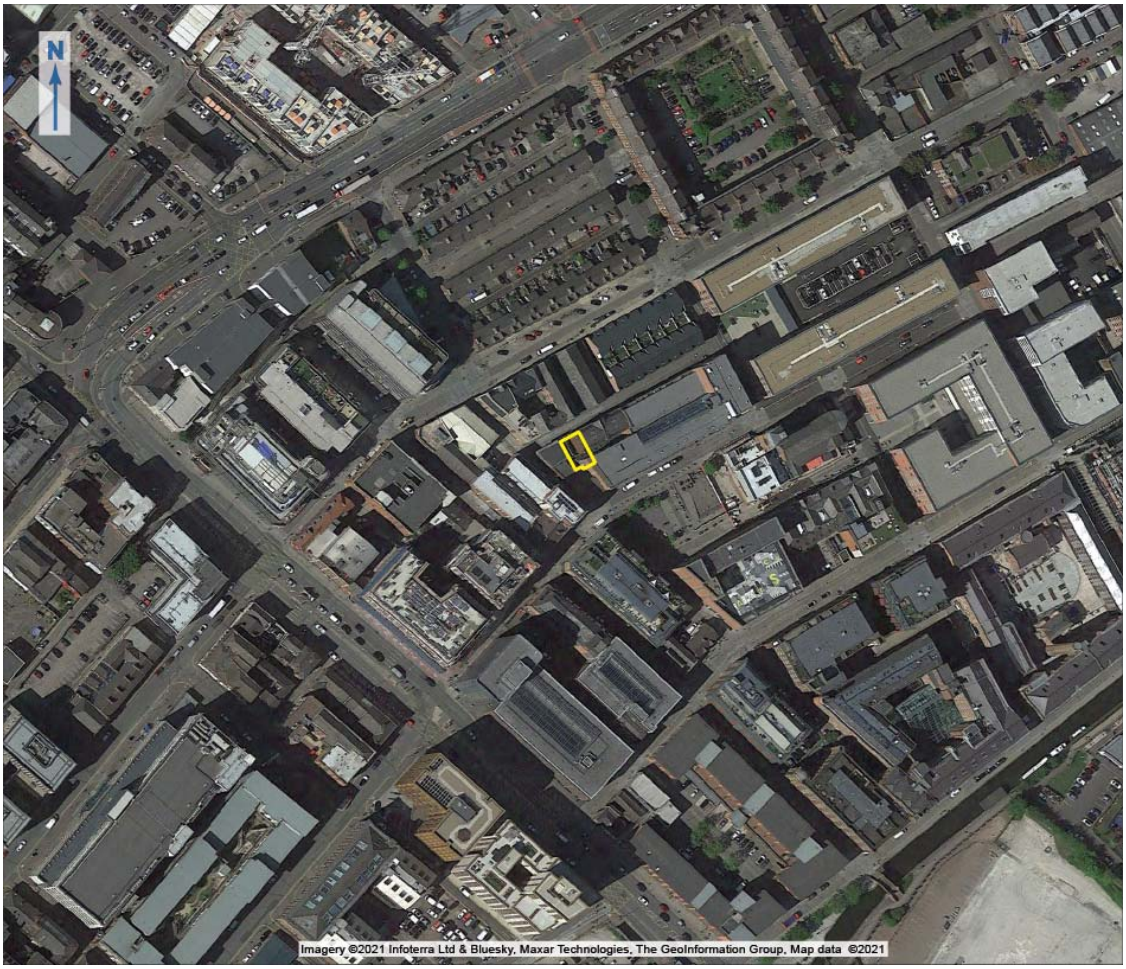
NEXUS HERITAGE

Land at 6 Loom Street, Manchester, M4 6AN (125037/FO/2019)



Written Scheme of Investigation for Monitoring and Recording of Geotechnical Investigations and Archaeological Watching Brief

Document No: 3534.R01

May 2021

Nexus Heritage Controlled Document – Commercial-in-Confidence

Document Number	**3534.R01a**	
Document Status	**SECOND DRAFT**	
Prepared by:	A. Martin and A. Nash	Date: 24.05.21
Client Check:	Mr. P. Haigh (The Forshaw Group)	Date: 10.06.21
Client Comment on First Draft	Incorporate E3P drawing as Fig. 3	
Local/National Authority Check	Mr. B. Dyson (GMAAS)	Date:
Local/National Authority Comment		
Revision_a	A. Martin	Date: 10.06.21
Client Acceptance		Date:
Local/National Authority Acceptance		Date:

The Forshaw Group
14 Wood Street
Bolton
Lancashire
BL1 1DY

Nexus Heritage
Thursby House
1 Thursby Road
Bromborough
Wirral
CH62 3PW

Copyright Declaration:

Nexus Heritage grants permission for the material presented within this report to be used by the archives/repository with which it is deposited, in perpetuity, although Nexus Heritage retains the right to be identified as the author of all project documentation and reports, as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the repository to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

© 2021 Nexus Heritage–SRI. Registered Address: Thursby House, Thursby Road, Bromborough, Wirral, CH62 3PW, United Kingdom. Company Registered in England and Wales 6575853.

Disclaimer:

This Report has been prepared solely for the person/party which commissioned it and for the specifically titled project or named part thereof referred to in the Report.

All statements and opinions contained with the Report are offered in good faith and are compiled according to professional standards. Nexus Heritage accepts no responsibility for any errors of fact or opinion resulting from data supplied by any third party or for loss or other consequence arising from decision made or actions taken upon the basis of facts or opinions expressed in the Report howsoever such facts and opinions may have been derived. Nexus Heritage reserves the right to amend, add or remove any elements of this document to respond to the publication of any new evidence, policy, guidance, etc. This report and related materials have been prepared for the sole use of the specified Client in response to an agreed brief, for a stated purpose and at a particular time and its application must be made accordingly. No duty of care extends to any other party who may make use of the information contained herein.

The Report should not be relied upon or used for any other project by the commissioning person/party without first obtaining independent verification as to its suitability for such other project, and obtaining the prior written approval of Nexus Heritage. Nexus Heritage accepts no responsibility or liability for the consequences of this Report being relied upon or used for any purpose other than the purpose for which it was specifically commissioned. The entitlement to rely upon this Report rests solely with the person/party which commissioned it and does not extend to any other person/party. Nexus Heritage accepts no responsibility or liability for any use of or reliance upon this Report by any person/party other than the commissioning person/party.

Note on Transcriptions of Historic Maps

Historical mapping, both Ordnance Survey (OS) and individual cartographer's work relies on the accuracy of the data input into it and the projection used to produce a two dimensional image from three dimensional data. Techniques of survey have evolved and improved over the centuries but pre-OS maps are of widely varying quality and their accuracy is limited by the technology used to create them.

Creating an overlay of historic mapping (including 1st and 2nd edition OS Maps) and modern OS data can never be completely accurate. Creating a good approximation relies on using digital technologies to estimate and extrapolate the projection, orientation and scale of original maps by correlating known points on the modern OS grid with the historic mapping. This georeferencing 'distorts' the historic mapping to fit the modern grid using a set of known points chosen by the cartographer/illustrator.

Modern digitally produced OS mapping has a stated accuracy tolerance. The most detailed mapping at 1:1,250 (urban) will have a relative error of <±0.5m up to 60m. On the ground that equates to an error between two points which are 60m apart on the ground. 95% of the time the scaled measurement would be between 59.1m and 60.9m (paraphrased from https://www.gov.uk/government/publications/land-registry-plans-the-basis-of-land-registryapplications/land-registry-plans-the-basis-of-land-registry-plans-practice-guide-40-supplement-1.)

