



Mather and Platt Foundry, Manchester

Written Scheme of Investigation Archaeological Evaluation

November 2021

Client: Canmoor Projects

Issue No: 4

OA Reference No: 2162/2021-22

NGR: SJ 8710 9999



Client Name: Canmoor Projects
Document Title: Mather and Platt Foundry, Manchester
Document Type: Written Scheme of Investigation for Archaeological Evaluation
Report No.: 2162/2021-22
Grid Reference: SJ 8710 9999
Planning Reference: 129444/FO/2021
Site Code: MPF21
Invoice Code: L11396
HER No.:

OA Document File Location: X:\AdamT\Projects\L11396_Mather_and_Platt_Foundry\WSI
OA Graphics File Location: X:\AdamT\Projects\L11396_Mather_and_Platt_Foundry\CAD

Issue No: 4
Date: November 2021
Prepared by: Dr Adam Tinsley (Senior Project Manager)
Checked by: Dr Adam Tinsley (Senior Project Manager)
Edited by: Dr Adam Tinsley (Senior Project Manager)
Approved for Issue by: Dr Alan Lupton (Director of Operations)
Signature:

Disclaimer:

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.

OA South

Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 263 800

OA East

15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SQ

t. +44 (0)1223 850 500

OA North

Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD

t. +44 (0)1524 880 250

e. info@oxfordarch.co.uk
w. oxfordarchaeology.com

Oxford Archaeology is a registered Charity: No. 285627



Chief Executive Officer
Ken Welsh, BSc, MCIFA
Private Limited Company, No: 1618597
Registered Charity, No: 285627
Registered Office: Oxford Archaeology Ltd
Janus House, Osney Mead, Oxford OX2 0ES

Mather and Platt Foundry, Manchester

Written Scheme of Investigation for Archaeological Evaluation

Centred on SJ 8710 9999

Contents

List of Figures	vii
1 INTRODUCTION	1
1.1 Project details	1
1.2 Location, topography and geology	1
2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL	2
2.1 Archaeological and historical background	2
2.2 Potential	2
3 PROJECT AIMS	4
3.1 General	4
3.2 Specific aims and objectives	4
4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY	5
4.1 Scope of works	5
4.2 Programme	5
4.3 Site specific methodology	5
5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY	8
5.1 Programme	8
5.2 Content	8
5.3 Specialist input	8
5.4 Further Dissemination	8
5.5 Archive	8
6 HEALTH AND SAFETY	9
6.1 Roles and responsibilities	9
6.2 Method statement and risk assessment	9
6.3 Monitoring of works	9
7 BIBLIOGRAPHY	10
8 FIGURES	12
OA STANDARD FIELDWORK METHODOLOGY APPENDICES	13
APPENDIX A GENERAL EXCAVATION AND RECORDING METHODOLOGY	13

A.1	Standard methodology – summary.....	13
A.2	Relevant industry standards and guidelines.....	14
A.3	Relevant OA manual and other supporting documentation	14
APPENDIX B GEOMATICS AND SURVEY		15
B.1	Standard methodology - summary	15
B.2	Relevant industry standards and guidelines.....	16
B.3	Relevant OA manual and other supporting documentation	17
APPENDIX C ENVIRONMENTAL EVIDENCE		18
C.1	Standard methodology – summary.....	18
C.2	Relevant industry standards and guidelines.....	18
C.3	Relevant OA manual and other supporting documentation	19
APPENDIX D ARTEFACTUAL EVIDENCE		20
D.1	Standard methodology - summary	20
D.2	Relevant industry standards and guidelines.....	21
D.3	Relevant OA manual and other supporting documentation	21
APPENDIX E HUMAN REMAINS		22
E.1	Standard methodology - summary	22
E.2	Relevant industry standards and guidelines.....	24
E.3	Relevant OA manual and other supporting documentation	25
APPENDIX F REPORTING.....		26
F.1	Standard methodology - summary	26
F.2	Relevant industry standards and guidelines.....	27
APPENDIX G LIST OF SPECIALISTS REGULARLY USED BY OA.....		29
APPENDIX H DOCUMENTARY ARCHIVING		31
	Standard methodology – summary.....	31
H.2	Relevant industry standards and guidelines.....	32
H.3	Relevant OA manual and other supporting documentation	33
APPENDIX I HEALTH AND SAFETY.....		34
I.1	Standard Methodology - summary	34
I.2	Relevant industry standards and guidelines.....	34

List of Figures

- | | |
|-------|---|
| Fig.1 | Site location map |
| Fig.2 | Location of proposed trenches |
| Fig.3 | Location of proposed trenches superimposed on the Ordnance Survey map of 1951 |

