The JESSOP Consultancy
Sheffield + Lichfield + Oxford

LOW MILL FARM

Silkstone, South Yorkshire

Written Scheme of Investigation
For
Archaeological Watching Brief

March 2023
Final v3.0

Document No: TJC2023.26
Planning No: 2922/0335
OASIS No: N/A
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SUMMARY OF PROJECT DETAILS

TJC Project Code:	**F127**
OASIS ID:	**N/A**
Project Type(s):	Heritage Statement
National Grid Reference:	SE 29626 06810 (centred)
Postcode:	S75 4DS (nearest)
County:	Barnsley
District/Unitary Authority:	South Yorkshire
Parish:	Cawthorne
Elevation:	c. 80m above Ordnance Datum
Planning Reference(s):	2022/0335
Designation Status(s):	Low Mill Furnace (NHLE: 1004793), situated to the south. Non-designated heritage assets within the site associated with the surrounding industrial post-medieval landscape.
Prepared by:	Jennifer Oliver MCIfA
Reviewed by	Oliver Jessop MCIFA
Date:	14.03.2023
Version:	Final v3.0

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1 INTRODUCTION

1.1. BACKGROUND

1.1.1. This document forms a Written Scheme of Investigation (WSI) for an archaeological watching brief at Low Mill Farm, Silkstone, South Yorkshire (**Figure 1**), centred on National Grid Reference SE 29626 06810.

1.1.2. This WSI provides a detailed methodology for a proposed programme of archaeological recording at the site, and has been prepared to address a condition of planning consent for the demolition of an existing barn and the construction of a new two-storey dwelling (2022/0335):

> *No development, including any demolition and groundworks, shall take place until the applicant, or their agent or successor in title, has submitted a Written Scheme of Investigation (WSI) that sets out a strategy for archaeological investigation and this has been approved in writing by the Local Planning Authority. The WSI shall include:*
>
> - *The programme and method of site investigation and recording.*
> - *The requirement to seek preservation in situ of identified features of importance.*
> - *The programme for post-investigation assessment.*
> - *The provision to be made for analysis and reporting.*
> - *The provision to be made for publication and dissemination of the results.*
> - *The provision to be made for deposition of the archive created.*
> - *Nomination of a competent person/persons or organisation to undertake the works.*
> - *The timetable for completion of all site investigation and post-investigation works.*
> - *Part B (Pre-occupation/use) Thereafter the development shall only take place in accordance with the approved WSI, and the development shall not be brought into use intil the Local Planning Authority has confirmed in writing that the requirements of the WSI have been fulfilled or alternative timescales agreed.*

Reason: to ensure that any archaeological remains present, whether buried or part of a standing building, are investigated and a proper understanding of their nature, date, extent, and significance gained, before those remains are damaged or destroyed and that knowledge gained is then disseminated in accordance with Local Plan Policy HE6.

1.2. CONSULTATION

1.2.1. This programme of works has been designed in consultation with South Yorkshire Archaeology Service (hereafter the Local Authority Archaeological Advisor (LAAA)), who have been given the opportunity to comment on a draft of this WSI prior to final submission.