CONTENTS:

INTRODUCTION AND DEFINITIONS 1
LOCATION AND SITE INFORMATION 3
ARCHAEOLOGICAL AND HISTORICAL BACKGROUND 6
TERMS AND CONDITIONS OF APPOINTMENT AND PERFORMANCE STANDARDS 7
AIMS AND OBJECTIVES 8
FIELDWORK METHODS 10
COPYRIGHT 16
CONFIDENTIALITY 16
HEALTH AND SAFETY 16
ARCHIVE 18
MONITORING 21
RESOURCES AND PROGRAMMING 24
COMMUNICATION PATHS 24

FIGURES

Figure 1: Site Location Plan
Figure 2: Site Plan
Figure 3: Proposed Exploratory Hole Location Plan (courtesy of E3P)

INTRODUCTION AND DEFINITIONS

The Forshaw Group (hereafter the Client) has secured full planning permission (ref. 125037/FO/2019) from Manchester City Council (hereafter the Council) for:

Erection five storey building to form two duplex apartments including roof terrace and associated car parking.

at Land at 6 Loom Street, Manchester, M4 6AN (hereafter the Site).

A condition (7) has been applied to the permission requiring the implementation of a programme of archaeological works.

No development shall commence until a Written Scheme of Investigation (WSI) is submitted to and agreed in writing by the City Council as Local Planning Authority. For the avoidance of doubt The WSI shall cover the following:

1. A phased programme and methodology of site investigation and recording to include:

i) Active presence, monitoring and recording of geotechnical investigations

ii) An archaeological watching brief on development groundworks

2. A programme for post investigation assessment to include production of a final report on the significance of the below-ground archaeological interest.

3. Deposition of the final report with the Greater Manchester Historic Environment Record.

4. Dissemination of the results of the archaeological investigations commensurate with their significance.

5. Provision for archive deposition of the report and records of the site investigation.

6. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.

Reason: To record and advance understanding of heritage assets impacted on by the development and to make information about the heritage interest publicly accessible in accordance with the NPPF Section 12, Core Strategy Policy EN3 and Saved UDP policy DC20.

The Client has commissioned Nexus Heritage to prepare a Written Scheme of Investigation (hereafter WSI) sufficient in scope to address item 1.(i) of condition no. 9 and those relevant elements of items 2, 3, 4, 5 and 6.

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2020). The watching brief should take place within a specified area or site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of

which could not be established in advance of development or other potentially disruptive works. It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The purposes of the watching brief are:

- to allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of any archaeological remains on the site affected by excavations and groundworks for the development, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.
- to provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

This draft version of this document is offered for consideration to GMAAS for verification with reference to condition 7, best practice and the relevant provisions in NPPF. Observations on the draft document made by GMAAS will be taken into account during preparation of the final version.

LOCATION AND SITE INFORMATION

The Site is located in Manchester (Fig.1) at national grid reference SJ 84853 98675 and fronts onto Loom Street. The Site comprises an existing 52.1m^2 single storey vacant unit understood to have been utilised as a garage during the late 20th century and early 21st century. It is bounded on three sides by existing buildings ranging from three to five storeys in height.

The spatial attribute information for Site is provided in the table below and relates to the spatial data as illustrated in Fig. 2 below.

Field Name	Data
Project No.	3534
Project Name	Land at 6 Loom Street, Manchester, M4 6AN (125037/FO/2019)- Written Scheme of Investigation for Monitoring and Recording of Geotechnical Investigations and Archaeological Watching Brief
Organisation	Nexus Heritage
Date	May 2021
Digitisation Source	DLA Design
Digitisation Scale	1:200 at A4
Description of Digitised Data	.dwg file

The underlying bedrock is characterised by the British Geological Survey as Chester Formation Sandstone a sedimentary deposit formed approximately 247 to 250 million years ago in the Triassic Period in a local environment previously dominated by rivers.

The superficial geological depsoits at the Site are characterised by the Brisith Geologcial Survey as Devensian Till- Diamicton, deposits formed up to 2 million years ago in the Quaternary Period in a local environment previously dominated by ice age conditions.

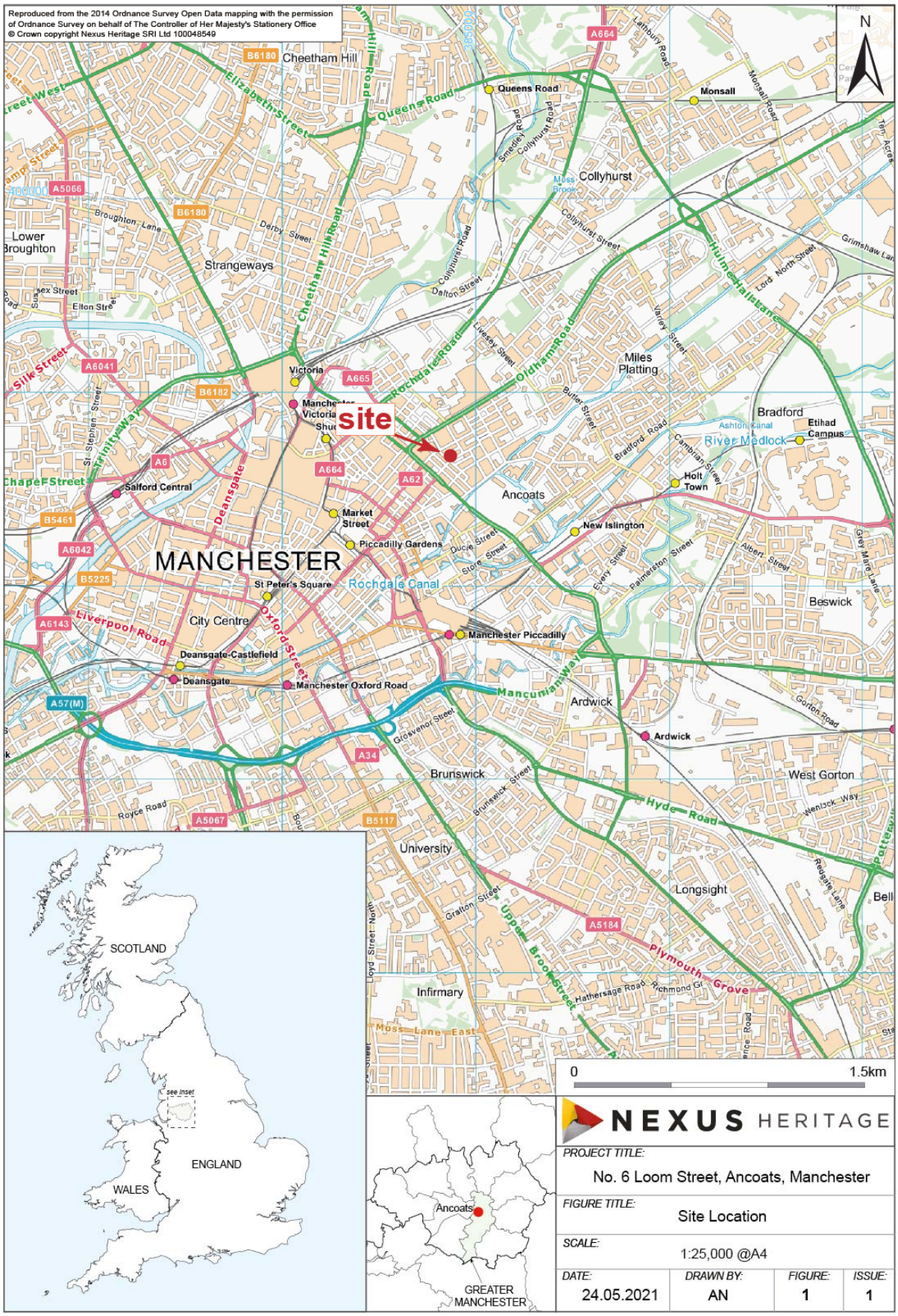


Fig. 1: Site Location Map (reproduced from Ordnance Survey mapping with the permission of Ordnance Survey on behalf of HMSO © Crown Copyright Nexus Heritage-SRI Licence No. 100048549)

