be recorded on Survey Control Station sheets.

B.1.6 Each control station will be marked with a PGM (Permanent Ground Marker). Witness diagrams will include the full 3-D co-ordinates generated, a sketch diagram and measurements to at least three fixed details, written description of the mark and a photograph of the control point in its environs.

B.1.7 Prior to entry into the field all equipment will be checked, and all pre-survey information will be logged onto the field computer and uploaded onto survey equipment as appropriate. The software in the field computer will be verified and all cabling between the GPS and/or TST and computer will be checked. Prior to conducting the survey, the site will be reconnoitred for locations for a viable control network and check the line of sight and any possible hindrance to survey. Daily record sheets will be kept to record daily tasks and conditions.

B.1.8 All spatial data will be periodically downloaded onto a field computer, and backed up onto CD, or DVD. It will be cleaned, validated and inspected.

B.1.9 All survey data will be documented on daily survey record sheets. Information entered on these sheets includes key set up information (Instrument height etc.) as well as daily variables and errors/comments. All survey data will be digitally recorded in a raw
format and translated during the download process this shall allow for any errors to be cross referenced with the daily survey record and corrected accordingly.

B.1.10 A weekly summary of survey work will be produced to access development and highlight problems. This information also will be recorded on the weekly survey journal. Technical support for the survey equipment and download software shall be available at all times. In those instances, where sites are remotely operated, all digital data will be backed up regularly and a copy returned to Oxford on a weekly basis.

B.1.11 A site plan will initially be created by a rapid survey of relevant archaeological features by mapping their extent using a combination of TST and GPS. This will form the basis for deciding excavation strategy and will be updated as the excavation clarifies the extent of, and relationships between, archaeological features.

B.1.12 Excavated archaeological interventions and areas of complex stratigraphy will be hand drawn. At least two Drawing Points (DPs) will be set in as a baseline and measurements taken off this by tape and offset. The hand drawn plans will be referenced to the digitally captured pre-site plan by measuring in the DPs with a TST or GPS. These hand drawn elements will then be scanned in, geo-referenced using the DPs as reference points and digitised following OA’s digitising protocols. For further details on hand planning procedure please refer to the fieldwork guidelines.

B.1.13 Where appropriate photogrammetry or rectified photography may be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for photogrammetry or rectified photography.

B.1.14 Survey data recorded in the field will be downloaded using appropriate downloading software, and saved as an AutoCAD Map DWG file, or an ESRI Shapefile. These files will be regularly updated and backed up with originals being stored on an OA server in Oxford.

B.1.15 All drawings will be composed of closed polygons, polylines or points in accordance with the requirements of GIS construction and OA Geomatics protocols. Once created, additional GIS/CAD work will normally be carried out at the local OA central office or at on-site remote locations when appropriate. Support for all GIS/CAD work will be available from OA’s Oxford Office during normal office hours. The aim of the GIS/CAD work is to produce workable draft plans, which can be produced as stand-alone products, or can be readily converted to GIS format. Any hand-drawn plans will be scanned and digitised on site in the first instance. Subsequent plans will be added to the main drawing as it develops.

B.1.16 All plan scans will be numbered according to their plan site number. Digital plans will be given a standard new plan number taken out from the site plan index.

B.1.17 All digital data will be backed up incrementally on CD or DVD. On each Friday the entire data directory will be backed up and returned to Oxford where it will be copied onto the OA projects server. Each CAD drawing will contain an information layout which will include all the relevant details appertaining to that drawing. Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all raw measurements will be made available as hard copy for archiving purposes.
B.2 Relevant industry standards and guidelines


B.3 Relevant OA manual and other supporting documentation

B.3.1 OA South Metric Survey, Data Capture and Download Procedures

B.3.2 OA South Digitising Protocols

B.3.3 OA South GIS Protocols

B.3.4 These will be superseded by the OA South Geomatics Manual (in progress).
APPENDIX C  ENVIRONMENTAL EVIDENCE

C.1 Standard methodology – summary

C.1.1 Different environmental and geoarchaeological sampling strategies may be employed according to established research targets and the perceived importance of the strata under investigation. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies. Sampling methods will follow guidelines produced by Historic England and Oxford Archaeology. A register of samples will be kept. Specialists will be consulted where non-standard sampling is required (e.g. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.