1 INTRODUCTION

1.1 Project details

- 1.1.1 Oxford Archaeology (OA) North has been commissioned by Canmoor Projects (hereafter referred to as the client) to undertake a trial trench evaluation at the site of a proposed commercial development to provide warehousing at the site of the former Mather and Platt Foundry, Newton Heath, Manchester. In this regard OA North will act as the archaeological contractor, operating under the guidance of Ben Stephenson, archaeological consultant for BSA Heritage (here after referred to as the consultant).
- 1.1.2 The work is being undertaken as a condition of Planning Permission (planning ref: 129444/FO/2021, Condition 3). Although the Local Planning Authority (LPA) has not set a brief for the work, discussions undertaken by the consultant with Ian Miller (Heritage Management Director for Greater Manchester Archaeology Advisory Service: GMAAS), acting in his capacity as archaeological advisor to the LPA, established an initial scope of work required, which has subsequently been amended by the consultant due to various reasons including issues of access to specific areas. This document outlines how OA North will implement the requirements communicated by the consultant.
- 1.1.3 All work will be undertaken in accordance with the Chartered Institute for Archaeologists *Code of Conduct* and relevant *Standards and Guidance*, and local and national planning policies (CfA 2019; 2020a; 2020b: English Heritage 1991: Historic England 2015a: 2015b: 2016: UKIC 1990: MCC 2012a: DCLG 2021).

1.2 Location, topography and geology

- 1.2.1 The proposed development area (PDA) is located approximately 3 miles to the north-east of the centre of Manchester, in the area of Newton Heath (Fig 1). It occupies the site of the former Mather and Platt Foundry, now demolished, a total area of approximately 6.5 hectares, comprising hard standing and rough ground to south, east and west, as well as an access track from Grimshaw Lane. The site is defined by the Rochdale canal to the north and north-west, the premises of the modern Fine Lady Bakery, off Briscoe Lane and Grimshaw Lane to the south and south-east, and Ten Acres Lane to the north-east and east.
- 1.2.2 The site is generally level, although the natural ground rises up from circa 70 metres AOD to the southwest of the main site area, to circa 75 metres in its northeast. The PDA is centred at NGR SJ 8710 9999.
- 1.2.3 The underlying solid geology of the PDA is characterised as sandstone of the Chester Formation to the east, with a thin band of Newton Heath Sandstone to its west, as well as Pennine Middle Coal Measures Formation mudstone, siltstone, and sandstone west of that (BGS 2021). Superficial deposits are recorded as comprising till, Devensian - Diamicton across the whole of the site and beyond (Cranfield 2021).

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 a desk-based assessment (DBA) undertaken by the consultant (BSA 2021) and will not be reproduced here.

2.2 Potential

- 2.2.1 As set out in the DBA, the potential of the site is two-fold and relates to a lesser degree to remains associated with the Romano-British period, and to a far greater extent, remains associated with the Industrial and modern period development of the PDA.
- 2.2.2 **Romano-British Period (43 AD–c. 410):** HER records indicate the line of the Roman road between Manchester and York (HER 24: Margery 1973, M712) extended immediately south of the PDA, from west to east, and is potentially fossilised by the current line of Briscoe Lane. Elsewhere in Newton Heath, investigations during the nineteenth-century confirmed the presence of a gravel road surface on a bed of logs associated with the Roman road (BSA 2021).
- 2.2.3 The only other find from this period in the vicinity of the PDA, was recovered from Philips Park, during the nineteenth-century, and relates to the find of a Roman coin of the mid-third century minted under the reign of Emperor Gallienus (*ibid*: HER 3672). While there is potential for further remains of the Romano-British period, the DBA concluded that this remains low due to the substantial nature of subsequent development across the site during the Industrial and modern period.
- 2.2.4 **Industrial to Modern Period (AD 1750-1900 /1900-present):** the main potential of the PDA resides with its development during the late nineteenth and early twentieth century, previously containing part of the extensive Park Works of the Mather and Platt Company, immortalised in 1943 by the painter L. S. Lowry in his work entitled 'Going to Work', which depicted workers leaving the plant and shows the two storey administrative building, with its distinctive stub tower, as well as an extant gatehouse and railings to its west (BSA 2021). The company of Mather and Platt was founded during the first half of the nineteenth century and originally supplied textile manufacturing equipment from their Salford Iron Works site. During the latter half of the nineteenth century the company diversified, acquiring the rights to manufacture various lucrative products including Thomas Edison's electric dynamo, centrifugal pumps used in water works, collieries, mills and power stations, and yet more lucrative rights to manufacture a new automatic sprinkler system, patented by Frederick Grinnell (Manchester Science Museum 2021).
- 2.2.5 The continued national and international success of the company necessitated the expansion of their manufacturing operations and, at the turn of the nineteenth century, the company purchased and developed the Park Works site in the Newton Heath area. This site grew during the next decade or more to include various facilities, including a sports centre and recreation ground, and catered for most of their manufacturing operations within the factory works and administrative buildings. During World War One part of the Park Works was leased to A. V. Roe for

manufacturing aircraft. In 1915 the works was taken over by the Government so it could be dedicated to munitions production, and this occurred again during the Second World War, when the plant was turned to the production of munitions, as well as water pumps for the war effort. Preceding the Second World War the patents for many of their more lucrative products came to an end and the company subsequently fell into decline in an increasingly competitive environment, the Park Works site finally being closed in 2017. All of the works has now been demolished and the site cleared, although there is still potential for below ground remains to be preserved across the PDA.