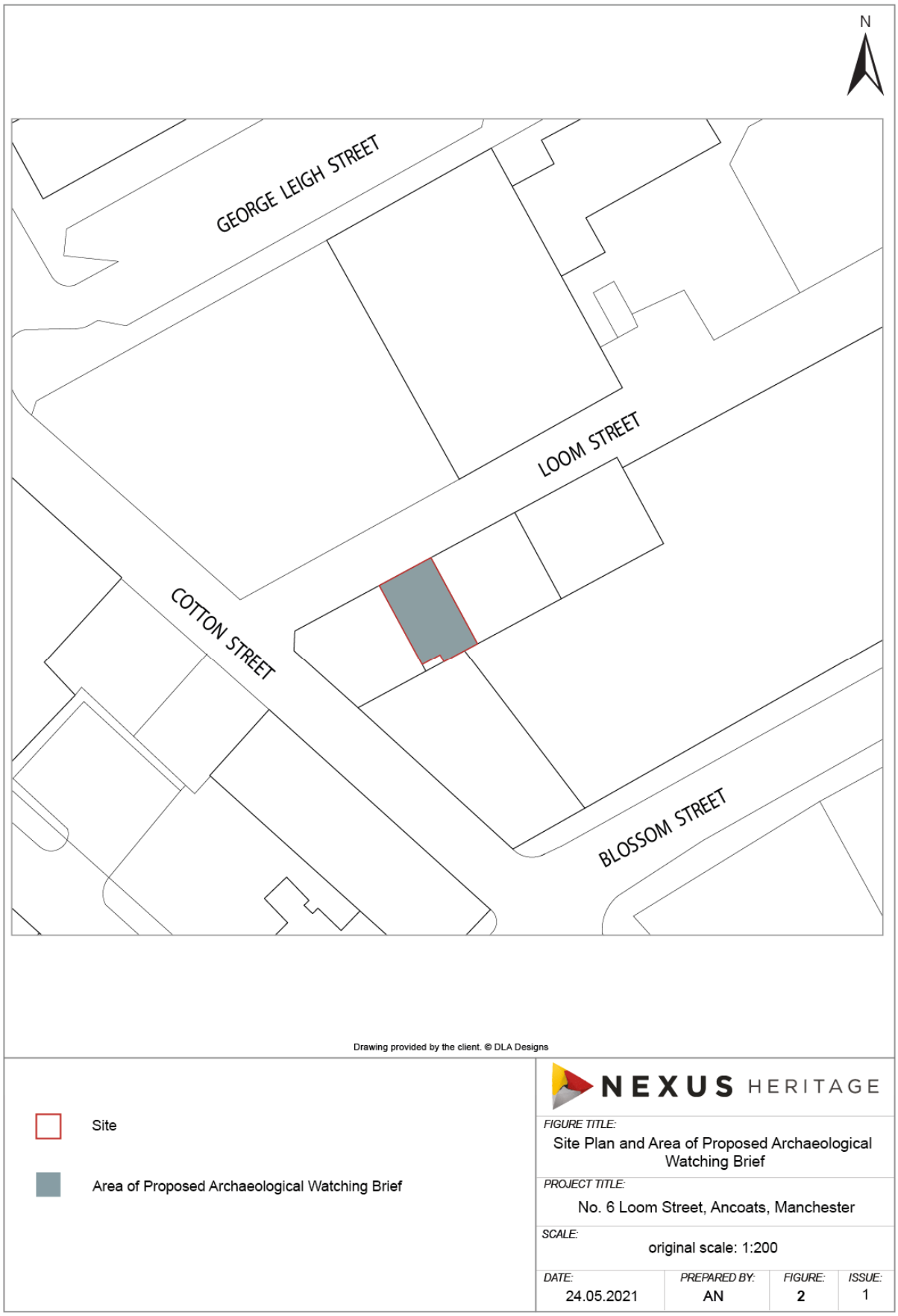


Fig. 2: Site Plan (reproduced from Ordnance Survey mapping with the permission of Ordnance Survey on behalf of HMSO © Crown Copyright Nexus Heritage-SRI Licence No. 100048549)

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The planning application was supported by an archaeological desk-based assessment (Nexus Heritage 2020).

In summary at the time of the desk-based assessment the Greater Manchester Historic Environment Record (GMHER) had no entry for the Site. However, whilst the Site was within the countryside surrounding Manchester up until the late 18th century, the Laurent map of 1793 (Fig. 4) the Site is depicted as containing a building. There is no information on the Laurent map to identify the industrial or residential nature of that building. A Rate Book entry from 1795 Rate Book under the name James Dewhurst indicates 6 Loom Street was in use as a dwelling. There is a potential, therefore for the Site to contain archaeological evince of late18th century domestic occupation, which has a significance in that such housing as was present on the Site pre-dates the publication of the Manchester Board of Health's 1796 report. And, of course, pre-dates by some considerable time the broad sanitary improvements undertaken after the 1848 British Public Health Act.

The Adshed Map of 1851 gives more information on the nature of usage of the buildings on the Site and it confirms that 6 Loom Street remained in use as a residential building.

There was a change of use at 6 Loom Street after 1881. On the 1893 Ordnance Survey map an alleyway not shown on any earlier map is shown running along the eastern boundary of the Site. A wall/boundary on the southern side of the Site also appears to have been moved. In *Slater's Manchester & Salford Directory, 1895 [Part 2: Trades, Institutions, Streets, etc.]* Number 6 Loom Street is listed as being occupied/owned by the Northern Rubber Co. Waterproof garment makers. This change of use throws up interesting questions regarding the fact of and extent of whether the dwelling was repurposed to incorporate a manufactory or was it demolished wholesale and a new building erected on the Site?

On 23rd November 1899 Messrs. Hugh Spence and Co. waterproof manufactory on Loom Street was destroyed by fire along with the adjoining premises of Messrs Humpreys, Stothart and Co. The Ordnance Survey 1922 map shows the Site as vacant, without a standing structure. The next map in the cartographic sequence is Goad's Insurance Mapping of 1926, which shows the redevelopment of the Site into an industrial building with a roof light. It is annotated as an "ice cream factory" of one storey with no cellar (Fig. 13). This structure is the building still visible today, including the roof light.

The archaeology of the domestic arrangements and living conditions of Manchester during the 19th century is a recognised research priority for North West England and the opportunities provided at the Site to address the research topics identified in the first decade of the 21st century remain valid and can be augmented by the Northwest Regional Research Framework (Updated Research Framework). The opportunities are expanded upon below in the examination of the project's aim and objectives.

