Land West of Northmoor View
Brimington
Derbyshire

Written Scheme of Investigation
Targeted Archaeological Excavation
CHE/18/00535/OUT &
APP/A1015/W/19/3223162

Land West of Northmoor View
Brimington
Derbyshire

WRITTEN SCHEME OF INVESTIGATION:
Targeted Archaeological Excavation

CHE/18/00535/OUT & APP/A1015/W/19/3223162

Contents Page

Land West of Northmoor View
Brimington
Derbyshire

WRITTEN SCHEME OF INVESTIGATION:
Targeted Archaeological Excavation

CHE/18/00535/OUT & APP/A1015/W/19/3223162

1 Summary

1.1 This document sets out the details for the archaeological work required at Land west of Northmoor View, Brimington, Derbyshire, in order to inform the Development Control Archaeologist at Derbyshire County Council, archaeological advisor to Chesterfield Borough Council of the archaeological potential of the site, prior to the commencement of a large residential development with associated infrastructure. The Written Scheme of Works has been commissioned by Linden Homes.

1.2 In accordance with the recommendations of the National Planning Policy Framework (June 2019) on 'Archaeology and Planning' a staged scheme of archaeological work has been carried out on the site. The Targeted Archaeological Excavation is the final phase of work which has previously included a Heritage Impact Assessment (Burpoe. 2017), Geophysical Survey (Durkin. 2017) and Archaeological Evaluation by Trial Trenching (Cole. 2019).

2 Site Description and Planning Background

2.1 Following an appeal (reference APP/A1015/W/19/3223162) planning permission has been granted for a residential development of up to 150 dwellings and associated access works, on land to the west of Northmoor View. The permission has been granted in accordance with the terms of application reference CHE/18/00532/OUT.

2.2 Condition 8 attached to the planning permission states that;

No development shall commence until a Written Scheme of Archaeological Investigation/ Resource Management; that includes post excavation analysis and publication has been submitted to and approved in writing by the Local Planning Authority. The development herby approved shall only be implemented in full accordance with the approved scheme.

2.2 The Proposed Development Area covers the area measuring approximately 6.6ha and is located to the south of Brimington, 3km north-east of the centre of Chesterfield.