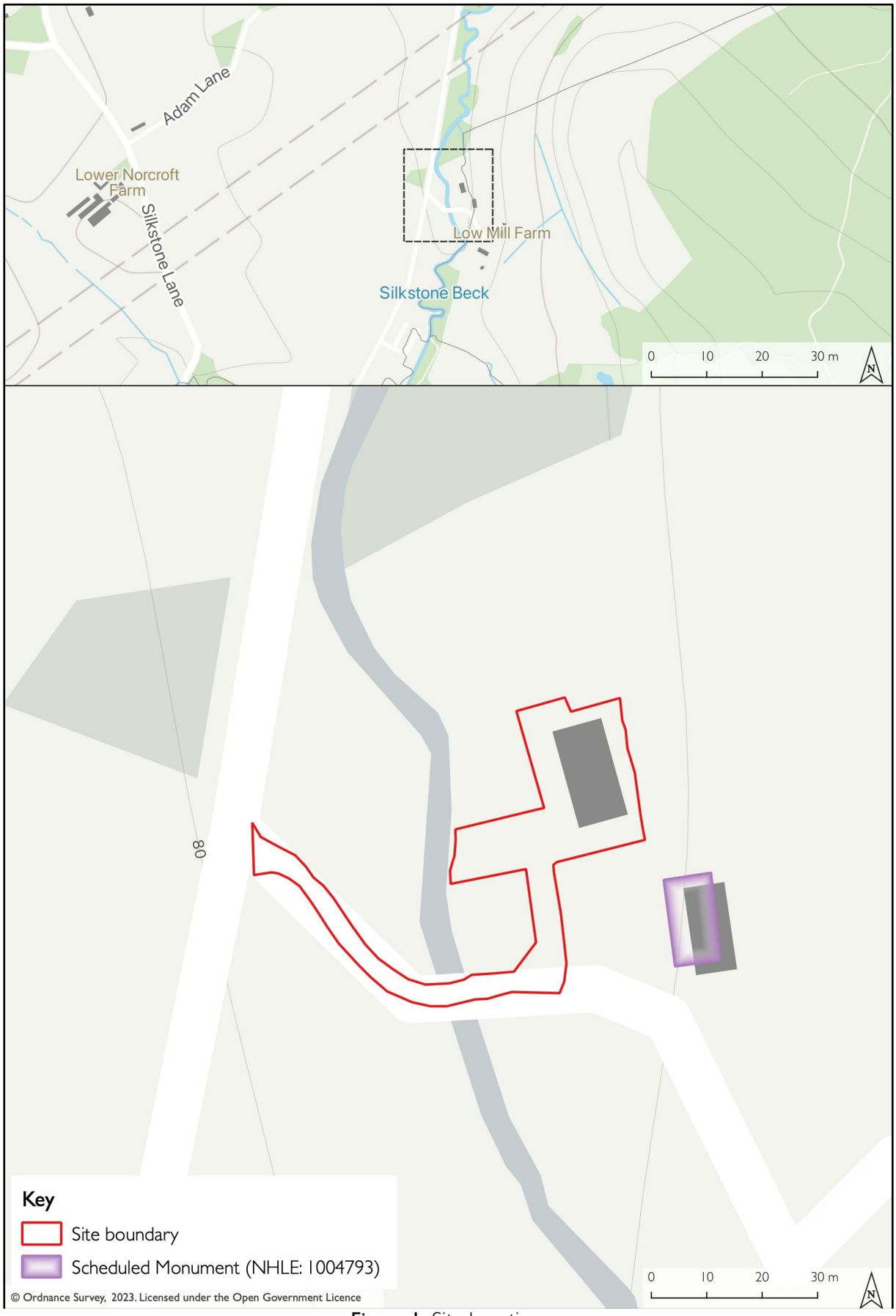

Figure 1: Site Location

2 PROJECT AIMS

2.1. AIMS

2.1.1. The principal aim of the project is to record structures and archaeological remains within the site, to make a permanent record in advance of its alteration or destruction, and to contribute to the understanding of the origin and development of the site.

2.1.2. The specific objectives of the programme of archaeological recording are to:

- to investigate and record all below ground archaeological features, or deposits encountered during the course of the development works.

2.2. RESEARCH QUESTIONS

2.2.1. The following research questions are proposed to guide this programme of work. They have been formed in consideration of the limited amount of information available for the site, the published research priorities in the South Yorkshire Historic Environment Research Framework (2023), in particular the following Industrial Research Questions:

1. How can we better understand the post-medieval and Industrial period mining landscape of South Yorkshire? What was the relationship between different components of that landscape?
2. What was the early organisation of the metal trades industries and how did this change over the post-medieval and into the industrial period?
3. What evidence can we find for the relationship between existing and emerging technologies in the post-medieval and Industrial periods?
4. Can we find evidence of undocumented or poorly documented industrial processes that could add to our understanding of the range of industries active locally in the Industrial period?

3 SCOPE OF WORKS

3.1. HISTORIC RESEARCH

3.1.1. A history of the property is to be produced, drawing on the existing research undertaken by TJC Heritage Report ref. TJC2020.78 (2022) and enhancing with reference to additional relevant sources, including:

- Census data;
- Historic newspapers;
- Historic trade directories;
- Wills and inventories;
- Other historic information as held by Barnsley Archives

3.2. ARCHAEOLOGICAL RECORDING

3.2.1. The programme of works will be co-ordinated by Archaeological Services WYAS a Registered Organisation (RO) of the Chartered Institute of Archaeologists (CIfA).

3.2.2. A targeted archaeological watching brief is to be maintained during the construction programme, comprising:

- Monitoring of ground reduction works relating to construction of the proposed dwelling and associated landscaping works.

3.2.3. If, during the course of the programme, sufficient evidence is identified to indicate the absence of archaeological remains within the area of works, then the watching brief may be reduced to intermittent monitoring or halted with the written approval of the Local Authority Archaeological Advisor.