TERMS AND CONDITIONS OF APPOINTMENT AND PERFORMANCE STANDARDS

Nexus Heritage acts as Archaeological Consultant to the Client. The archaeological attendances will be undertaken by a team of suitably qualified and experienced archaeological practitioners.

Nexus Heritage operates in accordance with:

- The Chartered Institute for Archaeologist's *Code of Conduct* (2019 edition).
- The Chartered Institute for Archaeologist's *Regulation for Professional Conduct* (2019 edition).
- The Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Brief* (2020 edition).
- The Chartered Institute for Archaeologist's *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2020 edition).
- The Chartered Institute for Archaeologist's *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2020 edition)

AIMS AND OBJECTIVES

The broad aims of the archaeological attendances are:

- to enhance knowledge and understanding of the historic environment of Manchester in particular, and north-western England in general;
- to effectively and rapidly disseminate the results of the project, and to archive them, enabling the project findings to be widely and readily accessed by professional and non-professional audiences alike
- to ensure that professional expertise and experience is advanced by the continual improvement of archaeological method and practice

The detailed objectives of the archaeological attendances are:

- to make a full and proper record of any archaeological structures, deposits, features, artefacts and ecofacts within the relevant areas of the Site, permitting a reconstruction of the Site's history and formation processes. To recover a sample of artefact and ecofact samples from deposits of potential
- To analyse the Site records, artefacts and ecofacts to produce a report on the engaging with the research implications of the site with reference to the regional research agenda and recent work in Manchester in particular and the Greater Manchester area/north-western England in general.

The archaeological works are to be implemented with reference to a research design which reflects the ambitions of the North-West England Regional Research Agenda, specifically relating the Industrial and Modern periods (Brennand 2007).

The specific aims of the archaeological attendances are to investigate:

- The late 18th century dwellings;
- The late 19th century waterproof manufactory; and
- The 20th century ice cream factory.

Some detailed objectives to address include:

- What is the evidence for the date of construction of the structures?
- Did the original dwelling on the Site have a cellar?
- What can the Site of the structures tell us about settlement pattern and settlement change within Manchester from the late 18th century into the 19th century?
- What can the Site contribute to an understanding of the relationship of the urban settlement pattern during the 18th and 19th centuries?
- Can the archaeology of the Site add to regressive projections of earlier settlement patterns?
- Identification of the fire horizon relatable to the 1899 blaze at the waterproof manufactory (reason for abandonment)
- Is there evidence at the site for changes on consumption patterns linked to the social status of the occupants across the centuries?
- Is there evidence of a change of use on Site form dwelling to manufactory in the late 19th century? If so, what is the evidence and what does it suggest or confirm?
- Is there any evidence at the Site of activity related to waterproof garment production?

- Is there any evidence at the Site of activity related to ice cream production

In addition the Northwest Regional Research Framework (Updated Research Framework) has been developed as part of a national strategy to create a series of self-sustaining regional historic environment research frameworks for England. It builds on the original North West Region Archaeological Research Framework (Brennand 2006 and 2007). The Industrial and 20th Century Period benefits form a series of refreshed research questions https://researchframeworks.org/nwrf/industrial/ focused on a number of period-related themes which the Site may be able to address.

The Environment:

- What evidence is there for the impact of Industrialisation on health, diet and natural resources?

  This question can be addressed by recovering palaeoenvironmental data from cess pits and other suitable cut features to inform on diet, health, natural resource use and consumption patterns

The Urban Landscape:

- How did industrial period towns affect the pre-existing historic landscape?

  Test for evidence of any impact the historic landscape had on the development of the Site from the late 18th century

- How can an understanding of the impact of industrialisation on the working class and their living conditions be taken forward?

  Opportunities to be taken for archaeological investigation of urban cellars to examine evidence for cellar dwellings in working class houses and areas of now undeveloped and cleared former working class areas regarded as slums.

- What evidence do we have for the improvement of urban public health during this period?

  Opportunities to be taken for archaeological investigation of provision for sewerage, drainage, drinking water, sanitation in urban dwellings.

- Can the Site provide any data on pre By Law workers housing?

Technology and Production

- Can the Site provide data of value such that it becomes a type-site for waterproof material manufacture?

- Can adaption of a domestic buildings for the textile industry be identified at the Site?

- Does 20th century ice cream production as an industrial processes require a specific building type and whilst ice-cream production is perceived as poorly understood and recorded does it have any significance?

FIELDWORK METHODS

It is proposed to maintain archaeological attendances on the following:

- geotechnical investigations (active presence, monitoring and recording of)
- works entailing ground disturbance in association with the scheme which derives from excavations and interventions (watching brief).

The methodology for the archaeological attendances has been prepared with reference to the CIfA's document *Standards and Guidance for Archaeological Watching Brief* (2020) and will be kept under constant review during the project, in order to see how far it is meeting the terms of the aims and objectives, and in order to adopt any new questions which may arise.

Curatorial monitoring of the archaeological work on behalf of the Council will be carried out by an officer(s) of Greater Manchester Archaeological Advisory Service (GMAAS) or as nominated by the Council (hereafter the monitor). To facilitate the curatorial monitoring, the monitor shall be provided with a minimum of one weeks' notice of the start of the archaeological work.

A suitably qualified and experienced archaeologist(s) will be commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) will report to the site manager and conform to the arrangements for notification of entering and leaving site. The archaeologist(s) will keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and any actions taken. The archaeologist will be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

During presence at and monitoring and recording of geotechnical investigations (Fig. 3) the archaeologist will monitor discoveries and arisings with the aim of recovering archaeological information in order to characterise the depositional and structural stratigraphy underlying the Site. The specific objectives are to assess the potential for floor surfaces, a cellar, buried land surfaces, preserved organic deposits, portable culture and other objects on the Site, and to inform considerations on the potential for the site to address the research topics significance. The exploratory investigations are understood to take the form of 150mm diameter probe-holes.

If deposits and or artefacts are exposed during geotechnical excavations or any other groundworks for the development which require recording and recovery, it may be necessary to delay works whilst the proper investigation and recording takes place. Recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site. Within the constraints of the terms of the watching brief work, the archaeologist will not cause unreasonable disruption to the maintenance of the work schedules of other contractors on site.

In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) is beyond the resources deployed the Client will be notified and a site meeting/telephone consultation arranged with the monitor. The aim of the meeting will be to confirm that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard and identify measures which would be sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

Any archaeological deposits, features and structures identified which can be investigated and recorded under the terms of the watching brief will be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not be necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures will be investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits will be investigated where practicable.

The method of recording will adopt best-practice techniques and the stratigraphy of each area will be recorded in written descriptions even where no archaeological deposits have been identified. The drawn record will comprise plans of the site at an appropriate scale, e.g. 1:20 or 1:50 and sections at scale 1:10. Electronic hardware and software may be used to prepare site drawings as appropriate.

All artefacts discovered will be retained for processing and analysis except for unstratified items dating to the twenty-first century AD which will be recorded by material type, form, identification and weight, and discarded. Consideration will be given to retention of significant and coherent groups of 20th century material associated with WW1, WW2 or the Cold War following assessment by a relevant specialist. All finds will be assessed in order to recover information that will contribute to an understanding of their date and function. All retained finds will be stabilised and packaged in accordance with best practice and current CIfA standards and guidance, and the requirements of the organisation nominated to receive the archive. The artefacts will be packed and stored in appropriate materials and conditions to ensure that no deterioration occurs. All artefact/ecofact processing/storage will be carried out in accordance with UKIC (United Kingdom Institute for Conservation) guidelines and should accord with the CIfA document *Standards and guidance for the collection, documentation, conservation and research of archaeological materials* (20120). Soil or other samples recovered will be processed as appropriate by a qualified and experienced bio-archaeological scientist. Where the need for dating of individual contexts/features arises, material suitable for scientific dating will be identified and the Client advised.