2.3 The site is bounded to the west, south-west and south-east by open land and housing to the north and north-east.

2.4 The site lies on bedrock geology of sandstone of the Pennine Lower Coal Measures Formation.

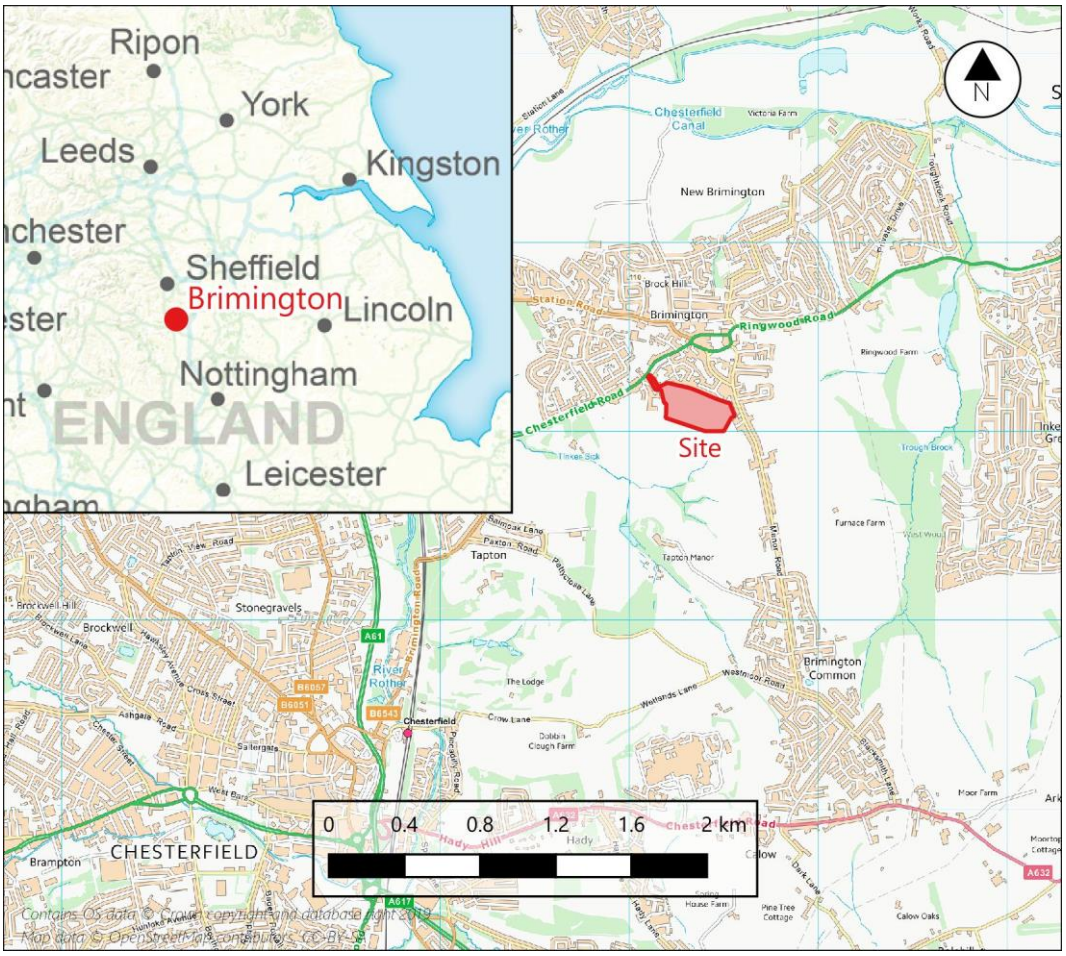


Figure 1. Site Location. 1:40,000

3. Archaeological and Historical Background

3.1 There are few records of prehistoric activity within the Brimington area. A stone implement, possibly a mace, was round in a field to the north of the site during quarrying works in the 18th century (NRHE 316271). A Palaeolithic bone implement, though to be a borer, was recorded during groundworks approximately 800m west of the site (HER ID 2502).

3.2 It has been suggested that a Roman encampment was present some 660m south-west of the site (NRHE 314345) although no evidence to substantiate this was identified during field work carried out during the 1960's.

3.3 The site is likely to partly fall within the Medieval core of Brimington. The site of the former Brimington Hall, a 15th or 16th century building which was demolished in 1931, is located 200m to the north. It is possible that the Medieval settlement may have been organised along Manor Road, to the east of the site.

4 Previous Archaeological Works

4.1 A Geophysical Survey was carried out in 2017 by Archaeological Research Services Ltd. The results of the survey did not reveal any anomalies in the data which would suggest that significant archaeological remains were present within the site although features of possible archaeological origin were identified. It was recommended that further field evaluation should be carried out.

4.2 A Heritage Impact Assessment was carried out by Archaeological Research Services Ltd in 2017. The report considered the archaeological and historical background of the site in order to assess the archaeological potential of the site. It concluded that there was a low potential for archaeological deposits to be present on the site relating to 18th and 19th century quarrying within the site. It was recommended that a programme of Evaluation by Trial Trenching be carried out in order to test anomalies identified by the Geophysical Survey including the former Bates Lane which existed in the eastern portion of the site.

4.3 A programme of Archaeological Evaluation by Trial Trenching was carried out by Archaeological Research Services in 2019. The Evaluation targeted areas of the site which contained anomalies identified during the Geophysical Survey but also assesses areas of the site which were considered to be devoid of archaeological features and/or deposits. Twenty-four Trial Trenches were excavated across the site, of which 16 contained archaeological deposits. The Evaluation was successful in confirming the results of the Impact Assessment and identifies the route of Bates Lane and expanding on the results of the Geophysical Survey. Identified features include field boundaries, drainage ditches. Industrial pits and a road (Bates Lane) which was demarcated by parallel ditches. The field systems have been dated to the Romano-British and Medieval periods although the relationship between the field systems and Bates Lane is unclear as 'the roadside ditches follow an irregular course and no not intersect any of the boundary/drainage ditches' (Cole, 2019). An area of the site to the west of Bates Lane has been identified as being at the centre of intense industrial activity, the final phase of which has been recognised by the presence of a large layer of slag which is likely to represent a former slag heap which has been levelled and which filled previous boundary ditches. Traces of a possible structure beneath the slag was identified during the evaluation in the form of a post hole and a large quantity of burnt clay kiln lining.