3.3. REPORTING AND ARCHIVING

3.3.1. The outputs deriving from this project will include:

1. An archaeological record collated into a fully indexed project archive with Barnsley Museum, or the Archaeology Data Service at the University of York;
2. An archaeological report presenting the results of the survey to be distributed digitally to the Client and made publicly available through South Yorkshire Historic Environment Record (HER), and OASIS (Online AccesS to the Index of archaeological investigations).

3.4. CHANGES TO SCOPE OF WORKS

3.4.1. Should un-anticipated features of high archaeological significance, or of potential national archaeological importance, be identified then the archaeologist will notify the owner, project architect and LAAA to discuss how these features might be preserved or enhanced within the scheme. Where additional archaeological recording is recommended, then this WSI will be updated and resubmitted to the LAAA for approval.

3.4.2. Whereas, if during the course of the programme sufficient evidence is identified to indicate the absence of remains or structures of archaeological interest within the area of works, then the watching brief may be reduced to intermittent monitoring or halted with the written approval of the LAAA.

4 SITE DETAILS

4.1. SITE LOCATION

4.1.1. The site is located approximately 850m north of the village of Silkstone, bounded to the west by the Silkstone Wagonway, a recreational and Industrial History Trail. East of the site is Hugset Wood.

4.1.2. Located within the site is a large modern barn. A sinuous series of fishponds lie north of the furnace and west of the barn. Silkstone Beck passes to the west of the site. The land within the site is predominantly pasture.

4.2. TOPOGRAPHY & GEOLOGY

4.2.1. The topography sit is situated at approximately 80m above Ordnance Datum (aOD).

4.2.2. The geology at the site comprises sandstone of the Parkgate Rock and Mudstone, Siltstone and Sandstone of the Pennine Lower Coal Measures Formation (BGS, 2023). Coal mining has historically occurred in the vicinity of the site with former workings recorded east, west and north of the site.

4.3. DESIGNATIONS

4.3.1. There are no designated heritage assets within the site boundary however the scheduled Low Mill Furnace (Scheduled Monument, NHLE: 1004793) is situated immediately to the south of the site.

5 HISTORIC AND ARCHAEOLOGICAL BASELINE

5.1. SUMMARY

5.1.1. This summary draws on the history presented in TJC Heritage Report Ref. TJC2020.78 (2022).

5.2. DEVELOPMENT OF THE SITE

5.2.1. The site lies in a region which saw extensive industrial development during the early post-medieval period, c.17th century, with the resources for ironmaking all present in the surrounding area. Ironstone lies locally in seams running roughly north from Silkstone to Cawthorne, extensive coal seams, large woods for charcoal, and numerous tributaries of the Dearne for waterpower.

5.2.2. The local ironstone whilst not of the highest quality was sufficient for the purposes of the nail making and wiredrawing trades that subsequently developed in the area (Hey 1979, 119). The local coal produced from the Silkstone seam was prized for its low ash and high heat (Hey, 2015). The impact on the landscape from the extraction of coal is clear in Hugset woods to the east of the site where detailed topographical survey has revealed hundreds of bell pits.

5.2.3. Charcoal fired blast furnaces are first documented in South Yorkshire around 1585. At Silkstone a lease dated 1607 recorded "*one pair of smithies, iron mills or iron forges commonly known as Silkstone Smithies*" and in 1656 the Spencers of Cannon Hall are recorded as having built a new furnace, replacing the bloomery furnace at Barnby which had been in existence since at least 1635 (Hey 1979, 118, Rastrick & Allen 1939, 170). Evidence for the Barnby furnace can be seen in the landscape today as a small area of woodland to the north of Low Mill farm which was once the holding pond for the furnace (BMBC Silkstone Walks). Further afield, the furnace at Rockley was built by Copley in 1652 replacing an earlier bloom hearth, string hearth and reheating hearth (Hey 1979, 118).

5.2.4. Key to the ironworking industry of the area were the Spencer family of Cannon Hall. Records held in 1938 at the Bradford City Museums recorded that they were connected to at least 10 furnaces, 18 forges and 5 slitting mills as well as controlling ironstone mines and coal leases in the region (Rastrick & Allen 1939, 168).

The Silkstone Waggonway

5.2.5. The Barnsley Canal was opened in the 1790s as a means of carrying coal to the Aire and Calder Navigation at Wakefield, although the stretch from Barnsley to Barnby Basin was not opened until 1802 (Hey, 2015).

5.2.6. In 1808 the canal company received parliamentary approval for the construction of a horse drawn waggon way from Silkstone Cross to Barnby Basin to provide access to market for the many 'day holes' and drift mines in the area; opening the following year (Hey, 2015).