The terms of the *Treasure Act* (1996) will be followed with regard to any items discovered to which the Act would apply. Such items will be removed to a safe place and reported to the local coroner as required. Where removal cannot be effected on the day of discovery suitable security measures will be taken to protect the items from unlawful removal.

The archaeological contractor will provide a detailed methodological statement for the appropriate treatment of animal bones in line with the Historic England document *Animal Bones and Archaeology - Recovery to Archive* (2019).

The aims, objectives and expectation of a palaeoenvironmental strategy will parallel the over-arching goals for the project, and proceed in accordance with the guidance provided in *Geoarchaeology - Using earth sciences to understand the archaeological record* (Historic England, 2015a) .If necessary a soil sampling and assessment strategy which address the project goals will be devised and defined.

Reservoirs of palaeo-environmental data, including alluvial sequences and palaeo-channels, which may be of intrinsic interest, will be identified and sampled on site subject to health and safety considerations and where contamination does not prohibit retrieval. Bulk samples will

be taken for wet-sieving with flotation to recover plant macro fossils, pollen, insects, molluscs, fish/animal bone, charred cereal remains, seeds, small bones or other small remains. Due to the low density of palaeoenvironmental remains expected from prehistoric contexts samples will be of around 40-60 litres. A range of samples will be taken from contexts with the potential to be datable and to contain remains to represent all feature types, areas and phases of the site. Target contexts will include appropriate stratified deposits within pits, ditch or gully terminals, refuse/waste deposits in ditches, domestic contexts, and burnt features. Features of other periods will be sampled as appropriate if encountered and other particular samples such as spot samples from intense concentrations of bones or seeds are found will be taken. Middens, if present, would require a specific investigation sampling strategy, possible on a grid pattern in order to recover remains systematically. Waterlogged: deeper features, if present, will be investigated for the preservation of organic remains including plant macrofossils, pollen and possibly insect remains, which may provide evidence of the environment or land use. If buried soils are encountered sampling for micromophological/phosphate analysis by taking monoliths with sub-samples for soil chemistry composition will be considered and budgeted for.

Recommendations for further analysis (including the sub-sampling volumes) will be made in accordance with the Historic England guidance (2015a). It is expected that the scientific sampling strategies will evolve subject to the requirements of the project's aims and objectives in accordance with the latest guidelines. The proposed environmental and scientific sampling regime will form part of the Compliance Statement and will need to be agreed with the Planning Archaeologist and the Historic England Science Advisor in advance of implementation. Any deviation from the sampling procedures outlined in the above guidance documents will be discussed and agreed with the Planning Archaeologist and the Historic England Science Advisor in advance of implementation.

In principal, any human remains discovered will be left *in situ* and protected. Nexus Heritage will notify the Client if the presence of human remains at the earliest opportunity. If removal is necessary and mandated by the relevant regulatory authorities the remains will be excavated archaeologically in accordance with the English Heritage document *Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England* (Second Edition 2017) and any conditions imposed by the Ministry of Justice and/or the Local Planning Authority Environmental Heath Directorate. Any assessment and reporting work on recovered human remains will be undertaken in accordance with the document *Updated Guidelines to the Standards for Recording Human Remains* (CIfA 2017) and the Historic England document *The Role of the Human Osteologist in an Archaeological Fieldwork Project* (2018a).

The photographic recording will be undertaken using a high-resolution (16mb) digital camera and a discretely placed graduated metric scale will be included in each image (unless its inclusion would obscure the item being photographed, in which case two images would be made, one with and without the scale). The colour digital images will be taken as RAW files, subsequently provided as JPG and TIFF files. A fixed lens will be utilised, but a zoom lens with the zoom length fixed throughout the archaeological recording may also be employed.

All photographs will have a unique identifying number and be recorded in a photographic register detailing the photograph number, the location and direction of each view, and the composition of the image.

Contingency will be allocated for the recovery and processing of sufficient C^{14} and/or archaeo-magnetic samples and/or optically-stimulated luminescence samples and or dendrochronological samples in order to fulfil the aims and objectives of the project In the event that discoveries during excavation warrant refinement of a scientific dating strategy a sampling strategy will be agreed with a suitably qualified and experienced dating specialist. The scientific dating strategies will follow the relevant English Heritage/Historic England guidance and the advice and information at https://www.bradford.ac.uk/archaeomagnetism/.

Every effort will be made by the Client and Nexus Heritage to allow public engagement with the archaeological resource. Nexus Heritage recognises that opportunities for members of the public to participate in archaeological fieldwork are a useful tool for training, engaging interest and increasing an appreciation of the historic environment. Therefore, with reference to the CIfA's policy statement on the use of volunteers (CIfA 2016), volunteers can be involved in archaeological projects managed by Nexus Heritage. However, due to operational constraints, and other factors it may not be possible to allow members of the public to participate in the on-site archaeological works. Where feasible the works and their results will also be transmitted to the public by the use of outreach strategies such as newspaper and radio interviews, lectures to amenity societies.

At the conclusion of the fieldwork, a brief summary of the results will be prepared for the Client. The report will be prepared after the retained artefacts have been cleaned, identified (if possible), labelled, assessed and dated (if possible).