5. Aims and Objectives

5.1 In accordance with the '*Standard and Guidance for Archaeological Excavation*' (CIfA 2014) the aims of the Targeted Archaeological Excavation were to:

- Examine the archaeological resource within a given area or site within a framework of defined research objectives;
- To seek a better understanding of the resource;
- To compile a lasting record of the resource; and
- To analyse and interpret the results of the excavation and disseminate them.

5.2 The objectives of the Targeted Excavation are to;

- To sufficiently record any archaeological features or deposits identified in line with the methodology outlined below
- To sample archaeological features and deposits in order to establish a relative sequence, likely dating and quality of preservation
- To gather sufficient information to establish the character, extent, form, function and status of any archaeological deposits in order to inform the Regional Framework aims identified below.

5.3 The following Regional Research Aims as identified in *East Midlands Heritage: An updated Research Agenda and Strategy for the Historic Environment of the East Midlands* (Knight *et al*. 2012) are applicable to the site.

- Research Objective 5H for the Romano-British Period investigating the landscape context of rural settlement
- Research Objective 7I for the High Medieval period- investigating the development of the open-field system

- Research Objective 8E for the Post-Medieval period- identifying agricultural improvements
- Research Objective 8F for the Post-Medieval period- researching the development of industry and its impact upon the landscape

5.4 Provision should be made for updating the East Midlands Historic Environment Research Framework (EMHERF) where the results of a fieldwork project contribute towards agenda topics. This should be done using the interactive digital resource at; https://researchframeworks.org/emherf/ and noted explicitly in the conclusions of the relevant report.

6 Compliance

6.1 MAP will adhere to the general principles of the CIfA Code of Conduct (CIfA 2014) throughout the project and to the CIfA 'Standards and Guidance for Archaeological Field Evaluations' (CIFA 2014b).

6.2 All work will be carried out in accordance with chapter 16 of the National Planning Policy Framework (June 2019) on 'Archaeology and Planning'.

6.3 The work will be monitored under the auspices of the Development Contol Archaeologist for Derbyshire County Council (archaeological advisor to Chesterfield Borough Council) who will be consulted at least 7 days before the commencement of site works in order for a monitoring visit to be arranged.

6.4 All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. License No. AL 50453A and data derived from Open Street Map (https://www.opennstreetmap.org/copyright).

6.5 If human remains are encountered during this evaluation it is considered best practice to not remove the remains at this stage, however, this should be considered at a site-specific level. If it is deemed necessary to remove human remains, this will be carried out under the conditions of licences for the removal of human remains (issued by the Ministry of Justice) and in accordance with the Burial Act (1857) and 'Guidelines to the Standards for Recording Human Remains' (Brickley & McKinley. 2004) to ensure that they are treated with due dignity.

6.6 MAP Archaeological Practice is an ISO 9001 accredited organisation (certificate number GB2005425). The award of the ISO 9001 certificate, independently audited by the British Standards Institution (BSI), demonstrates MAP's commitment to providing a quality service to our clients. ISO (the International Organisation for Standardisation) is the most recognised standards body in the world, helping to drive excellence and continuous improvement within businesses.

7 Fieldwork Methodology

7.1 Excavation and Recording

7.1.1 An area measuring 2.8ha, depicted in Figure 2, will be stripped under archaeological supervision and subject to the Targeted Archaeological Excavation. The area has been selected in order to fully assess

archaeological features identified during the Evaluation by Trial Trenching including field boundaries and/or drainage ditches believed to date to the Romano-British and Medieval periods and also Bates Lane and its relationship to an area of industrial activity to the west.