5.2.7. In 1847 the canal company offered to sell the waggonway to the Manchester, Sheffield and Lincolnshire Railway, although the purchase never took place. In 1864 ownership of the waggonway transferred to the Aire and Calder Navigation Company, although trade was already in decline and by August 1872 it was reported all the rails had been pulled up and sold (Goodchild, 1994).

The Corn Mill

5.2.8. The Dodworth parish tithe map dated 1846 depicts a bypass water system drawing from the Silkstone Beck with a reservoir adjacent to Fall Head Lane and a dam just south of Low Mill from which a tail goit leads north to re-join the beck which followed a more easterly path than at present, through the centre of the site.

5.2.9. Structures are shown at the northern end of the dam, presumably the corn mill, with a rectangular range to the north-east. Whilst the 1846 map does not show the furnace, this could be because it is a copy of an earlier survey of 1806 (Umpleby, 2000: 113).

5.2.10. By the production of the 1850 Ordnance Survey (OS) map, the reservoir and dam are still shown but the buildings at the head of the dam and the respective goits are not shown. Whilst this would suggest the mill had been demolished by this period, William Kidd was still listed as a miller at Low Mill in 1852 (White's 1852 Gazetteer and General Directory of Sheffield), and Thomas Sissons as a miller and farmer at Low Mill in 1899 (Lincolnshire Chronicle 14 July 1899).

THE ORIGIN AND OPERATION OF THE FURNACE

5.2.11. There is limited documentary evidence for the furnace, although various reports have tried to piece together its history (Baker, 1943; Crossley, 1995; Umpleby, 2000; and ArcHeritage, 2012).

5.2.12. The earliest date attributed to the furnace was by Ronald Frank Tylecote (formerly of Dept. of Metallurgy at Kings College Newcastle) who suggested it probably started work about 1650 (pastscape.org). The furnace at Low Mill has also been attributed an 18th century date through comparative work undertaken in the publication of archaeological excavations at Rockley Furnace (Crossley, 1990). These dates have yet to be substantiate through documentary evidence.

5.2.13. An article in the Journal of Industrial Archaeology (1964) states the furnace may have first worked in 1761.

5.2.14. Low Mill is not listed in the 1788 or 1796 surveys of furnaces nor in the lists of those that had closed from 1750-1788 (Meade 1882). Absence from these lists does not provide evidence of absence, however, as furnaces were not always reported by owners to avoid excise duty (Umpleby, 2000: 115). Cartographic evidence for this period is limited to Jeffry's map which shows Silkstone Beck as passing close to the site of the furnace and depicts a waterwheel at the site. The later 1846 Dodworth tithe map, possibly based on a survey of 1806 (*ibid.*), does not show the furnace with the line of the beck passing through its current site.

5.2.15. It has been previously suggested that the furnace may have fallen out of use in the latter half of the 18th century before being brought back into blast (i.e. back into operation) between 1799 and 1817, at which time it was converted to use coke (Bayliss 1995, 20 & ArcHeritage 2012, 74-5).

5.2.16. Of note when considering the age of the furnace is that legal proceedings brought during a dispute over the furnace in 1839 stated it had been erected by James Bland who was involved with the site from 1819 (see below); whilst a (c.1855) tithe rate book recorded the adjacent plot as an unoccupied 'House and Garden by New Furnace' owned by John Spencer Stanhope (Umpleby, 2000: 116; our emphasis).

5.2.17. In July 1817 Major Wilson is recorded to have taken up a lease on a furnace, together with a colliery (possibly Pall Mall see Umpleby, 2000), for a rent of £187.10. That same month James Cockshutt of Thurgoland, a renowned local ironmaster, made an agreement with Major Wilson to manufacture charcoal smelted pig iron at the furnace (Umpleby, 2000: 115; ArcHeritage 2012, 75 and Morley, 2002).

5.2.18. An earlier rental of 1811 between the Wilsons and the Spencer Stanhopes referring to 'Furnace Farm' has been suggested elsewhere (ArcHeritage, 2012) to refer to Low Mill, however this to have most likely been 'Furnace House' where the Wilsons lived at Barnby (1822 Baines' Directory; Bishop Transcripts: & Tiplady Pratt, 1882: 62).

5.2.19. After Cockshutt's death in 1819 James Bland, his executor, continued the company with Edward Cockshutt. at which time Silkstone Low Mill Blast Furnace was recorded to be part of the estate (Morley, 2002). Further evidence from this period includes documented rents due for payments for the use of the Silkstone Waggonway in 1820 (ArcHeritage, 2012: 75); an agreement for purchase of land at £250 per acres for ironstone in Silkstone in 1822 (Umpleby, 2000: 115); and record of the sale a load of cinders to the Barnsley Canal Navigation in 1822 (*ibid.*).