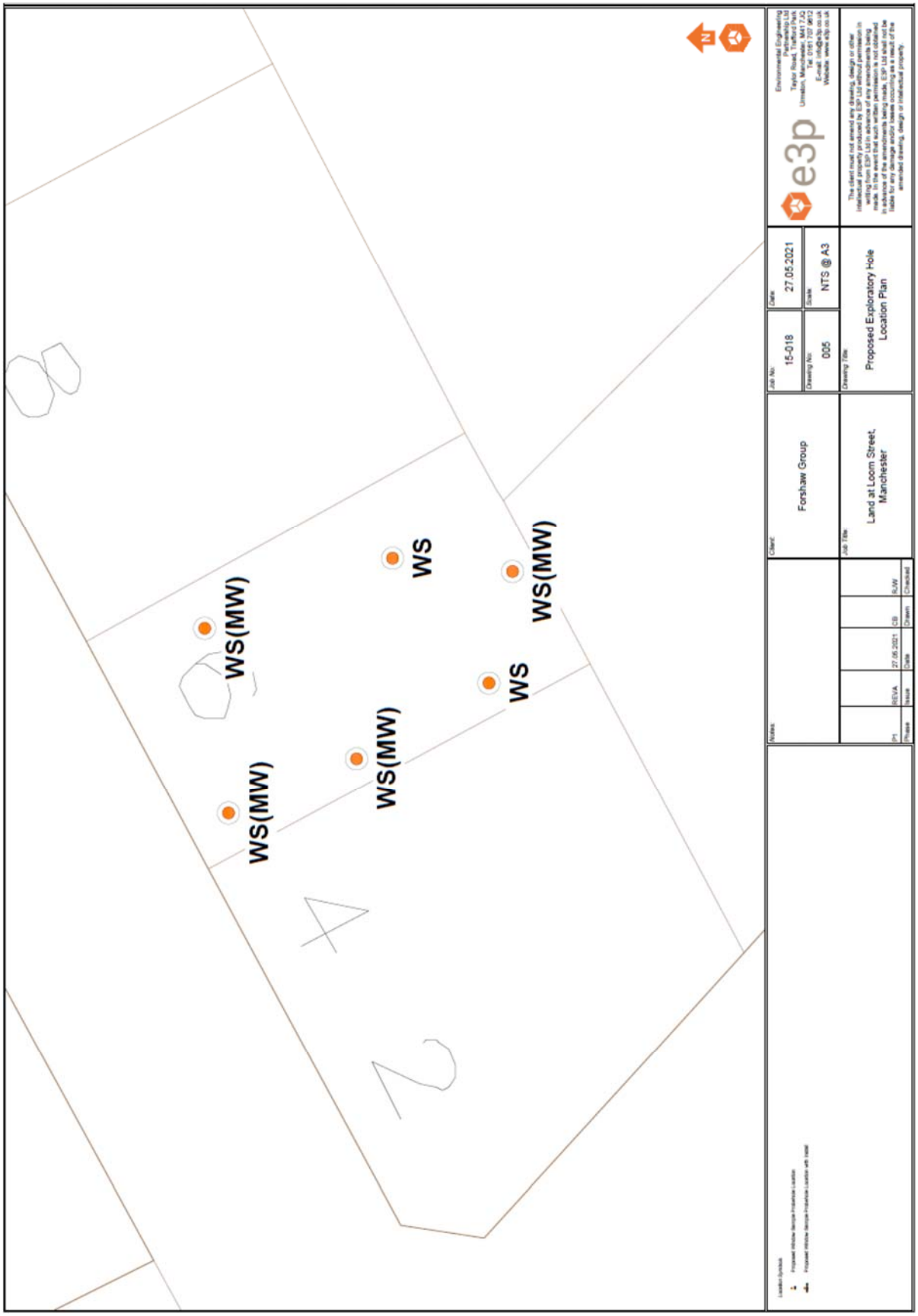


Fig. 3: Proposed Exploratory Hole Location Plan.

After the completion of the fieldwork a report will be prepared which encompasses the results of the archaeological attendances. The report would normally contain the following, but the contents may be adapted to take account of project specific circumstances:

- A non-technical summary
- A table of contents
- An introduction with acknowledgements, including a list of all those involved in the project and the location and description of the site
- A statement of the project aims
- An account of the project methodology undertaken, with an assessment of the same to include a statement on preservation bias and the means of data collection and sampling strategies
- A factual summary of the history, development and use of the site
- A statement setting out the nature, quantity and condition of the material archive (artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements
- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data)
- A general site plan indicating the position and size of the areas subject to watching brief and the locations of archaeological deposits identified and recorded during the works
- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.
- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository

One digital .PDF copy of a draft version of the report will be made available by Nexus Heritage to the Client and GMAAS for review for comment within three weeks of the completion of the fieldwork.

Nexus Heritage will take into account any observations on the content of the draft report made by the Client and GMAAS during preparation of the final version of the report

Should the delivery of the report depend on the incorporation of reports arising from specialist and/or laboratory work then a revised timetable for delivery of the draft report may be agreed upon conclusion of the fieldwork stage. Any observations on the content of the draft report made by the Client, the Council and the monitor will be taken into account during preparation of the final report.

A digital .pdf copy of the final report will be submitted to the Client (1) and onward submission to the Council (1 copy) and the GMHER (1 copy). A copy of the final report will also be submitted to the National Monument Record in appropriate hard and digital formats.

A summary report on the archaeological works will be provided to a suitable local journal if this is appropriate to the significance of the results, with a record note presented to the appropriate national period journal(s). These reports/notes will include the collaborative role of the Client and the Council in the completion of the archaeological works. An OASIS report will also be submitted.

Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive, a statement on its location/proposed repository and copy of the OASIS report.

Reference will be made to the updated Research Framework during report preparation, to ensure that if additional research avenues come to the fore during consideration of the results they can be tied back to the framework.

Report copies in the appropriate numbers, formats and media (e.g. digital .PDF/A format generated using Adobe Acrobat) of the final report will be prepared and submitted to the NMR, and the GMHER.

COPYRIGHT

Copyright to any commissioned reports and any other project documents prepared by the appointed service providers will be retained by the appointed service providers under the Copyright, Designs and Patents Act of 1988; excepting that an exclusive licence will be provided to the Client, the Council, and GMAAS for the use of such documents by the Client, the Council, and the GMAAS in all matters directly relating to the project.

The copyright of this document remains with Nexus Heritage, subject to the same exclusive licence.

CONFIDENTIALITY

Nexus Heritage will treat as confidential all information obtained directly or indirectly in connection with the archaeological works and will not, without the prior consent of the Client, disclose any information relating to the project or publicise the project in any way. The Client will manage all matters pertaining to publicity arising from the archaeological works and for any public education/outreach events or matters, as appropriate.

HEALTH AND SAFETY

Nexus Heritage will be responsible for obtaining all relevant certification regarding Health and Safety prior to any site works. Nexus Heritage and its sub-contractors will adhere to all

relevant health and safety legislation and be guided by, *inter alia*, the *Health and Safety at Work Act* (1974), *Control of Substances Hazardous to Health (COSHH) Regulations* (2002), *Construction Design and Management (CDM) Regulations* (2015), *Management of Health and Safety at Work Regulations* (1999), the *Work at Height Regulations* (2005), the *Confined Spaces Regulations* (1997) and the *Personal Protective Equipment at Work Regulations* (2002).

While carrying out the archaeological works Nexus Heritage will operate in accordance with all applicable Health and Safety Legislation. All site staff and site visitors will be provided with all necessary protective clothing and equipment.

It is understood that contaminated material may be present within surface and subsurface deposits on the Site. Archaeological work may therefore encounter contaminants. The potential for acute exposure to archaeological practitioners is a material consideration and a risk. Accordingly, Nexus Heritage will manage any potential acute exposure risk to its staff and adjacent site users during the archaeological works in accordance with, *inter alia*, the *Control of Asbestos Regulations* (2012). Nexus Heritage is prepared to implement a series of control measures as follows:

- Provision of a site specific toolbox talk training session for all operatives on site,
- the use of basic 5 point PPE (hard hat, to include a chin strap when working from height or in windy conditions, high visibility vest/jacket, un-laced protective footwear to provide toe, sole and heel protection, gloves, safety eye-wear),
- the use of disposable coveralls (Type 5 BS EN ISO 13982-1) if contaminants are discovered,
- Respiratory Protective Equipment (RPE) EN149 (type FFP3) or EN1827 (type FMP3), or Half mask respirator (to standard EN140) with P3 filter and an appropriate filter change regime, if contaminants trigger the use of RPE,
- Request for dust suppression, if airborne contamination is a possibility
- Compliance with material handling requirements (keep number of operatives working in the area of contaminated material to a minimum and handle carefully potentially contaminated materials avoiding double-handling where possible
- Decontamination washing of footwear, tools and equipment, if contamination is discovered
- Removal of disposable PPE/RPE upon leaving area/Site, if contamination is discovered.

In addition, if contamination is discovered during the archaeological works Nexus Heritage will ensure that site staff wear coveralls one size larger than the normal fit for the individual to prevent tearing at the seams, that loose cuffs are sealed with tape to reduce the risk of contaminating clothing, that the coverall legs are worn over footwear to prevent dust / contamination entering the footwear, that the hood is worn over the straps of the RPE and that coveralls are removed by turning them inside out to facilitate disposal.