7.1.2 All topsoil and any subsequent subsoils will be carefully removed by mechanical excavator using a wide toothless blade, under archaeological supervision, to the top of archaeological features or deposits. Excavated soils will be separated and stored in a location to be stipulated by the client, in line with the standards of the Construction Code of Practice for Sustainable Use of Soils on Construction Sites (DEFRA 2009).

7.1.3 Following the initial site strip, a meeting will be held between MAP, the regional Science Advisor for Historic England and the Development Control Archaeologist to discuss and agree appropriate sampling strategies.

7.1.4 All excavation of archaeological features and deposits carried out will be by hand. Areas of intensive modern disturbance will be given a low priority in excavation. If required, any deposits of this type will be removed by mechanical excavator.

7.1.5 Context recording methodologies and systems will be used. All archaeological deposits will be recorded according to principles of stratigraphic excavation on MAP's *pro forma* sheets, which are compatible with the MoLAS recording system. The MoLAS recording manual will be used on site where necessary. The stratigraphy of trenches will be recorded even if no archaeology is found.

7.1.6 The excavation sampling policy is:

a) A 100% sample of stakeholes,

b) An initial 50% sample should be taken of all postholes, but where they are part of a building these should be 100% excavated,

c) A 50% sample of pits with a diameter up to 1.5m (where justified, these should be 100% excavated,

d) A minimum 25% sample of all pits over 1.5m in diameter, but this should include a complete section across the pit to record a full profile (where justified, these should be 100% excavated),

e) All junctions/intersections and corners of linear features will be investigated, and their stratigraphic relationships determined; if necessary, using box sections and all ditch terminals will be examined,

f) All funerary contexts, all buildings and all industrial features will be subject to 100% excavation. As noted above, postholes and the enclosing ditches around barrows and roundhouses would be first subject to sample excavation, sectioning and recording, but then should be fully excavated.

7.1.7 In certain cases, the use of mechanical excavation equipment may also be appropriate for removing deep intrusions (e.g. modern brick and concrete floors or footings), or for putting sections through major features after partial excavation (e.g. ditches), or through deposits to check that they are of natural origin. This work would only occur with the agreement of the Development Control Archaeologist.

7.1.8 A full written, drawn and photographic record will be maintained throughout this work. Plans should be completed at a scale of 1:50 or 1:20 (as appropriate), whilst section drawings should be at a scale of 1:10. High

resolution digital photographs should form the basis of the photographic archive.

7.1.9 A sampling strategy for the recovery for environmental remains has been formulated in accordance with an Environmental Strategy written by an Environmental Consultant (Diane Alldritt, appendix 2) and follows the guidance of the Association for Environmental Archaeology (1995) and Historic England (2011).

7.1.10 Samples will be collected from primary and secondary contexts, where applicable, from a range of representative features, including pit and ditch fills, postholes, floor deposits, ring gullies and other negative features. Where features allow between 40 and 60 litres will be taken although entire contexts will be sampled if the volume is low, and specialist samples, such as for General Biological Analysis (GBA) or column samples, will be of the order of 20 litres. Positive features will also be sampled; retention of structural material such as bricks will be implemented where necessary. Sampling will also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Animal bones will be hand collected, and bulk samples collected from contexts containing a high density of bones. Spot finds of other material will be recovered where applicable. Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies if necessary, but also because processing at a later stage could cause delays.

7.1.11 Archaeometallurgist Dr Roderick Mackenzie will be contacted at the earliest opportunity in order to establish an appropriate sampling strategy

regarding the slag deposits identified during the Evaluation by Trial Trenching.

7.1.12 If human remains are encountered during the course of this excavation, their removal will take place under the conditions of licences for the removal of human remains (issued by the Ministry of Justice, to ensure that they are treated with due dignity). The preferred option would be for them to be adequately recorded before lifting, and then carefully removed for scientific study, and long-term storage with an appropriate museum; however, the burial licence may specify reburial or cremation as a requirement.

7.1.13 All finds (artefacts and ecofacts) visible during excavation will be collected and processed, unless variations in this principle are agreed with the Local Authority. Finds will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication First Aid for Finds. In accordance with the procedures outlined in MoRPHE, all iron objects, a selection of non-ferrous artefacts (including all coins), and a sample of any industrial debris relating to metallurgy will be X-radiographed before assessment.