6 ARCHAEOLOGICAL MONTORING

6.1. INTRODUCTION

This methodology has been produced in reference to overarching national guidelines as set out in the Standards and Guidance for an Archaeological Watching Brief (CIfA 2020b).

6.2. EXCAVATION

6.2.1. Ground levels will be reduced by hand or by mechanical excavator fitted with a toothless bucket, mindful of the potential for archaeological remains to survive directly beneath.

6.2.2. All potential archaeological remains will be cleaned and recorded by hand.

6.2.3. Discrete features will be half-sectioned; linear features will be sampled a minimum of 20% along their length (each sample section to be not less than 1m), or a minimum of a 1m sample section, if the feature is less than 5m long.

6.2.4. The deposits at junctions or interruptions in linear features will be sufficiently excavated for the relationship between components to be established. All termini will be investigated.

6.3. RECORDING

6.3.1. A standard single context recording system will be used to keep a documentary record of all archaeological remains that are encountered. The individual contexts will be cross-referenced as appropriate to associated features that are exposed.

6.3.2. Stratigraphy will be recorded in all areas of monitoring, even where no archaeological deposits have been identified.

6.3.3. The extent of the excavated areas and the location of any archaeological features and deposits will be recorded in plan at an appropriate scale (1:500, 1:1250 or 1:2500), including the position of section lines.

6.3.4. All archaeological features will be drawn in plan and section at an appropriate scale (1:10, 1:20 or 1:50, with Ordnance Datum heights on each drawing.

6.3.5. All archaeological features will be photographed following cleaning and at appropriate stages during their excavation utilising a high-quality camera with no less than an APS-C or DX size sensor of 10 megapixels and to be capable of generating images in TIF (v6) or unprocessed RAW format. Metric scales of appropriate size will be clearly and discreetly placed in photographs to preserve scale

including, where colour is important factor, a KODAK colour scale. The details of each image will be recorded on pro-forma recording forms capturing subject, location, date and photographer.

6.4. ARTEFACT RECOVERY

6.4.1. All stratified archaeological finds will be collected, except for modern (relating to the latter half of the 20th Century and later) finds from topsoil and subsoil contexts unless it is determined that they are of archaeological interest.

6.4.2. All artefacts will be bagged and labelled by context.

6.4.3. Recovered finds are to be returned to the Archaeological Services WYAS office as part of a Working Project Archive, where they will be processed (cleaned, marked, and labelled as appropriate) and appropriately packed and stored in accordance with standard guidance as detailed within 'First Aid for Finds' (Watkinson and Neal 1998) and specific Historic England guidance as required.

6.5. ENVIRONMENTAL SAMPLING AND SCIENTIFIC DATING

6.5.1. Suitable stratified deposits where there is a good potential for palaeo-environmental remains to survive will be sampled in consultation with the appropriate specialist (see **Section 9**) and in accordance with guidance issued by Historic England (HE 2011). Where required, the Historic England Science Advisor will be contacted for support and advice.

6.5.2. Bulk samples of 40 litres will be taken from deposits with obvious potential for palaeo-environmental remains (e.g. burnt pit fills) and a selection of securely dated stratified contexts. Where the context is sufficiently large, bulk samples will be taken at different points to avoid spatial bias (HE 2011: 10). Artefacts recovered during the processing of the sample or material may be available for C14 dating.

6.5.3. Each sample will be taken from a cleaned surface, collected with clean tools, and placed in clean containers or double bagged, with internal and external plasticised/waterproof labels corresponding to a sample register.

6.5.4. Recovered samples are to be returned to the Archaeological Services WYAS office as part of a Working Project Archive, where they will be appropriately stored in accordance with guidance issued by Historic England (HE 2011).

6.5.5. All samples will be provided to appropriate specialists for assessment (see **Section 9**).

6.6. BURIALS

6.6.1. Should any burials or cremations be encountered, their extent, number and state of preservation will be established and the client and Local Authority Archaeological Advisor will be notified to discuss an appropriate strategy for their management. Where it is deemed necessary, a licence for removal should be requested from the Ministry of Justice, and Local Authority Archaeological Advisor notified, and no development should take place until burials are removed or alternate arrangements made.

6.6.2. The treatment of human remains will be in accordance with the requirements of Civil Law and all relevant best practice guidance (APBE, 2017). The remains will be adequately recorded in-situ before lifting in accordance with CIfA Technical Paper 13, Excavation and post-excavation treatment of cremated and inhumed human remains (McKingley, *et al.* 1993). All burials will be provided to appropriate specialists for assessment (see **Section 9**).