3 PROJECT AIMS

3.1 General

3.1.1 The general aims of the trial trench evaluation are to evaluate the archaeological potential of key parts of the former works ahead of its subsequent redevelopment, and the likely impact development will have upon any archaeological assets found to be present, in order to inform the need for and scope of any further investigations. By so doing it is intended that the evaluation will allow a suitable strategy to be devised to mitigate damage or destruction to the archaeological resource during development of the PDA.

3.2 Specific aims and objectives

3.2.1 The specific aims and objectives of the evaluation are:

- i. To provide information about any archaeological resource identified within the trenches (including its presence or absence, character, extent, date, integrity, state of preservation and quality);
- ii. To record, where feasible, the depth, extent, character and date of any archaeological features or deposits encountered;
- iii. To create an appropriate record of the archaeological resource which will be impacted upon as a result of the proposed development;
- iv. To interpret the archaeology of the site within its local, regional and national archaeological context;
- v. To address, where possible, research aims set out in the Northwest Regional Archaeological Research Framework, for example (but not limited to) Questions IND 55, 56, 58, 60, and 62 etc;
- vi. To carry out the above in accordance with the ClfA Code of Conduct, Standard and guidance for an archaeological evaluation;
- vii. To compile a professional archive in line with industry standards and guidelines;
- viii. To satisfy and discharge (in part or whole) planning consent associated with planning permission for the site.

4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

4.1 Scope of works

- 4.1.1 Following consultation between Ian Miller of GMAAS and the consultant, a programme of focussed trial trench evaluation of the below ground archaeological potential of the PDA was requested. GMAAS proposed a scope of works involving the excavation of four trenches of varied size. However, due to issues of access in some areas, as well as site design (with some areas remaining relatively undeveloped), under the guidance of the consultant, it was agreed that two 100m x 2m trenches will be excavated in the first instance, with a contingency for up to a further 20 metres of trench. The proposed trench layout is set out relative to current and previous OS mapping in Figure 2 and 3. These trenches will be excavated to a general depth of no more than 1m below ground surface (bgl), for reasons of health and safety, although deeper excavations, requiring stepping out of trench edges, shoring, or other safety mitigation strategies, may be required, subject to consultation with the consultant and GMAAS.

4.2 Programme

- 4.2.1 Requirement to undertake archival research to try and obtain further plans and other information relating to the potential layout and operation of the works will be partially undertaken by a research visit to Manchester Central Library archives, currently scheduled for Thursday 18th November 2021, where it is thought copies of various insurance plans etc are currently held. Further archival research will also be undertaken, if required, at the site of Salford Archives and the Manchester Museum of Science. However, preliminary inquiries have highlighted that, under current Covid conditions, access to such archives is restricted to a single day per week, by appointment only, and must be arranged in advance, with appointments requiring a minimum of two weeks' notice. It is also anticipated that, given the operation of such restrictions, queries for appointment may be a further issue. The MMSI has been contacted but as yet has not replied.
- 4.2.2 It is anticipated that the fieldwork will take less than a week to complete, subject to the absence of significant concrete deposits, by a team consisting of a Project Supervisor (likely to be Andrew McGuire), directing one or two Project Archaeologists, under the management of Dr Adam Tinsley, Senior Project Manager.
- 4.2.3 All fieldwork undertaken by Oxford Archaeology (North) is overseen by the Operations Manager, Dr 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. Following deployment to site, OA North will set out each trench location, as defined in Figure 2 and 3, using a dGPS system, or Total Station, both of which are accurate to +/- 0.01m;
- ii. Following set out, all working areas will be scanned for services using a CAT 4 and Genny prior to excavation;
- iii. All trenches will be excavated using an appropriately sized (8-14ton) tracked mechanical excavator, equipped with a toothless ditching bucket, in a stratigraphical manner;
- iv. Within each trench, the upper horizons of overburden, topsoil, subsoil and any recent made ground will be rapidly mechanically removed, under archaeological supervision, in controlled, level spits of no more than 0.20m, to the surface of the first significant archaeological deposit, or to the level of the natural subsoil, whichever is encountered first;
- v. Where appropriate, this deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels, depending on the subsoil conditions, and inspected for archaeological features;
- vi. Overburden arisings will be stored either side of the trench and separated, where possible; such deposits will be banded and sealed as appropriate to await backfill;
- vii. These spoil heaps will demarcate the long edges of the trenches, and Netlon fencing will be placed at their short ends, where deposits can be graded to assist walk-in access;
- viii. Deeper interventions within the trenches will be demarcated with Netlon fencing, where these are to be left open overnight;
- ix. An accurate, detailed survey plan of the three- dimensional position of archaeological structures and features will be generated through, as appropriate, dGPS, TST and/or a mosaic of overhead photography tied to surveyed fixed points and synthesised in an appropriate computer programme. This process will generate scaled plans within AutoCAD and/or other software, which can then be manipulated and further enhanced as required. The drawings will be generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required;
- x. A representative sample of all features of archaeological interest within each trench will be investigated and recorded unless otherwise agreed with the consultant and GMAAS;
- xi. Further, it is not proposed to excavate deposits and features during the evaluation where such investigation would damage them and compromise an understanding of them during any subsequent mitigation works;
- xii. Given that the anticipated archaeological assets may primarily comprise structural features, general demolition materials will be entirely removed by machine, unless discrete deposits of significance are identified, for example, dumps of industrial waste materials and debris etc. In such instances these will be manually sample excavated, as appropriate. Structural features will be manually cleaned sufficient to characterise them and understand any significant stratigraphic relationships;