7.1.14 We will make provision within our excavation strategies, where necessary, for use of shoring, pumps or artificial lighting. Such strategies will also follow for sampling for radiocarbon, archaeomagnetic and/or dendrochronological determinations, as appropriate: where in situ timbers are found to survive in good condition, samples should be taken for dendrochronological assay.

7.1.15 Arrangements for site access and reinstatement are to be agreed with the commissioning body.

7.1.16 Health and safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must comply with all Health and Safety Legislation, this includes the preparation of a Risk Assessment.

7.1.17 Necessary precautions should be taken over underground services and overhead lines.

7.1.18 All on site staff hold valid CSCS cards. All Project Officers and Project Managers hold a valid First Aid at Work Certificate and Site Supervisor Safety Training qualifications.

7.1.19 MAP will provide evidence of all necessary insurances, including Employer's Liability, Professional Liability and Public Liability Cover.

8. Post Excavation Analysis and reporting

8.1 Upon completion of the Targeted Excavation, the artefacts, soil samples and stratigraphic information will be assessed as to their potential and significance for further analysis.

8.2 A report will be prepared to include the following:

a) A non-technical summary of the results of the work, Introduction and aims and objectives.

b) An introduction which should include:

- the site code/project number

- planning reference number and SMR Casework number
- dates when fieldwork took place
- grid reference

c) An account of the methods and results of the evaluation, describing structural data and associated finds and/or environmental data recovered.

d) Interpretation, including phasing of the site sequence and spot-dating of ceramics (Descriptive material should be clearly separated from interpretive statements). This shall be supported using photographs and drawings, to include an overall plan of the site accurately identifying the location of trenches; individual trench plans as excavated indicating the location of archaeological features, with at least one section detailing the stratigraphic sequence of deposits within each trench.

e) A specialist assessment of the artefacts recovered with a view to their potential for further study. Allowance should be made for preliminary conservation and stabilisation of all objects and an assessment of long-term conservation and storage needs. Assessment of artefacts must include inspection of X-radiographs of all iron objects, a selection of non-ferrous artefacts (including coins), and a sample of any industrial debris relating to metallurgy. A rapid scan of all excavated material should be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration will be given to possible investigative procedures (e.g. glass composition studies, residues in or on pottery, and mineral preserved organic material). Once assessed, all material will be packed and stored in optimum conditions, as described in First Aid for Finds. Waterlogged organic materials should be dealt with, following Historic

England documents, Guidelines for the care of waterlogged archaeological leather, and guidelines on the recording, sampling, conservation and curation of waterlogged wood.

f) A specialist assessment of environmental samples taken, with a view to their potential for subsequent study. Processing of all samples collected for biological assessment, or sub-samples of them, will be completed. Bulk and site-riddled samples from dry deposits should have been processed during excavation, where possible. The preservation state, density and significance of material retrieved must be assessed, following methods presented in Environmental Archaeology and archaeological evaluations, or existing local guidelines, until national guidelines are available. Unprocessed sub-samples must be stored in conditions specified by the appropriate specialists. Assessments for any technological residues will be undertaken. Samples for dating must be submitted to laboratories promptly, to ensure that results are available to aid development of specifications for subsequent mitigation strategies.

g) The results from investigations in archaeological sciences will be included in the Site Archive and presented in the Evaluation Report. Reports must include sufficient detail to permit assessment of potential analysis. They will include tabulation of data in relation to site phasing and contexts and must include non-technical summaries. The objective presentation of data must be clearly separated from interpretation. Recommendation for further investigation (both on samples already collected, and at future excavations) must be clearly separated from the results and interpretation.

h) An assessment of the archaeological significance of the deposits identified, in relation to other sites in the region.

i) A conclusion with recommendations for further post-excavation work, if required.
j) Detailed archive location and destination.
k) Appendices and figures, as appropriate, including a copy of the specification and/or project design.
l) References and bibliography of all sources used

8.3 An updated Project Design will be prepared on the basis of the results of the assessment of environmental data and deposits and artefacts identified during the course of the Targeted Excavation.