C.1.2 Geoarchaeological sampling methods are site specific, and methodologies will be designed in consultation with the geoarchaeological manager on a site by site basis.

C.1.3 Bulk soil samples, where possible of 40 litres or 100% of a deposit if less is available, will be taken from potentially datable features and layers for flotation for charred plant remains and for the recovery of small bones and artefacts. Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments. Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods and foraminifera if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) and possibly for metallurgical analysis in consultation with the appropriate specialists.

C.1.4 Bulk samples from dry deposits will be processed by standard water flotation using a modified Siraf-style machine and meshes of 0.25mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). Heavy residues will be wet sieved, air dried and sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples (1L subsample) and snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.25mm (waterlogged plants) and 0.5mm (snails) respectively; these flots and residues will be sorted by the specialist. Samples specifically taken for insects, pollen, other microflora and microfauna, metallurgy and soil analysis will be submitted as whole earth to the appropriate specialists or processed following their instructions.

C.2 Relevant industry standards and guidelines


C.3 Relevant OA manual and other supporting documentation

APPENDIX D  ARTEFACTUAL EVIDENCE

D.1  Standard methodology - summary

D.1.1  Before a site begins arrangements concerning the finds will be discussed with the Head of Finds. Information will be provided by the project manager about the nature of the site, the expected size and make-up of the finds assemblage and any site specific finds retrieval strategies. On-site requirements will be discussed and a conservator appointed who can be called on to make site visits if required. Special requirements regarding particular categories of material will be raised at this early stage for instance the likelihood of recovering assemblages of waterlogged material, large timbers, quantities of structural stone or ceramic building material. Specialists may be required to visit sites to discuss retrieval strategies.

D.1.2  The project manager will supply the Head of Finds with contact details of the landowner of the site so that consent to deposit any finds resulting from the investigation can be sought.

D.1.3  The on-site retrieval, lifting and short term packaging of bulk and small finds will follow the detailed guidelines set out in the OA Finds Manual (sections 2 and 3), First Aid for Finds and the UKIC conservation guidelines No.2.

D.1.4  All finds recovered from site will be transported to an OA regional office for processing; local sites will return finds at the end of each day, away based sites at the end of each week. Special arrangements can be discussed for certain sites with the department manager before the start of a project. Larger long running sites may in some instances set up on-site processing units to deal with the material from a particular site.

D.1.5  All finds qualifying as Treasure will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act (1996), and the Treasure (Designation) Order 2002. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

D.1.6  Each box of finds will be accompanied by a finds context checklist itemising the finds within each box. The number of bags of finds from each context and individual small find from each context will be recorded. A member of the processing team will check the list when it arrives in the department. There are separate forms for finds recovered from fieldwalking.

D.1.7  The processing programme is reviewed on a weekly basis and priorities are worked out after discussions with the Head of Fieldwork and the Head of Post-excavation. Project managers will keep the Head of Finds informed of any pressing deadlines that they are aware of. All finds from evaluations are dealt with as a matter of priority.

D.1.8  All bulk finds are washed (where appropriate), marked, bagged and boxed by the processing team according to the guidelines set out in section 4 and 5 of the OA Finds Manual, First-aid for finds and the UKIC guidelines No.2. They must also take into account the requirements of the receiving museum. Primary data recording count and weight of fragments by material from each context is recorded on the site database.
D.1.9 Unstable and sensitive objects are recorded onto the database and then packaged and stored in controlled environments according to their individual requirements. The advice of a conservator will be sought for sensitive objects in need of urgent conservation. All metalwork will be x-rayed prior to assessment (and to meet the requirements of most receiving museums).