- xiii. Further to the standard methodology identified in *Appendix D*, artefactual finds will only be recovered from securely stratified deposits, unless of pronounced significance or interest. Where finds are identified within general demolition deposits, this will be noted on *pro-forma* records, set aside for review during the site inspection by GMAAS, but not otherwise retained unless otherwise directed;
- xiv. A sample of all accessible uncontaminated features of archaeological significance will be sample excavated in a series of slots, as follows (minimum percentages according to size of feature);
 - 10% of each linear feature (and a minimum 1m sample of each such feature);
 - Pre-industrial features such as gullies associated with buildings (i.e., eaves drip gullies for prehistoric roundhouses), or funerary remains, will initially be investigated by the excavation of regularly spaced slots to encompass 50% of the area of the feature, and will include slots placed to investigate any termini or relationships. Once recorded, the remaining fills will be removed by hand and by context to facilitate soil sampling, finds collection, and the completion of a post-excavation plan;
 - 50% sample of each pit, posthole and other discrete feature less than 1.5m in diameter. The remainder of the feature will be hand-excavated by context to facilitate soil sampling, finds collection, and the completion of a post-excavation plan;
 - In agreement with the Monitoring Archaeologist, a 25% sample of each large pit, posthole or deposit over 1.5m in diameter, with the investigation slot placed to define the extents of the feature and to include a complete section across the feature to recover its full profile.
- xv. Sign off of trenches will occur at a pre-arranged site meeting, to be held at an appropriate time to allow backfill operations to be successfully concluded. Once all manual excavation and recording has been achieved to the satisfaction of GMAAS, trenches will be backfilled with the arisings in reverse order and compacted with plant provided only. No reinstatement of surfaces will be undertaken;
- xvi. Further development of the site will be dependent upon the results of the evaluation, and ultimate discharge of any conditions will only be secured after formal submission and acceptance of an appropriate report by GMAAS. If deemed appropriate, this may require additional phases of archaeological mitigation, to be governed by a subsequent and separate WSI.

5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY

5.1 Programme

- 5.1.1 The report will be completed within four weeks of the completion of the fieldwork.
- 5.1.2 Three bound copies of the completed report(s) will be provided to the consultant for further dissemination to stakeholders. A copy of the report in Adobe Acrobat (.pdf) format will also be provided.

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 and will be engaged dependent upon the results of the evaluation. 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 Further Dissemination

- 5.4.1 The need for and scope of any further dissemination will in part be dependent upon the results of the fieldwork, but may also include a summary of the results (c 300 words maximum) to be published in a roundup of excavations conducted during 2021, within a regionally or era specific peer review journal or the like, e.g. *Post Medieval Archaeology*.

5.5 Archive

- 5.5.1 The site archive will be deposited with Manchester Museum of Science and Industry (MMSI) following completion of the project. The MMSI has been contacted to notify them of the potential start of the project, via email and the OASIS V form (Ref: oxfordar2-502814), but has not yet responded.
- 5.5.2 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 Senior Project Manager, Dr Adam Tinsley, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Supervisor (likely to be Andrew McGuire) who implements these on a day-to-day basis.
- 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 At least five days' notice of the commencement of the evaluation works will be given to Ian Miller, County Archaeologist for GMAAS.
- 6.3.2 GMAAS will have free access to the site (subject to Health and Safety considerations) and all records to ensure the works are being carried out in accordance with this WSI and all other relevant standards.