Coveralls will be the outer layer of clothing and high visibility vest/jacket should not be worn over the coverall. In some cases, white coveralls may be classed as high visibility clothing; this will be considered Nexus Heritage prior to commencing work. In cases where high

visibility clothing cannot be avoided, garments should be disposed of when work in that area is completed if they have been exposed to significant levels of contamination that precludes decontamination and re-use.

Should contamination be discovered, such contamination may need to be dealt with by an appropriately qualified contractor. Nexus Heritage and/or its sub-contractors will not take responsibility for the removal of contaminated material from the excavation area or Site.

Where contaminated material is present in the surface or sub-surface deposits at the Site appropriate measures will be taken into account by the Nexus Heritage and is sub-contractors to ensure the health and safety of operatives which may come into contact with contaminants. In case of encountering contaminated material, Nexus Heritage will inform the Client immediately.

In the event of encountering contaminated material, it may be necessary for Nexus Heritage to produce a revised method statement. Nexus Heritage will forward the revised method statement to GMAAS for reference.

In the light of the Site's location, the recorded information on ordnance strikes during WW2 and partial redevelopment after 1945 the UXO risk is considered to be moderate. The Client will share any UXO Risk Assessment with Nexus Heritage in order that the archaeology team can familiarise itself with the risk profile and devise appropriate actions to be undertaken in the event of a suspected or actual UXO discovery. Appropriate actions in the event of UXO discovery are a vital part of the general safety requirement and contribute to evidencing conformity with the principles laid down in the CDM regulations 2015. All archaeological operatives working on the Site will receive a general briefing from the Client concerning the identification of UXO what actions they should take to keep people and equipment away from such a hazard.

A Health and Safety Plan (including a Risk Assessment) and/or a Risk Assessment Method Statement (RAMS) will be submitted to the Client for verification before archaeological Site works commence. Such documentation may also be reviewed by a third party H&S expert. Nexus Heritage will take into account any comments made by the Client on the Health and Safety Plan (including a Risk Assessment) and/or a Risk Assessment Method Statement (RAMS) and revise as appropriate.

ARCHIVE

The project and its resulting archive would be undertaken within a Digital Data Management Plan environment maintained by the archaeological contractor.

Digital Data Management Plan

Type of study

Archaeological watching brief.

Types of data

Digital text, digital photographs, vector and raster images, digital spreadsheets, hand-written notes.

Format and Scale of the Data

Photographs taken in RAW format and later converted to TIFF format for long term archiving and JPEG format for use in the digital report, converted using Adobe Photoshop. All photographs to be renamed using AF5 freeware (or equivalent) with the prefix (project code_frame number) and a photographic metadata created using Microsoft Excel (.xlsx) or Access (.accdb).

Written descriptions taken in digital .txt format and sent via email to ensure a digital backup copy at time of record.

Plans scanned as .PDF files.

For GIS creation, the metadata relating to each spatial feature will be contained in the attribute table. This will include:

• Date of creation

• Date of any edits and modifications

• Ordnance Survey Grid reference

• Extent

Methodologies for Data Collection / Generation

Digital data will be collected / generated in line with recommendations made in the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014. Rev 2020). Sections 3.3.1 and 3.3.3 are relevant:

Project Specifications, Research Designs or similar documents should include a project specific Selection Strategy and a Data Management Plan.

Project designs or schedules of works etc. should outline the methodology used in recording all information, in order to demonstrate that all aspects of archive creation will ensure consistency; for instance in terminologies and the application of codes in digital data sets, highlighting relevant data standards where appropriate

Data Quality and Standards

Consistency and quality of data collection / generation will be controlled and documented through the use of standardised procedure as outlined in the WSI. This will include the use of standardised data capture file formats, digital *proformae*, data entry validation, peer review, and use of controlled vocabularies.

Managing, Storing and Curating Data

All digital data will be organised into the contractor's project file systems and backed up to the cloud with additional copies made to external physical hard drive.

Metadata Standards and Data Documentation

Digital metadata created using Microsoft Excel (.xlsx) or Access (.accdb) of all photographic plates.

GIS data will be georeferenced using the Ordnance Survey National Grid and saved as ESRI shapefiles which will contain the associated attribute tables including metadata. Attribute tables will also be exported as .csv files.

Data Preservation Strategy and Standards

Long term data storage will be through the submission of digital (.PDF) reports to the regional Historic Environment Record (HER); submission of digital (.PDF) reports and a project completion

form to the Oasis database; submission of the scanned (.PDF) archive, photographic plates (.TIF), and metadata (.xlsx) (.accdb) to the Archaeology Data Service (ADS); and retention of copies of all digital files at Nexus Heritage on physical external hard drive and uploaded to the cloud.

Suitability for Sharing

All digital data will be placed within the public realm (through the channels above) except for where project confidentiality restricts the sharing of data. All data sets will be selected / discriminated by Nexus Heritage and written permission will be sought from all project specific Clients prior to the sharing of data.

Discovery by Potential Users of the Research Data

Potential users of the generated digital data (outside of the organisation) will be able to source the data and identify whether it could be suitable for their research purposes through access granted via the ADS and OASIS websites. Requests can also be made for data through the regional HER's and directly to the archaeological contractor.

Governance of Access

The decision to supply research data to potential new users will be via the associated website request (ADS, OASIS, HER) or via the archaeological contractor.

Exclusive use of the data by the Generating Organisation

There is a requirement is for timely data sharing, with the understanding that a limited, defined period of exclusive use of data for primary research is reasonable according to the nature and value of the data, and that this restriction on sharing should be based on simple, clear principles. This time period is expected to be six months from completion of the project however the archaeological contractor can reserve the right to extend this period without notice if primary data research dictates.

Restrictions or Delays to Sharing, with Planned Actions to Limit Such Restrictions

Restriction to data sharing may be due to participant confidentiality or consent agreements. Strategies to limit restrictions will include data being anonymised or aggregated; gaining participant consent for data sharing; and gaining copyright permissions. For prospective projects, consent procedures will include provision for data sharing to maximise the value of the data for wider research use, while providing adequate safeguards for participants.

Regulation of Responsibilities of Users

External users of the data will be bound by data sharing agreements provided by the relevant organisation or directly through the archaeological contractor.

Responsibilities

Responsibility for project-wide data management, metadata creation, data security and quality assurance of data will be through the archaeological contractor when concerning data generation and early/mid-term storage. Upon deposition with digital depositories the project-wide data management, metadata creation, data security and quality assurance of data will be the responsibility of the specific organisations themselves.

Organisational Policies on Data Sharing and Data Security

The archaeological contractor will demonstrate existence of the following policies:

Archive Deposition Policy

Quality Assurance Policy

Conflict of Interest Policy

Outreach Policy

Digital Management Policy

The anticipated recipient organisation for the project archive is the Manchester Museum. The contact at the Manchester Museum is Bryan Sitch (Tel: 0161 306 1582, Email: bryan.sitch@manchester.ac.uk). The archaeological contractor will contact Manchester Museum to confirm collection policies and whether or not Museum is receiving archaeological archives.

The archaeological contractor will conform to the arrangements for archive preparation and submission prior to commencing the works and provide copies of the relevant correspondence and accession number to GMAAS.