D.1.10 Finds recovered from the environmental sample processing will be incorporated into the main assemblage and added to the database.

D.1.11 On completion of the processing and data entry a finds file for each archaeological investigation will be produced, a summary of which is available for the project manager. The assemblage is allocated an OA number for storage purposes. Bulk finds are stored on a roller racking system, metals in a secure controlled storage and organic finds are refrigerated where possible.

D.1.12 The movement of finds in and out of the department storage areas is strictly monitored and recorded. Carbon copy transit forms exist to record this information. Finds will not be removed from storage without the prior knowledge of the Head of Finds.

D.1.13 Finds information summarised in the finds compendium is used to assess the finds requirements for the post excavation stages of the project. The Finds department holds a list of all specialists used by OA (see below) both internal and external.

D.1.14 On completion of the post excavation stage of the project the department prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the head of finds to finalise any selection, retention or discard policy. Most museums issue strict guidelines for the preparation of archives for deposition with their individual labelling, packaging and recording requirements.

D.2 Relevant industry standards and guidelines


D.3 Relevant OA manual and other supporting documentation

D.3.1 Allen, L, and Cropper, C (internal publication only) Oxford Archaeology Finds Manual.
APPENDIX E  HUMAN REMAINS

E.1  Standard methodology - summary

E.1.1 Human remains will not be excavated without a relevant licence/faculty and, where applicable (for example, a post medieval cemetery), a risk assessment from the local environmental officer.

E.1.2 All human remains will be treated with due care and regard to the sensitivities involved, and will be screened from the public throughout the course of the works.

E.1.3 Excavation will be undertaken in accordance with CIfA (Roberts and McKinley 1993), Historic England (2018) and the Advisory Panel on the Archaeology of Burials in England (APABE, 2015, 2017). For crypts and post-medieval burials, the recommendations set out by the CIfA (Cox 2001) and by the Association of Diocesan and Cathedral Archaeologists and APABE (2010) are also relevant.

E.1.4 In accordance with recommendations set out in the Historic England and Church of England (2005) and updated by the Advisory Panel on the Archaeology of Burials in England (2017), skeletons will not be excavated beyond the limits of the trench, unless they are deemed osteologically or archaeologically important.

E.1.5 Where any soft tissue survives and/or materials (for example, inner coffins, mattresses and other paddings) soaked in body liquor, no excavation or handling of the remains will take place until an appropriate risk assessment has been undertaken. Relevant protocols (i.e. Cox 2001) for their excavation, recording and removal will be adhered to.

E.1.6 OA does not excavate or remove modern burials (those less than 100 years old) and does not remove or open sealed lead coffins. Appropriate PPE (e.g. chemical suit, latex gloves) will be worn by all staff when working with lead coffins.

E.1.7 Graves and their contents will be hand excavated in plan. Each component (for example, skeleton, grave cut, coffin (or remains of), grave fill) will be assigned a unique context number from a running sequence. A group number will also be assigned to all of these, and small finds numbers to features such as coffin nails, hobnails and other grave goods (as appropriate).

E.1.8 Soil samples will be normally taken during the excavation of inhumations, usually from the region of the skull, chest, right hand, left hand, abdomen and pelvis, right foot and left foot. Infants (circa. less than 5 years) will normally be recovered as bulk samples. Soil samples will also be taken from graves that appear to contain no human bone.

E.1.9 Burials (including the skeleton, cremation, coffin fittings, coffin, urn, grave goods / other) will be recorded by photographic and written record using specialised pro forma context sheets, although these records may only include schematic representations of the location and position of the skeletons, depending on the nature and circumstances of the burial.

E.1.10 Where necessary, hand drawn plans (usually at 1:10, sometimes 1:5) will be made, especially of contexts where required details cannot be adequately seen using photography (for example, urned cremations; undisturbed hob nails).
E.1.11 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.

E.1.12 Human remains that are exhumed will be bagged and labelled according to skeletal region and carefully packed into suitable containers (for example, acid free cardboard boxes) and transported to a suitable storage location. Any associated coffins and coffin fittings will be contained with the human remains wherever possible.