6.7. TREASURE

6.7.1. In the event of discovery of artefacts covered or potentially covered by the Treasure Act 1996 (as amended and the Treasure (Designation) Order 2002) their excavation and removal will be undertaken following notification of the local coroner and the Local Authority Archaeological Advisor. Where removal cannot be undertaken on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

7 ARCHIVE

7.1. GENERAL

7.1.1. In accordance with Barnsley Museum's conditions and standards, the museum will be contacted at project initiation, mid-point review, and completion stages to discuss archaeological archiving requirements.

7.2. WORKING PROJECT ARCHIVE: PROCESSING AND STORAGE

7.2.1. All material (whether digital or physical) recovered or generated through the duration of project will be appropriately and securely stored in a working project archive.

Survey Archive

7.2.2. The project archive will be collated in a designated folder and stored in a secure location when not in use. On completion of the project, or at weekly intervals, digital security copies will be made of any physical documents. (no less than 300dpi for documents, 600dpi for photographic prints, and 4000dpi for negatives or slides), saved in lossless format (e.g. TIFF), and scans checked for quality.

7.2.3. All digital records will be treated in accordance with a project data management plan (**Appendix 2**).

Material Archive

7.2.4. The material archive will be returned for processing at regular intervals in accordance with best practice guidance (Watkinson and Neal 1998 & HE, 2011). As a minimum all artefacts will be cleaned, weighed, counted, marked, and boxed ready for assessment by the relevant specialists. Unstable artefactual remains (e.g. metallic, wood or leather) will be sent to the appropriate specialists to advice on conservation, including undertaking x-ray analysis where appropriate.

7.2.5. Finds and samples will be marked and boxed ready for transfer to the relevant specialists according to accepted principles and in line with appropriate period/ material guidelines.

7.2.6. Specialist dating of finds, or scientific dating of suitable recorded material, may be undertaken during the fieldwork programme where it would assist with meeting the aims of the project.

7.2.7. On completion of fieldwork recovered artefacts and samples will be assessed by appropriate specialists. Basic stratigraphic information will be supplied to the project specialists. The specialists will provide assessment reports describing the material, proposing selection for the permanent

archive, and identifying recommendations for further detailed analysis in consideration of the project research objectives and any unanticipated research potential.

7.3. SELECTION AND RETENTION STRATEGY

7.3.1. The site specific archive selection strategy is presented in **Appendix 1**.

7.3.2. The entire project archive will be subject to a selection procedure in accordance with best practice guidance (AAF 2011; and SMA 2020). The aim of the selection process is to produce a project archive that allows a full re-examination and interpretation of all the results of the project whilst avoiding replication, repetition or the retention of materials not germane to future analysis.

7.3.3. At the completion of the fieldwork stage, a mid-project review may be undertaken in consultation with relevant stakeholders to determine the final selection strategy. The archaeology curator of the nominated archive repository, and the Local Authority Archaeological Advisor, will be consulted on these recommendations to arrive at a final agreed selection for retention prior to compilation of the final project archive.

7.4. FINAL ARCHIVE

7.4.1. The final archive will be assembled in accordance with the national guidelines in *'Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation'* (AAF 2011) and the Chartered Institute for Archaeologists' '*Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives'* (CIfA 2020c).

7.4.2. The physical archive will be deposited with Barnsley Museum, prepared in accordance with their specifications (2012, adopted 2018). In the event that the project does not produce artefactual remains or samples selected for retention, then any remaining paper record will be scanned and incorporated into the digital archive for deposition with the ADS (see below).

7.4.3. The digital archive will be deposited with the Archaeology Data Service (ADS) at the University of York, a Trusted Digital Repository. The archive will be prepared in accordance with national guidance (DigVentures, 2011) and the standards and requirements of the repository (ADS, 2020).

8 REPORTING

8.1. ASSESSMENT REPORT

8.1.1. If required, an assessment report will be provided to the Local Authority Archaeological Advisor, including:

- A brief introduction, describing the scope, circumstances, and methods of the work
- A stratigraphic descriptive account of the results
- A brief description of the range of finds including spot dates and recommendations for further assessment as appropriate.
- Summary of the results and their significance
- Conclusions including a re-evaluation of research objectives and recommendations for further work
- Illustrations and plates as appropriate.
- References

8.1.2. Where necessary, and following consultation with the LAAA, an updated project design (UPD) will be prepared to detail any further analysis and reporting required.