8.4 If no other publication is recommended, a brief site summary in text format will be Provided for Derbyshire Archaeological Journal's annual fieldwork round-up. This will be sent to chriswardle01@btinternet.com at the same time as submitting the final report to the Derbyshire HER.

8.4 Copies of the report will be submitted to the commissioning body, the Local Planning Authority and the Derbyshire Historic Environment Record within an agreed timetable and subject to any contractual requirements on confidentiality (see 8.1 below).

8.4 We will provide a digital copy of the report in PDF format to the Derbyshire Historic Environment Record.

8.6 A Brief, interim report may be required shortly after the completion of fieldwork.

8.7 The following Specialists have been contacted as are available to work on the project:

Pottery - T G Manby (Prehistoric),

M R Stephens (Medieval and Post-medieval)

P A Ware (Roman)

Flint - P Makey

Animal Bone – Jane Richardson

Environmental Sampling – Diane Alldritt

Archaeometallurgy- Dr Roderick Mackenzie

Conservation – York Archaeological Trust

Human Remains – York Osteology

Ceramic Building Material – Dr Phil Mills

Clay Tobacco Pipe - M R Stephens

9. Copyright, Confidentiality and Publicity

9.1 Unless the individual/organisation commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic records and reports rests with MAP.

10. Archive Preparation and Dissemination

10.1 The requirements for archive preparation and deposition must be addressed and undertaken in a manner agreed with the recipient museum: in this instance, the Chesterfield Museum is recommended. Prior to the commencement of on site works, a Project Initiation Form will be completed and submitted to the Chesterfield Museum and to the Development Control Archaeologist.

10.2 A site archive should be prepared in accordance with the specification outlined in *Management of Archaeological Projects* (MoRPHE (Lee, E, 2006). See also *Towards an Accessible Archaeological Archive, the Transfer of Archaeological Archives to Museums: Guidelines for use in England, Northern Ireland, Scotland and Wales* Society of Museum Archaeologists 1995.

10.3 The site archive, including finds and environmental material, subject to the permission of the relevant landowners, will be labelled, conserved and stored according to the United Kingdom Institute for Conservation (UKIC)'s. Provision will be made for the stable storage of paper records and their long term storage on a suitable medium, such as microfilm. An index to the contents of the archive together with details of its date and place of deposition should be lodged with the Historic Environment Record.

10.4 Archive deposition must be arranged in consultation with the recipient museum and the Development Control Archaeologist at Derbyshire County Council and must take account of the requirements of the recipient museum and the relevant guidelines (see above) relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative.

10.5 Provision will be made to deposit a digital archive with the Archaeology Data Service (ADS) in line with Appendix 7 of the Procedures for Deposition of Archives in Derbyshire: Chesterfield Museum.

11. Bibliography

British Geological Society. 2019. Geology of Britain Viewer. Accessible at; http://mapapps.bgs.ac.uk/geologyofbritain/home.html? [accessed 24.11.2019]

Burpoe. M. 2017. A Heritage Impact Assessment of Land North-West of Northmoor View, Brimington

Cole. R. 2019. Archaeological Evaluation on Land West of Northmoor View. Brimington, Derbyshire

Durkin. R. 2017. Geophysical Survey of Land West of Northmoor View, Brimington, Derbyshire

Knight, D., Vyner, B., and Allen, C. 2012. East Midlands Heritage: An Updated Research Agenda and Strategy for the historic Environment of the East Midlands. Nottingham

12. Best Practice and Guidelines

Association for Environmental Archaeology. 1995. Environmental archaeology and Archaeological Evaluations, Recommendations Concerning the Component of Archaeological Evaluations in England. Working Papers of the Association for Environmental Archaeology, Number 2. http://www.envarch.net/publications/papers/evaluations.html

Brown, D.H. 2011. Archaeological Archives – A guide to best practice in creation, compilation, transfer and curation. Institute for Archaeologists and the Archaeological Archives Forum. 2nd Edition. http://www.archaeologyuk.org/archives/aaf_archaeological_archives_2011.pdf

Brickley, M. and McKinley, J.I. (2004) Guidelines to the Standards for Recording Human Remains. Reading: Institute for Archaeologists, Technical Paper 7

Burial Act. 1857

Chartered Institute for Archaeologists. (2014) Code of Conduct. https://www.archaeologists.net/sites/default/files/CodesofConduct.pdf

Chartered Institute for Archaeologists. (2014b) Standard and Guidance for Archaeological Field Evaluation. https://www.archaeologists.net/sites/default/files/CIfAS&GFieldevaluation_1.pdf

DEFRA. 2009. Construction Code of Practice for Sustainable Use of Soils on Construction Sites.