E.1.13 Unurned cremations will not usually be half sectioned, but excavated in spits and/or quadrants (i.e. large deposits or spreads), or recovered as a bulk sample.

E.1.14 Wherever possible, urned cremations will be carefully bandaged, recovered whole and will be excavated in the laboratory, as per the recommendations of McKinley (2004, 2017).

E.1.15 Unless deemed osteologically or archaeologically important disarticulated bone / charnel will be collected and reserved for re-burial if immediate re-internment as close to its original position is not practicable. In some instances, a rapid scan of this material may be undertaken by a qualified osteologist, if deemed relevant.

E.1.16 If undisturbed, pyre sites will normally be excavated in quadrants, at the very least in 0.5 m blocks of 0.5 m spits.

E.1.17 Pyre debris dumps will be half sectioned or quadranted and will be subject to 100% sampling.

E.1.18 Wooden and lead coffins and any associated fittings, including fixing nails will be recorded on a pro forma coffin recording sheet. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by OA. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible departum plate inscriptions will be recorded and further documentary research will be made.

E.1.19 Funerary structures, such as brick shaft graves and/or vaults will be recorded by photogrammetry or hand-drawn at a scale of 1:10 or 1:20, as appropriate. Location, dimensions and method of construction will be noted, and the structure added to the overall trench plan.

E.1.20 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.

E.1.21 Where required, memorials will be accorded an individual context number and will also be included as part of the grave group, if the association with a burial is clear.

E.1.22 Memorials will be recorded on pro-forma context sheets, based on and following the guidelines set out by Mytum (2002), and will include details of:

- Shape
- Dimensions
- Type of stone used
• Condition, completeness and fragmentation of stones, no longer in original positions
• Iconography (an illustration may best describe these features)
• Inscription (verbatim record of inscription; font of the lettering)
• Stylistic type

E.2 Relevant industry standards and guidelines


E.2.4 Association of Diocesan and Cathedral Archaeologists and APABE. 2010 Archaeology and Burial Vaults. A guidance note for churches. Guidance Note 2

E.2.5 British Association of Biological Anthropology and Osteoarchaeology. 2010a Code of Practice

E.2.6 British Association of Biological Anthropology and Osteoarchaeology. 2010b Code of Ethics

E.2.7 Cox, M, 2001 Crypt archaeology. An approach. CIfA Paper No. 3

E.2.8 English Heritage, 2002 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports


E.2.13 Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, CIFA 2017


E.2.16 The Human Tissue Act 2004

E.3 Relevant OA manual and other supporting documentation

E.3.1 Loe, L, 2008 The Treatment of Human Remains in the Care of Oxford Archaeology. Oxford Archaeology internal policy document

E.3.2 Excavating and recording of buried human remains. Oxford Archaeology internal guidelines document
APPENDIX F  REPORTING

F.1  Standard methodology - summary

F.1.1  For Watching Briefs and Evaluations, the style and format of the report will be determined by OA, but will include as a minimum the following:

- A location plan of trenches and/or other fieldwork in relation to the proposed development.
- Plans and sections of features located at an appropriate scale.
- A section drawing showing depth of deposits including present ground level with Ordnance Datum, vertical and horizontal scale.
- A summary statement of the results.
- A table summarising the features, classes and numbers of artefacts contained within, spot dating of significant finds and an interpretation.
- A reconsideration of the methodology used, and a confidence rating for the results.
- An interpretation of the archaeological findings both within the site and within their wider landscape/townscape setting.

F.1.2  For Excavations, a Post-Excavation Assessment and Project Design will generally be prepared, as prescribed by Historic England Management of Research Projects in the Historic Environment (MoRPHE) 2006, Section 2.3. This will include a Project Description containing:

- A summary description and background of the project.
- A summary of the quantities and assessment of potential for analysis of the information recovered for each category of site, finds, dating and environmental data. Detailed assessment reports will be contained within appendices.
- An explicit statement of the scope of the project design and how the project relates to any other projects or work preceding, concurrent with or following on from it.
- A statement of the research aims of the fieldwork and an illustrated summary of results to date indicating to what extent the aims were fulfilled.
- A list of the project aims as revised in the light of the results of fieldwork and the current post-excavation assessment process.