The archaeological contractor will maintain the archive until the period of report preparation is complete. The archaeological contractor will prepare the archive in accordance with the any guidelines adopted by and published by the recipient organisation. The archive is to be prepared, compiled and presented for long term storage according to the format requirements of the recipient organisation and as set out relevant standards including

- The Institute for Archaeologists' *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2020 edition).
- The Institute for Archaeologists' *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2020 edition)

The archaeological contractor will be responsible for the security of the project archive. An indexed project archive will be prepared. The project archive will comprise all primary written documents, maps, plans and plots, unprocessed raw data and photographs.

Legal title to any artefacts or other items identified and/or recovered during the archaeological works remains vested in the land owner. Nexus Heritage will request deposition of the artefact archive along with the remainder of the archive by means of an agreement to transfer legal title to the artefacts from the landowner to the archive repository. Should the land owner not wish to donate the artefact component of the project archive to the recipient organisation Nexus Heritage will request that the landowner retains the artefact archive and makes it available, on a cost–free, fair-usage basis to those individuals and/or organisations with a legitimate research therein.

MONITORING

Nexus Heritage will monitor the works for the Client's benefit and GMAAS will act on behalf of the Council. A minimum of one week's notice of the commencement of the archaeological attendances will be given by Nexus Heritage to GMAAS so that arrangements for monitoring can be made.

Reasonable access to the site works will be provided by Nexus Heritage to representatives of the Client, the Council and GMAAS in order to monitor the works. A site tour and opportunity to scrutinise site records will be provided to the monitors.

Nexus Heritage will ensure that any significant results recovered during the archaeological investigations are brought to the attention of the Client who will notify the relevant organisations/authorities as soon as is practicably possible, and certainly within 24 hours.

Any monitoring visits or communications will be documented by Nexus Heritage and copied to the Client.

Consultations between the Nexus Heritage, the Client and GMAAS will be convened periodically during the project. The purpose of these consultations is to advise the monitors on the manner in which the objectives of the project have been addressed and secure agreement that the milestone elements of the project have been concluded to the satisfaction of the Client and the Council. A series of consultations is suggested in the table below with potential outcomes.

Milestone	Purpose of Consultation	Participants	Format	Outcome
Draft of WSI	To discuss draft WSI, timetable, etc.	Nexus Heritage Client GMAAS	Telephone/e-mail	Authorisation of WSI and issue of final WSI. Authorisation to begin archaeological attendances. Confirmation that the pre-commencement obligations of the condition have been addressed.
At half-way point	To confirm compliance with WSI	Nexus Heritage Client GMAAS	Site meeting Telephone/e-mail	Continuation of archaeological investigations
Upon completion of archaeological attendances	To review results	Nexus Heritage Client GMAAS	Telephone/e-mail	Confirmation of completion of archaeological excavations and compliance with the WSI. Authorisation to commence reporting.
Production of the draft report.	To review results	Nexus Heritage Client GMAAS	Telephone/e-mail	Authorisation to commence production of final report
Production of final report	To review results	Nexus Heritage Client GMAAS	Telephone/e-mail	Confirmation of completion of reporting in compliance with the WSI.
Preparation of project archive	To confirm that all tasks have been completed with reference to the WSI and to formally close the project	Nexus Heritage Client GMAAS	Telephone/e-mail	An ordered and indexed project archive discharge of condition upon application

RESOURCES AND PROGRAMMING

The archaeological attendances will be undertaken by a team of demonstrable competence and experience.

The overall delivery of the project objectives will be managed by Anthony Martin, a Director of Nexus Heritage with over 30 years' experience in the heritage and archaeology sector. He is a Member of the Chartered Institute for Archaeologists (Mem. No. 1091) and has a BA (Hons) in History and an MA in Scientific Methods in Archaeology. For the purposes of condition 7 he can be identified as the Competent Person.

The archaeological attendances will be carried out by a field team with relevant experience and qualifications and will be drawn from one of the regional archaeological contractors with experience working in Greater Manchester and familiarity with the relevant topics within the regional research agenda. The field team will not be deployed until confirmed as appropriate by the Client and GMAAS.

Nexus Heritage will provide target dates for the start and completion of the Site works and the submission of reports, publications and archival material.

COMMUNICATION PATHS

Anthony Martin is identified as the Project Manager on behalf of Nexus Heritage.

Any questions or requests for clarification arising from examination of this document are to be submitted in writing to Nexus Heritage.

SOURCES

ADS (1) *Data Management and sharing Plans* https://archaeologydataservice.ac.uk/advice/DataManagementPlans 10

ADS (2) *Guides to good practice* http://guides.archaeologydataservice.ac.uk/g2gp/Main

ADS (3) *Guidelines for Depositors* https://www.archaeologydataservice.ac.uk/advice/guidelinesForDepositors

ADS (4) *Guidance for the selection of material for deposit and archive* https://www.archaeologydataservice.ac.uk/advice/selectionGuidance.xhtml

Brennand, M. (ed), 2006, *The Archaeology of North-West England – An Archaeological Research Framework for North-West England. Volume 1 – Research Assessment.* Association for Local Government Archaeological Officers/English Heritage/Council for British Archaeology.

Brennand, M. (ed), 2007, *Research and Archaeology in North-West England – An Archaeological Research Framework for North-West England. Volume 2 – Research Agenda and Strategy.* Association for Local Government Archaeological Officers/English Heritage/Council for British Archaeology.

Chartered Institute for Archaeologists, 2017, *Updated Guidelines to the Standards for Recording Human Remains*

Chartered Institute for Archaeologists, 2019a, *Code of Conduct*

Chartered Institute for Archaeologists, 2019b, *Regulations for Professional Conduct*

Chartered Institute for Archaeologists, 2020a, *Standards and Guidance for Archaeological Excavation*

Chartered Institute for Archaeologists, 2020b, *Standards and guidance for the collection, documentation, conservation and research of archaeological materials*

Chartered Institute for Archaeologists, 2020c, *Standards and guidance for the creation, compilation, transfer and deposition of archaeological archives*

Douglas, I, Hodgson, R and Lawson, N., 2002, Industry, environment and health through 200 years in Manchester in *Ecological Economics* Vol. 41, pp. 235–255

Forster, M., (ed), 2019, *Work digital / think archive A guide to managing digital data generated from archaeological investigations* © Dig Adventures on behalf of Archaeological Archives Forum and Historic England

Historic England, 2006, *Guidelines on the X-Radiography of Archaeological Metalwork*

Historic England, 2017, *Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England* Second Edition

Historic England, 2015a, *Geoarchaeology - Using earth sciences to understand the archaeological record*

Historic England, 2015b, *Archaeological and Historic Pottery Production Sites – Guidelines for Best Practice*

Historic England, 2015c, *Archaeometallurgy – Guidelines for Best Practice*

Historic England, 2016, *A Standard for Pottery Studies in Archaeology.*

Historic England, 2017, *Organic Residue Analysis and Archaeology – Guidelines for Best Practice.*

Historic England, 2018a, *The Role of the Human Osteologist in an Archaeological Fieldwork Project*

Historic England, 2018c, *Waterlogged Organic Artefacts Guidelines on their Recovery, Analysis and Conservation*

Historic England, 2019 *Animal Bones and Archaeology - Recovery to Archive*

Nexus Heritage, 2020, *No. 6 Loom Street, Manchester – Archaeological Desk-Based Assessment.* Unpublished document, ref. 3472.R01

UK Government, 1996, *The Treasure Act 1996.* London: The Stationery Office.