English Heritage 2006. Archaeomagnetic Dating. English Heritage, Swindon. https://historicengland.org.uk/images-books/publications/archaeomagnetic-dating-guidelines/

English Heritage 2010. Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood. Swindon, English Heritage.
https://historicengland.org.uk/images-books/publications/waterlogged-wood/

English Heritage 2011 Environmental Archaeology A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition). English Heritage, Swindon. 2nd edition.
https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/

English Heritage 2012. Waterlogged Organic Artefacts: Guidelines on their recovery, analysis and conservation. Swindon, English Heritage.
https://historicengland.org.uk/images-books/publications/waterlogged-organic-artefacts/

English Heritage 2014. Animal Bones and Archaeology: Guidelines for Best Practice
https://historicengland.org.uk/images-books/publications/animal-bones-and-archaeology/

English Heritage 2006. Guidelines on the X-radiography of archaeological metalwork. English Heritage, Swindon.
https://historicengland.org.uk/images-books/publications/x-radiography-of-archaeological-metalwork/

Gaffney, C., Gater, J. and Ovenden, S. 2002. The Use of Geophysical Techniques in Archaeological Evaluations. Reading: Institute for Archaeologists, Technical Paper 6

Historic England. 2015a. Archaeological and Historical Pottery Production Sites. Historic England, Swindon. https://historicengland.org.uk/images-books/publications/archaeological-and-historic-pottery-production-sites/

Historic England. 2015b. Geoarchaeology Using earth sciences to understand the archaeological record. Historic England, Swindon. https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/

Historic England. 2015c. Archaeometallurgy: Guidelines for best practice. Historic England, Swindon. https://historicengland.org.uk/images-books/publications/archaeometallurgy-guidelines-best-practice/

Historic England. 2015d. Management of Research Project in the Historic Environment: The MoRPHE Project Managers' Guide. Swindon: English Heritage. https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide/heag024-morphe-managers-guide/

Historic England. 2016. Preserving Archaeological Remains. Decision taking for Sites under Development. www.HistoricEngland.org.uk/advice/technical-advice/archaeological-science/preservation-in-situ/

Historic England. 2017 Organic Residue Analysis and Archaeology, Guidance for Good Practice.
www.HistoricEngland.org.uk/advice/technical-advice/archaeological-science/

Institute for Archaeologists. 2008. Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials. Reading: Institute for Archaeologists.
http://www.archaeologists.net/sites/default/files/node-files/ifa_standards_materials.pdf

Institute for Archaeologists. 2009. Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives. Reading: Institute for Archaeologists.
http://www.archaeologists.net/sites/default/files/node-files/Archives2009.pdf

Institute for Archaeologists. 2010 Draft Standard and Guidance for Archaeological Geophysical Survey. Reading: Institute for Archaeologists.
http://www.archaeologists.net/sites/default/files/node-files/geophysicsSG.pdf

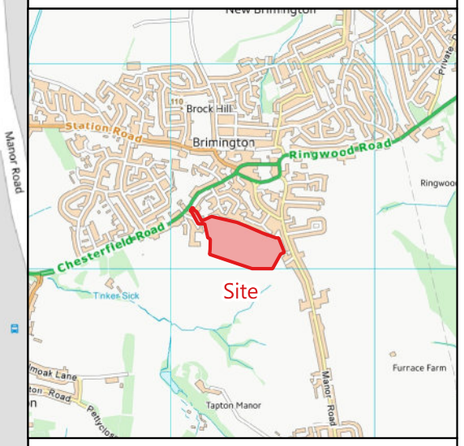
Mays, S., Brickley, M. and Dodwell, N. 2004. Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports. Swindon: English Heritage.
http://www.english-heritage.org.uk/publications/human-bones-from-archaeological-sites/humanbones2004.pdf