7 BIBLIOGRAPHY

British Geological Survey (BGS), 2021 Geology of Britain Viewer [Online], available at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed November 2021)

BSA Heritage, 2021, *Land at Grimshaw Lane, Newton Heath, Manchester: Archaeology and Heritage Assessment*, Abingdon, BSA Heritage, unpubl client rep, No BSA 203_2a

Chartered Institute for Archaeologists (CifA), 2019, Code of Conduct, Reading

Chartered Institute for Archaeologists (CifA), 2020a, Standard and guidance: for conducting an archaeological evaluation, Reading

Chartered Institute for Archaeologists (CifA), 2020b, Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives, Reading

Cranfield Soil and Agrifood Institute, 2021, National Soil Resources Institute's Soils of Britain Map, [Online], available at: <http://www.landis.org.uk/soils/>, Cranfield University (accessed November 2021)

Department for Communities and Local Government (DCLG) 2021 National Planning Policy Framework London

English Heritage, 1991 The Management of Archaeological Projects, 2nd edn, London

Historic England, 2015a Management of research projects in the historic environment: The MoRPHE project managers guide, London

Historic England, 2015b Digital Image Capture and File Storage: Guidelines for Best Practice, London

Historic England, 2016, Understanding Historic Buildings: A Guide to Good Recording Practice, London

Manchester City Council (MCC) 2012 Manchester's Local Development Framework – Core Strategy: Development Plan Document Manchester

Manchester Science Museum, online article relating to the Mather and Platt Company (accessed November 2021),
<https://collection.sciencemuseumgroup.org.uk/people/ap10887/mather-platt-ltd>

Margary, ID, 1973 Roman Roads in Britain, 3rd edn, London

North West Regional Archaeological Research Framework accessible on line at
<https://researchframeworks.org/nwrf/>

UKIC 1990 Guidelines for the Preparation of Excavation Archives for Long-term Storage