8.1.3. The UPD will form an addendum to this document.

8.2. FINAL REPORT

8.2.1. At the end of the fieldwork programme a final report will be prepared to present the results and interpretations of the programme of works.

8.2.2. The final report will include:

- Project specific fieldwork codes and dates
- Non-technical summary
- Site location and relevant designations
- Aims, purpose and research objectives of the programme of work
- Methodology
- Discussion of the history of the site
- Analysis of the results of the survey and archaeological monitoring, including types of archaeological features/monuments recorded, their periods and account of sites past and present uses
- Discussion and Conclusion

- Acknowledgements
- List of contents of fieldwork archive
- Bibliography and References
- Illustrations and photographs

8.3. DISSEMINATION

8.3.1. Provision will be made for updating the South Yorkshire Historic Environment Research Framework where the results of a fieldwork project contribute towards agenda topics. This will be done using the interactive digital resource at https://researchframeworks.org/emherf/ and noted explicitly in the conclusions of the relevant report.

9 MANAGEMENT OF THE ARCHAEOLOGICAL WORKS

9.1. STAFFING

9.1.1. The programme of works will be co-ordinated by Archaeological Services WYAS a Registered Organisation of the Chartered Institute for Archaeologists (RO).

9.1.2. Specialists selected by Archaeological Services WYAS will undertake any post-excavation analysis of any finds, or environmental data that is recovered, CVs will be provided on request.

9.2. TIMETABLE AND MONITORING

9.2.1. It is presently understood that the programme of works will be undertaken as following:

- May 2023 – Archaeological monitoring during groundworks and construction programme;
- June 2023 – Final Report;
- August 2023 – Archive deposition

9.2.2. This timetable is liable to change as work progresses on account of the programme of works being tied to the construction programme, and the uncertainties therein. The Local Authority Archaeological Advisor will be updated with any changes to the timetable.

9.2.3. At the inception of the project the Local Authority Archaeological Advisor and Barnsley Museum will be notified of the project details, timetable and confirm principal approval for the deposition of the final archive.

9.2.4. It is the responsibility of the client to ensure that the archaeologist is aware of the schedule for commencement of all groundworks within areas to be monitored in order that monitoring can be scheduled appropriately.

9.2.5. The Local Authority Archaeological Advisor will be offered the opportunity to undertake a site inspection, and sufficient notice of the commencement of fieldwork will be provided in order that this can be scheduled. All monitoring visits will be documented and agreed by each party.

9.2.6. A draft report on the archaeological recording will be finalised within 3 months of completion of the programme of works and provided to the Local Authority Archaeological Advisor for approval.

9.2.7. The project archive will be deposited with the appropriate repository within 6 months of completion of the fieldwork and reporting. Local Authority Archaeological Advisor will be notified upon receipt of confirmation of transfer from the repository.

9.2.8. Any deviation from this programme should be documented and agreed by each party.

10 HEALTH AND SAFETY

10.1. HEALTH AND SAFETY

10.1.1. The programme of works will be undertaken in accordance with the 1974 Health and Safety at Work Act. Appropriate Personal Protective Equipment (PPE) will be worn at all times.

10.1.2. All equipment will be suitable for the purpose and in sound condition and comply with Health and Safety Executive recommendations.

10.1.3. A project specific Risk Assessment will be prepared prior to work commencing on site and all personnel will be made aware of all Risks and Hazards associated with the project.

10.1.4. Health and Safety regulations and requirements cannot be ignored no matter how imperative the need to record archaeological information; hence Health and Safety will take priority over archaeological matters.

11 COPYRIGHT

11.1. PAPER AND DIGITAL ARCHIVE

11.1.1. The copyright and ownership of the paper and digital archive from the archaeological work will rest with the originating body – Archaeological Services WYAS. Archaeological Services WYAS will deposit the material with the recipient museum or repository on completion of the contracted works, whereupon and to whom they will transfer title and/or licence the use of the records. This licence will allow the repository to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

11.2. REPORT

11.2.1. Full copyright of each report shall be retained by the originating body (the archaeological organisation undertaking the work) under the Copyright, Designs and Patents Act 1988 with all rights reserved, excepting that the Developer will be licensed: to use each report in all matters directly relating to the scheme; and to make each report available for public dissemination as part of the dissemination measures identified in **Section 3**.

12 SUPPORTING INFORMATION

BIBLIOGRAPHY

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APPENDIX 1:

ARCHIVE SELECTION STRATEGY

ARCHIVE SELECTION STRATEGY

INTRODUCTION

This strategy details a project-specific selection process agreed by all stakeholders which will be applied to the working project archive in order to create the archaeological archive.

The strategy should be attached to, and read alongside, the project Written Scheme of Investigation which identifies all relevant project information.