F.1.3  A section on Resources and Programming will also be produced, containing:

- A list of the personnel involved indicating their qualifications for the tasks undertaken, along with an explanation of how the project team will communicate, both internally and externally.
- A list of the methods which will be used to achieve the revised research aims.
A list of all the tasks involved in using the stated methods to achieve the aims and produce a report and research archive in the stated format, indicating the personnel and time in days involved in each task. Allowance should be made for general project-related tasks such as monitoring, management and project meetings, editorial and revision time.

A cascade or Gantt chart indicating tasks in the sequence and relationships required to complete the project. Due allowance will be made for leave and public holidays. Time will also be allowed for the report to be read by a named academic referee as agreed with the County Archaeological Officer, and by the County Archaeological Officer.

A report synopsis indicating publisher and report format, broken down into chapters, section headings and subheadings, with approximate word lengths and numbers and titles of illustrations per chapter. The structure of the report synopsis should explicitly reflect the research aims of the project.

F.1.4 The Project Design will be submitted to the County Archaeological Officer or equivalent for agreement.

F.1.5 Under certain circumstances (e.g. with very small mitigations), and as agreed with the County Archaeological Officer or equivalent, a formal Assessment and Project Design may not be required and either the project will continue straight to full analysis, or a simple Project Proposal (MoRPHE 2006 Section 2.1) will be produced prior to full analysis. This proposal may include:

- A summary of the background to the project
- Research aims and objectives
- Methods statement outlining how the aims and objectives will be achieved
- An outline of the stages, products and tasks
- Proposed project team
- Estimated overall timetable and budget if appropriate.

F.1.6 Once the post-excavation Project Design or Project Proposal has been accepted, the County Archaeological Officer or his appointed deputy will monitor the progress of the post-excavation project at agreed points. Any significant variation in the project design will be agreed with the County Archaeological Officer.

F.1.7 The results of the project will be published in an appropriate archaeological journal or monograph. The appropriate level of publication will be dependent on the significance of the fieldwork results and will be agreed with the County Archaeological Officer. An OASIS (Online Access to the Index of Archaeological Investigations) form will be completed for each project as per Historic England guidelines.

F.2 Relevant industry standards and guidelines

F.2.1 Oxford Archaeology (OA) adheres to the national standards in post-excavation procedure as outlined in Historic England’s Management of Research Projects in the Historic Environment (MoRPHE; EH 2006). Furthermore, all post-excavation projects
take into account the appropriate regional research frameworks as well as national research agendas such as the Framework for Historic Environment Activities & Programmes in Historic England (SHAPE; EH 2008).
APPENDIX G  LIST OF SPECIALISTS REGULARLY USED BY OA

G.1.1 Below are two tables, one containing 'in-house' OA specialists, and the other containing a list of external specialists who are regularly used by OA.