8 FIGURES

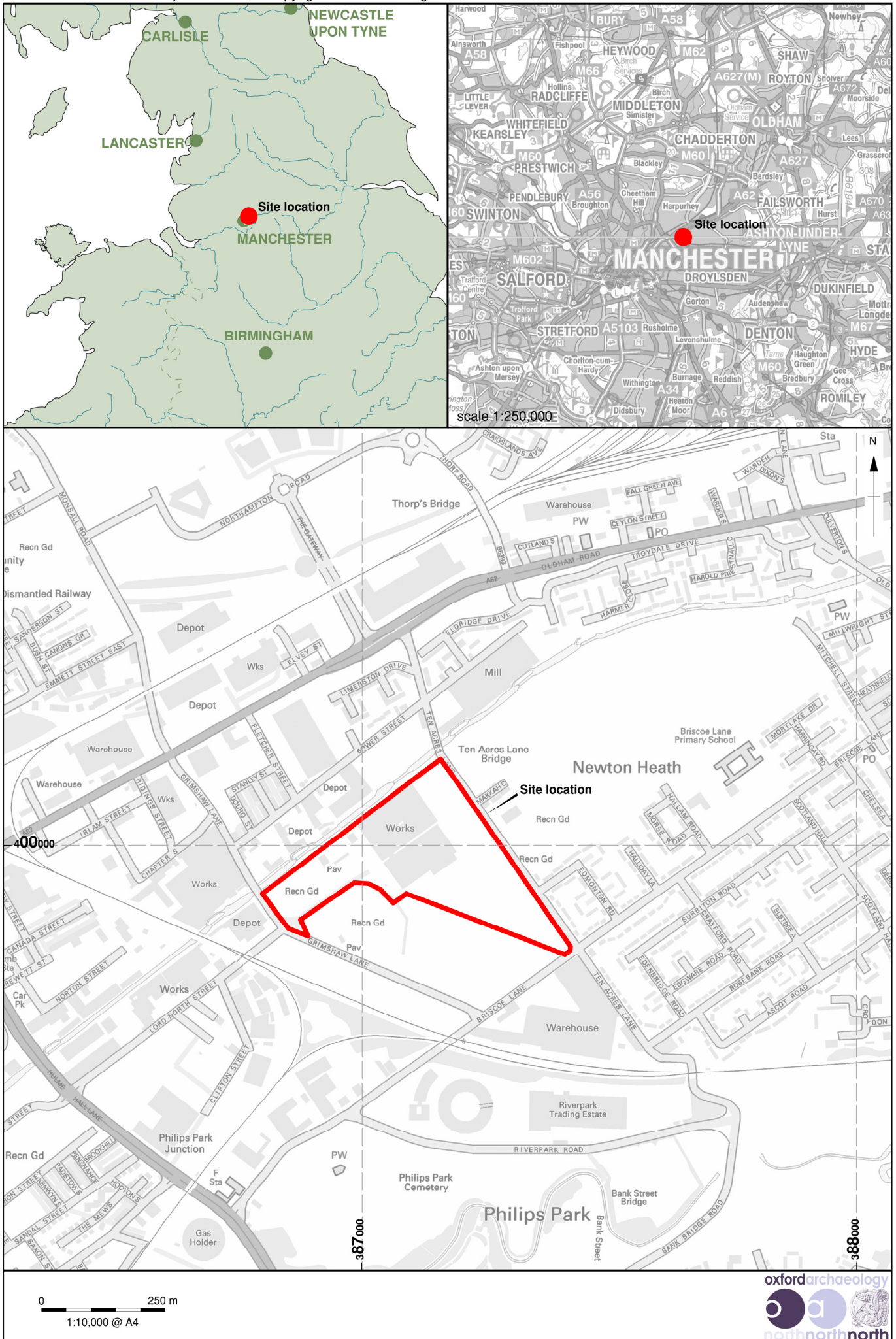


Figure 1: Site location

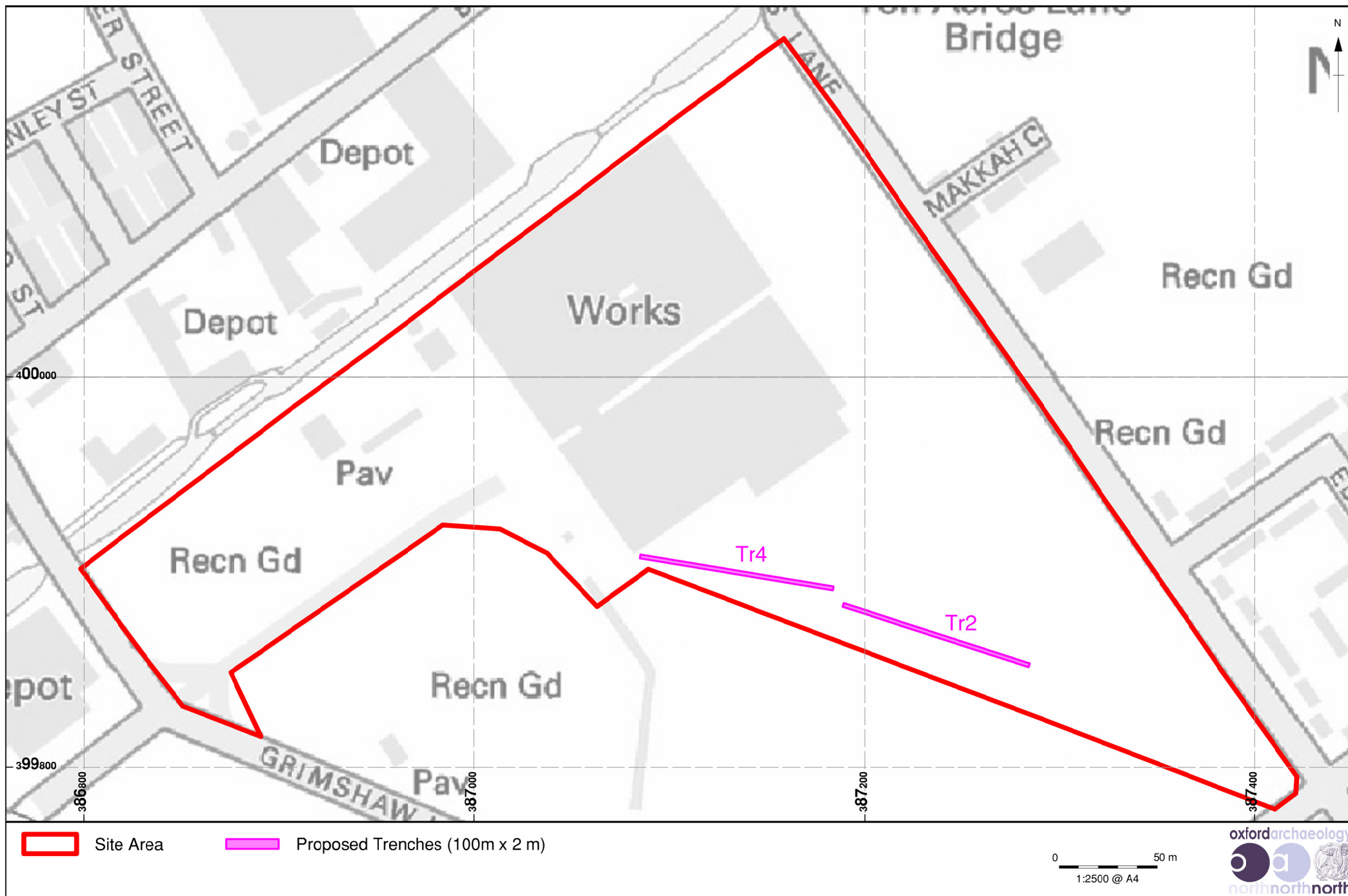


Figure 2: Location of proposed trenches

Figure 3: Location of proposed trenches superimposed on the Ordnance Survey map of 1951