McKinley, J.I. and Roberts, C. 1993. Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains. Reading: Institute for Archaeologists, Technical Paper 13

SYAS. 2001. Yorkshire, the Humber and the North- East: A Regional Statement of Good Practice for Archaeology in the Development Process. https://www.sheffield.gov.uk/content/dam/sheffield/docs/planning-and-development/archaeology/The-regional-statement-for-good-practice-in-archaeology-within-Planning--pdf--24KB-.pdf

Watkinson, D. and Neal, V. 2001. First Aid for Finds: A Practical Guide for Archaeologists [Third Edition]. Hertford: RESCUE – The British Archaeological Trust

maparch
MAP Archaeological Practice



Legend

- Development Outline
- Targeted Excavation Area
- Archaeological Features

Historic Mapping Features

- 1755 Brailsford
- 1827 Plan
- 1883 OS
- 2006 OS
- Bate Lane (site of)

N

0 12 24 36 48 60 m

Proposed Targeted Excavation Area
Scale: 1:1200 @ A3
Version B-121219
Client: Linden Homes

APPENDIX 1

Conservation Strategy by Ian Panter of York Archaeological Trust

Artefacts from all categories and all periods will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with First Aid for Finds. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and structural timbers from the ground.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with First Aid for Finds and Guidelines for the Preparation of Excavation Archives for Long-Term Storage (Walker, 1990).

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, Waterlogged wood: sampling, conservation and

curation of structural wood (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

References

Brunning, R. and Watson, J. *Guidelines on Recording, Sampling, Conversation and Curation of Waterlogged Wood*. Swindon: English Heritage (2010). http://www.english-heritage.org.uk/publications/waterlogged-wood/waterlogged-wood.pdf

Karsten, A., Graham, K., Jones, J., Mould, Q. and Walton Rogers, P. (2012) *Waterlogged Organic Artefacts: Guidelines on Their Recovery, Analysis and Conservation*. Swindon: English Heritage. http://www.english-heritage.org.uk/publications/waterlogged-organic-artefacts/woa-guidelines.pdf

Walker, K. 1990 *Guidelines for the preparation of excavation archives for long-term storage*, Archaeology Section of the United Kingdom Institute for Conservation.

Watson, J., Fell, V. and Jones, J. (2008) *Investigative Conservation: Guidelines on How the Detailed Examination of Artefacts from Archaeological Sites can Shed Light on their Manufacture and Use*. Swindon: English Heritage. http://www.english-heritage.org.uk/publications/investigative-conservation/investigative-conservation.pdf

Watkinson, D. and Neal V. 1998 First Aid for Finds *(3rd edition), RESCUE and the Archaeology Section of the United Kingdom Institute for Conservation.*

Institute for Archaeologists. (2008) *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*. Reading: Institute for Archaeologists. http://www.archaeologists.net/sites/default/files/node-files/ifa_standards_materials.pdf

APPENDIX 2

Environmental Strategy by Diane Alldrit

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 40litre of sediment (where possible) should be taken from every stratigraphically secure and archaeologically significant context. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors' discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The

flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods, and once processed kept wet. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool conditions. Where large waterlogged timbers are recovered these should be stored under refrigerated conditions and an appropriate conservator consulted.

There is the possibility that the waterlogged deposits may require parasite egg analysis. It is proposed that the 'squash' technique is adapted, this would require small lumps of raw sediment approximately 3mm in diameter taken from three separate points from within the sample and homogenised in a little water by

shaking. After allowing coarse particles to settle for a few moments, a drop of the supernatant was removed. This work would be undertaken by either John Carrott or Harry Kenwood if necessary.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

References

Dobney, K. D., Hall, A. R., Kenward, H. K. and Milles, A. 1992 A working classification of sample types for environmental archaeology. *Circaea* 9 24-26.

French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies 21* 59-64.