**Internal archaeological specialists used by OA**

<table>
<thead>
<tr>
<th>Specialist</th>
<th>Specialism</th>
<th>Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lisa Brown</td>
<td>Early Prehistoric pottery</td>
<td>BA, PGDip, MLitt, MCIfA</td>
</tr>
<tr>
<td>Paul Booth</td>
<td>Iron Age and Roman pottery</td>
<td>BA, FSA, MCIfA</td>
</tr>
<tr>
<td>John Cotter</td>
<td>Medieval and Post Medieval pottery, Clay Pipe and CBM</td>
<td>BA (Hons), MCIfA</td>
</tr>
<tr>
<td>Cynthia Poole</td>
<td>CBM and Fired Clay</td>
<td>BA (Hons), MSc</td>
</tr>
<tr>
<td>Edward Biddulph</td>
<td>Roman Pottery</td>
<td>BA (Hons), MA, MCIfA</td>
</tr>
<tr>
<td>Ian Scott</td>
<td>Metalwork and Glass</td>
<td>BA (Hons)</td>
</tr>
<tr>
<td>Leigh Allen</td>
<td>Metalwork and worked bone</td>
<td>BA (Hons), PGDip</td>
</tr>
<tr>
<td>Dr Ruth Shaffrey</td>
<td>Worked stone artefacts</td>
<td>BA, PhD, MCIfA</td>
</tr>
<tr>
<td>Julian Munby</td>
<td>Architectural Stone</td>
<td>BA, FSA</td>
</tr>
<tr>
<td>Dr Rebecca Nicholson</td>
<td>Fish and Bird Bone</td>
<td>BA (Hons), MA, D.Phil, MCIfA, FSA Scot</td>
</tr>
<tr>
<td>Dr Mairead Rutherford</td>
<td>Pollen</td>
<td>BSc, MSc</td>
</tr>
<tr>
<td>Lee Broderick</td>
<td>Animal bone</td>
<td>BA (Hons), MA, MSc, FZG, SAC Dip (ecology)</td>
</tr>
<tr>
<td>Julia Meen</td>
<td>Charred and waterlogged plant remains and charcoal</td>
<td>BSc (Hons), MA</td>
</tr>
<tr>
<td>Dr Denise Druce</td>
<td>Charred plant remains, charcoal and pollen</td>
<td>BA (Hons), PhD, MCIfA</td>
</tr>
<tr>
<td>Elizabeth Stafford</td>
<td>Geoarchaeology and land snails</td>
<td>BA (Hons), MSc</td>
</tr>
<tr>
<td>Carl Champness</td>
<td>Geoarchaeology</td>
<td>BA (Hons), MSc, ACIfA</td>
</tr>
<tr>
<td>Dr Ian Smith</td>
<td>Animal Bone</td>
<td>BSc, PhD</td>
</tr>
<tr>
<td>Nicola Scott</td>
<td>Archaeological archive deposition</td>
<td>BA (Hons Dunelm)</td>
</tr>
<tr>
<td>Mike Donnelly</td>
<td>Flint</td>
<td>BSc, MCIfA</td>
</tr>
<tr>
<td>Dr Louise Loe</td>
<td>Human Bone</td>
<td>D.Phil, BA, MCIfA</td>
</tr>
<tr>
<td>Helen Webb</td>
<td>Human Bone</td>
<td>MSc, BSc</td>
</tr>
<tr>
<td>Mark Gibson</td>
<td>Human Bone</td>
<td>MSc, BA</td>
</tr>
<tr>
<td>Dr Lauren McIntyre</td>
<td>Human Bone</td>
<td>D.Phil, MSc, BSc</td>
</tr>
</tbody>
</table>