OA STANDARD FIELDWORK METHODOLOGY APPENDICES

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 (CIfA) Standard and Guidance notes relevant to fieldwork are:
- Standard and guidance for archaeological field evaluation, 2014 (updated 2020)
 - Standard and guidance for archaeological excavation, 2014 (updated 2020)
 - Standard and guidance for an archaeological watching brief, 2014 (update 2020)
- 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 GPS/GNSS (Global Positioning System/Global Navigation Satellite System), hand-measured elements, Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM), or photogrammetry where appropriate.
- B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area as necessary. 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 GNSS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.
- B.1.5 Control stations will be checked by closed traverse and/or GNSS, as appropriate. The accuracy of these control stations will be accessed on a regular basis and re-established accordingly. Control 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 uploaded onto survey equipment as appropriate. 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 recording daily tasks and conditions as appropriate.
- B.1.8 All spatial data will be periodically downloaded uploaded and backed up to our central servers via ftp. It will be cleaned, validated and inspected.
- B.1.9 All survey data will be documented on daily survey record sheets as necessary. 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 summary of survey work will be produced as needed to access development and highlight problems. 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 via ftp to Oxford on a regular 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 GNSS. 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 Areas of complex stratigraphy will be hand drawn or recorded by photogrammetry as appropriate. Where 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 GNSS. 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 Photogrammetry may also be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for photogrammetry.
- 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 Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all data recorded will be made available for archiving purposes.

B.2 Relevant industry standards and guidelines

- B.2.1 Historic England, 2017 Understanding the Archaeology of Landscapes A Guide to Good Recording Practice
- B.2.2 Historic England, 2015 Metric Survey Specifications for Cultural Heritage (3rd edn)

B.2.3 Historic England, 2016 Understanding Historic Buildings: A Guide to Good Recording Practice

B.2.4 Historic England, 2017 Photogrammetric Applications for Cultural Heritage: Guidance for Good Practice

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) of 10-20 litres 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 sub-sample) 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.2.1** Historic England, 2010 Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.
- C.2.2** Historic England, 2011 Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)

- C.2.3 Historic England, 2004 Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates (revision due 2020).
- C.2.4 University of Bradford, 2019 Archaeomagnetism: Magnetic Moments in the Past <https://www.brad.ac.uk/archaeomagnetism/>
- C.2.5 Historic England, 2008 Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology (revision due 2020).
- C.2.6 Historic England, 2008 Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains (currently being revised).
- C.2.7 Historic England, 2015 Archaeometallurgy. Guidelines for Best Practice.
- C.2.8 Historic England, 2015 Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.
- C.2.9 Historic England, 2017 Organic Residue Analysis and Archaeology.
- C.2.10 Baker, P and Worley, F, 2019 Animal Bones and Archaeology: Recovery to Archive. Historic England

C.3 Relevant OA manual and other supporting documentation

- C.3.1 Oxford Archaeology 2017. Environmental Sampling Guidelines, 4th ed.

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 Finds Team Leader. 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 Finds Team Leader 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 Team Leader 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 Fieldwork Team Leader and the Post-excavation Team Leader. Project managers will keep the Finds Team Leader 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. Suitable 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 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 Finds Team Leader.
- 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 Team Leader 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 team prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the Finds Team Leader 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.2.1 ClfA, 2014 (updated 2020) Standard and guidance for the collection, documentation, conservation and research of archaeological materials
- D.2.2 Society of Museum Archaeologists, 1993 Selection, retention and dispersal of Archaeological Collections. Download available via <http://www.socmusarch.org.uk/publica.htm>)
- D.2.3 UKIC, 1983 Packaging and Storage of Freshly-Excavated Artefacts from Archaeological Sites. Conservation Guidelines No.2. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.4 UKIC, 1988 Excavated Artefacts and Conservation: UK sites Revised Edition. Conservation Guidelines No.1. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.5 Watkinson, D E & Neal, V, 1998 First Aid for Finds (3rd edition). RESCUE & UKIC