**External archaeological specialists regularly used by OA**

<table>
<thead>
<tr>
<th>Specialist</th>
<th>Specialism</th>
<th>Qualifications</th>
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</thead>
<tbody>
<tr>
<td>Lynne Keys</td>
<td>Slag</td>
<td>BA (Hons)</td>
</tr>
<tr>
<td>Quita Mould</td>
<td>Leather</td>
<td>BA, MA</td>
</tr>
<tr>
<td>Specialist</td>
<td>Specialism</td>
<td>Qualifications</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Penelope Walton Rogers,</td>
<td>Identification of Medieval Textiles</td>
<td>FSA, Dip.Acc</td>
</tr>
<tr>
<td>The Anglo Saxon Laboratory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dana Goodburn-Brown</td>
<td>Conservation</td>
<td>BSc (Hons), BA, MSc</td>
</tr>
<tr>
<td>Steve Allen, York Archaeological</td>
<td>Conservation</td>
<td>BA, MA, MAAIS</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Richard Macphail</td>
<td>Soils, especially Micromorphology</td>
<td>BA (Hons), MSc, PhD</td>
</tr>
<tr>
<td>Dana Challinor</td>
<td>Charcoal</td>
<td>MA, MSc</td>
</tr>
<tr>
<td>Dr Nigel Cameron</td>
<td>Diatoms</td>
<td>BSc, MSc, PhD</td>
</tr>
<tr>
<td>Dr David Smith</td>
<td>Insects</td>
<td>BA (Hons), MA, PhD</td>
</tr>
<tr>
<td>Professor Adrian Parker</td>
<td>Phytoliths and pollen</td>
<td>BSc (Hons), D.Phil</td>
</tr>
<tr>
<td>Dr David Starley</td>
<td>Metalworking Slag</td>
<td>BSc (Hons), PhD</td>
</tr>
<tr>
<td>Wendy Carruthers</td>
<td>Charred and waterlogged plant remains</td>
<td>BA (Hons)</td>
</tr>
<tr>
<td>Dr Sylvia Peglar</td>
<td>Pollen</td>
<td>PhD</td>
</tr>
<tr>
<td>Dr John Whittaker</td>
<td>Ostracods and Foraminifera</td>
<td>BA (Hons), PhD</td>
</tr>
<tr>
<td>Dr John Crowther</td>
<td>Soil Chemistry</td>
<td>MA, PhD</td>
</tr>
<tr>
<td>Dr Martin Bates</td>
<td>Geoarchaeology</td>
<td>BSc, PhD</td>
</tr>
<tr>
<td>Dr Dan Miles</td>
<td>Dendrochronology</td>
<td>D.Phil, FSA</td>
</tr>
<tr>
<td>Dr Jean-Luc Schwenninger</td>
<td>Optically Stimulated Luminescence Dating</td>
<td>PhD</td>
</tr>
<tr>
<td>Dr David Higgins</td>
<td>Clay Pipe</td>
<td>BA, PhD, MCIfA</td>
</tr>
<tr>
<td>Dr Hugo Anderson-Wymark</td>
<td>Flint</td>
<td>BSc, PhD, FSA Scot, MCIfA</td>
</tr>
<tr>
<td>Dr Damian Goodburn-Brown</td>
<td>Ancient Woodwork</td>
<td>BA, PhD</td>
</tr>
</tbody>
</table>
APPENDIX H DOCUMENTARY ARCHIVING

H.1 Standard methodology – summary

H.1.1 The documentary archive constitutes all the written, drawn, photographic and digital records relating to the set up, fieldwork and post-excavation phases of the project. This documentary archive, together with the artefactual and environmental ecofact archive collectively forms the record of the site. The report is part of the documentary archive, and the archive must provide the evidence that supports the conclusions of the report, but the archive may also include data which exceeds the limitations of research parameters set down for the report and which could be of significant value to future researchers.

H.1.2 At the outset of the project OA Archive department will contact the relevant local receiving museum or archive repository to notify them of the imminent start of a new fieldwork project in their collecting area. Relevant local archiving guidelines will be observed and site codes, which integrate with the receiving repository, will be agreed for labelling of archives and finds.

H.1.3 Where there is currently no receiving museum for the project archive, although responsibility for the archive ultimately lies with the client, OA will hold the archive on their behalf for a period of up to 3 years after completion of the report, after which time (in the event that a suitable depository has not been secured) provision for further storage of the archive will be made in agreement with Oxford Archaeology, the client and the relevant planning archaeologist.

H.1.4 During the course of the project the Archive department will assist the Project Manager in the management of the archive including the cataloguing and development technique suitable for photographic archive requirements.

H.1.5 The hard copy site archive will be security copied by scanning to PdFA and a copy of this will be housed on the OA Archive Server. A full digital copy of the archive, including scanned hard copy and born digital data, will be deposited with and made publicly available on-line through the ADS. A further copy will be maintained on the OA server and if requested a copy on disk will also be sent to the receiving museum with the hard copy. This will act as a safeguard against the accidental loss and the long-term degeneration of paper records and photographs.

H.1.6 Born digital data will only be printed to hard copy for the receiving museum where practical. Archive elements that need maintaining in digital form will be sent to ADS in accordance with Arches Standard and ADS guidelines. A copy will be sent to the receiving museum by CD and back-up copies will be stored on the OA digital network. In most cases a digital copy of the report will be included in the OASIS project library hosted by ADS.

H.1.7 Prior to deposition the Archive department will contact the museum regarding the size and content of the archive and discuss any retention and dispersal policies which may be applicable in line with local and SMA Guidelines ‘Selection, Retention & Dispersal of Archaeological Collections’ 1993.
H.1.8 The site archive will then be deposited with the relevant receiving museum or repository at the earliest opportunity unless further archaeological work on the site is expected. The documentary archive will include correspondence detailing landowner consent to deposit the artefacts and any copyright licences in accordance with the receiving museum guidelines. Deposition charges will be required from the client as part of the project costs but the level of the fee is set by the receiving body, and may be subject to change during the lifespan of the project. Changes to archiving charges beyond OA’s control will be passed across to the client.

H.1.9 Oxford Archaeology will retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it will provide the receiving repository or museum for the archive with a full licence for use to the client in all matters directly relating to the project as described in the Written Scheme of Investigation, and in line with the relevant receiving body guidelines.

H.1.10 OA will advise the receiving repository or museum for the archive of 3rd party materials supplied in the course of projects which are not OA’s copyright.

H.1.11 OA undertakes to respect all requirements for confidentiality about the client’s proposals provided that these are clearly stated. It is expected that such conditions shall not unreasonably impede the satisfactory performance of the services required. Archaeological findings and conclusions can be kept confidential for a limited period but will be made publicly available in line with the above procedure either after a specified time period agreed with the client at the outset of the project, or where no such period is agreed, after a reasonable period of time. It is expected that clients respect OA's general ethical obligations not to suppress significant archaeological data for an unreasonable period.

H.2 Relevant industry standards and guidelines

H.2.1 At the end of the project the site archive will be ordered, catalogued, labelled and conserved and stored according to the following national guidelines:


H.2.3 The 2014 CIFA Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives.


H.2.5 The UKIC’s Guidelines for the preparation of excavation archives for long-term storage.

H.2.6 The MGC’s Standards in the museum care of archaeological collections.

H.2.7 Local museum guidelines such as Museum of London Guidelines: (http://www.museumoflondonarchaeology.org.uk/English/ArchiveResearch/DeposRe source) will be adopted where appropriate to the archive collecting area.

H.2.8 The site archive will be prepared to at least the minimum acceptable standard defined in Management of Archaeological Projects 2, Historic England 1991.
H.3 Relevant OA manual and other supporting documentation

H.3.1 The OA Archives Policy.
APPENDIX I  HEALTH AND SAFETY

I.1  Standard Methodology - summary

I.1.1  All work will be undertaken in accordance with the current OA Health and Safety Policy, the OA Site Safety Procedures Manual, a site-specific Risk Assessment and, if required, Safety Plan or Method Statement. Copies of the site-specific documents will be submitted to the client or their representative for approvals prior to mobilisation, and all relevant H and S documentation will be available on site at all times. The Health and Safety documentation will be read in conjunction with the project WSI.

I.1.2  Where a project falls under the Construction (Design and Management) Regulations (2015), all work will be carried out in accordance with the Principal Contractor’s Construction Phase Plan (CPP).

I.2  Relevant industry standards and guidelines

I.2.1  All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively:

I.2.2  The Health and Safety at Work Act (1974).
I.2.3  Management of Health and Safety at Work Regulations (1999).
I.2.5  The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013).
I.2.7  Relevant OA manual and other supporting documentation
I.2.8  The OA Health and Safety Policy.
I.2.9  The OA Site Safety Procedures Manual.
I.2.10  The OA Risk Assessment templates.
I.2.11  The OA Method Statement template.
I.2.12  The OA Construction Phase Plan template.