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 ClfA (Roberts and McKinley 1993), Historic England (2018), the Advisory Panel on the Archaeology of Burials in England (APABE, 2015, 2017) and British Association of Biological Anthropology and Osteoarchaeology Code of Practice (2019) and Code of Ethics (2019). For crypts and post-medieval burials, the recommendations set out by the ClfA (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 digital imaging is used it will be done in accordance with the British Association of Biological Anthropology and Osteoarchaeology Recommendations on the Ethical Issues Surrounding 2D and 3D Digital Images of Human Remains (2019).
- E.1.11 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.1.12 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.
- E.1.13 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.1.14 Urned 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.1.15 Wherever possible, urned cremations will be carefully bandaged, recovered whole and will be excavated in spits in the laboratory, as per the recommendations of McKinley (2004, 2017).
- E.1.16 Unless deemed osteologically or archaeologically important disarticulated bone / chanel 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.1.17 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.1.18 Pyre debris dumps will be half sectioned or quadrant and will be subject to 100% sampling.
- E.1.19 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.1.20 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.1.21 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.
- E.1.22 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.1.23 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.2.1 Advisory Panel on the Archaeology of Burials in England, 2013 Science and the Dead. A guideline for the destructive sampling of archaeological human remains for scientific analysis. English Heritage Publishing.
- E.2.2 Advisory Panel on the Archaeology of Burials in England, 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England
- E.2.3 Advisory Panel on the Archaeology of Burials in England, 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects
- 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. 2019a Code of Practice (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.6 British Association of Biological Anthropology and Osteoarchaeology. 2019b Code of Ethics (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.7 British Association of Biological Anthropology and Osteoarchaeology, 2019c Recommendations on the Ethical Issues Surrounding 2D and 3D Digital Images of Human Remains (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.8 Cox, M, 2001 Crypt archaeology. An approach. ClfA Paper No. 3
- E.2.9 English Heritage, 2002 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports
- E.2.10 Historic England, 2018 The Role of the Human Osteologist in an Archaeological Fieldwork Project. Swindon, Historic England
- E.2.11 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, ClfA Technical Paper No. 13

- E.2.12 McKinley, J, 2004 Compiling a skeletal inventory: cremated human bone. In Brickley, M, and McKinley, J (eds) Guidelines to the Standards for Recording Human Remains, ClfA Technical Paper No. 7. 9-13
- E.2.13 McKinley, J, 2017 Compiling a skeletal inventory: cremated human bone. In Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, ClfA 14-19
- E.2.14 Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, ClfA 2017
- E.2.15 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15
- E.2.16 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85
- E.2.17 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 Oxford Archaeology 2018 *Fieldwork Manual Human Remains* unpublished

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) 2015, 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 2015 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 their 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; HE 2015). 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 and may be engaged as and when required.

Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MCIfA
Dr Adam Tinsley	Prehistoric Pottery	BA (Hons), MA, PhD, ACIfA
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Kate Brady	Roman Pottery	BA, ACIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Anni Byard	Metalwork, coins and glass	MSx, MCIfA
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD, MCIfA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MCIfA, FSA Scot
Dr Mairead Rutherford	Pollen	BSc, MSc
Ian Smith	Animal Bone	BA (Hons), MSc, PCIfA
Dr Martyn Allen	Animal Bone	BA (Hons), MA, PhD
Dr Denise Druce	Charred plant remains, charcoal and pollen	BA (Hons), PhD, MCIfA
Sharon Cook	Charred plant remains	BSc, MSc, ACIfA
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc, ACIfA
Nicola Scott	Archaeological archive deposition	BA (Hons Dunelm)
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	BA PhD, MCIfA, BABAO
Helen Webb	Human Bone	BSc, MSc, MCIfA, BABAO
Mark Gibson	Human Bone	BA, MSc, ACIfA, BABAO
Dr Lauren McIntyre	Human Bone	BSc, MSc, PhD, MCIfA, BABAO
Zoe Ui Choileain	Human Bone	Pg Dip, MA, Msc, BABAO
Natasha Dodwell	Human Bone	BA, MSc, BABAO

External archaeological specialists regularly used by OA

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

APPENDIX H DOCUMENTARY ARCHIVING

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 manager 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 team 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 team 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.2.2 EAC, 2014 A Standard and Guide to Best Practice for Archaeological Archiving in Europe (EAC Guidelines 1)
- H.2.3 ClfA, 2014 (Updated 2020) Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives
- H.2.4 Brown, D, 2011 Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. AAF
- H.2.5 UKIC, 1990 Guidelines for the preparation of excavation archives for long-term storage
- H.2.6 SMA, 2020 Standards and Guidance in the 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.2.4 Manual Handling Operations Regulations 1992 (as amended).
 - I.2.5 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013).
 - I.2.6 The Construction (Design and Management) Regulations (2015).
 - 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.



**Head Office/Registered Office/
OASouth**

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: <http://oxfordarchaeology.com>

OANorth

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: [oanorth@oxfordarchaeology.com](mailto: oanorth@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>

OAEast

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>



Chief Executive Officer
Ken Welsh, BSc, MCIFA
Oxford Archaeology Ltd is a
Private Limited Company, N^o: 1618597
and a Registered Charity, N^o: 285627