Project review stages:

R1: Project Planning
R2: Data Gathering
R3: Analysis and Reporting
R4: Archive Compilation

SELECTION STRATEGY

The aim of the selection process is to produce a project archive that allows a full re-examination and interpretation of all the results of the project whilst avoiding replication, repetition or the retention of materials not germane to future analysis.

Note: details relating to the standards for the generation of digital data is set out in the accompanying Data Management Plan (**Appendix 2**).

	Type	Selection	Stage	Stakeholder
1.1	Digital Files: Project Text / Documents	All final documents in PDF/A format. Including: WSIs, interim reports, digitally generated fieldwork forms, final reports and specialist reports.	R4	ASWYAS project lead Archaeological Data Service Museum curator
1.2	Digital Files: Survey Data / Vector Graphics	All final illustrations and record drawings in .SVG format. Including: plans, annotated plans, phase drawings, interpretative drawings, and photo location plans. Unprocessed survey data not identified as a project output and will be de-selected.	R4	ASWYAS project lead Archaeological Data Service Museum curator
1.3	Digital Files: Record Images	Each record image from every unique viewpoint in .TIFF format. Duplicate or blurred images to be de-selected.	R4	ASWYAS project lead Archaeological Data Service Museum curator

2.1	Physical Documents: Project Text / Documents	All fieldwork forms.	R4	ASWYAS project lead Museum curator
2.2	Physical Documents: Drawings	All fieldwork drawings. Including: measured survey drawings and dimensioned or interpretative sketch drawings.	R4	ASWYAS project lead Museum curator
2.3	Physical Documents: Record images	All films will be retained and negatives processed. A curated selection of 6x4 inch prints will be produced which best illustrates the character of the subject..	R4	ASWYAS project lead Museum curator
2.1	Physical Documents: Recovered Text / Documents	All documents encountered during fieldwork will be recovered for specialist analysis.	R4	ASWYAS project lead Museum curator
3.1	Materials: Bulk Finds	All material gathered during the project will be recovered for specialist analysis with the exception of material post-dating the mid-20th century which will be noted but not collected. Specialist assessment reports will be produced for each class of material, and recommendations made as to their research value in view of the project aims and objectives. Recommendations for selection for final archaeological archive will be made by the specialist and confirmed with the stakeholders prior.	R4	Specialist Museum curator
3.2	Materials: Environmental Remains	All material gathered from samples during the project will be recovered for specialist analysis. Specialist assessment reports will be produced, and recommendations made as to their research value in view of the project aims and objectives. Recommendations for selection for final archaeological archive will be made by the specialist and confirmed with the stakeholders prior.	R4	Specialist Museum curator

DISCARD STRATEGY

De-selected digital material will be deleted from the ASWYAS servers.

De-selected physical material will be appropriately disposed of, with any sensitive physical documentation shredded.

APPENDIX 2:

DATA MANAGEMENT PLAN

DATA MANAGEMENT PLAN

DATA COLLECTION

Anticipated Forms of Data Created

Type	Format	Estimated volume (Data Archive)
Text / Documents	PDF (.pdf/a)	2 objects (size <100MB) (Written Scheme of Investigation / Final Report)
Vector Graphics	Existing CAD survey drawings to be checked and imported into Adobe Illustrator (.ai) for enhancement with archaeological information and conversion to HE drawing conventions. (Intended deposition format - .svg)	Four (size <100MB) (Annotated plans)
Images	Lossy image file (.jpg) & Unprocessed image file (.raw) (Intended deposition format - .tiff)	50 objects (size <1TB) (Record photography / photogrammetry)

Data Standards/Methods

Data will be created in accordance with the following standards and guidance:

- Archaeological Data Service 2021. *Guidance for Depositors* [online]. Available: https://archaeologydataservice.ac.uk/advice/guidelinesForDepositors.xhtml
- Tumpenny. 2012. *Archaeological Archive Depostition policy for Museums in Yorkshire and the Humber*
- DigVentures 2019. *Dig Digital : a guide to managing digital data generated from archaeological investigations.* Available: https://www.archaeologists.net/digdigital
- The Potteries Museum & Art Gallery 2019. *Conditions and Guidelines: Preparation and Deposition of Archaeological Archives.*
- HE Digital Image Capture and File Storage: Guidelines for Best Practice 2015
- HE Metric Survey Specifications for Cultural Heritage 2015

Data will conform to the preferred file formats identified by the Archaeological Data Service, the intended repository (https://archaeologydataservice.ac.uk/advice/Downloads.xhtml).

Methods of data creation are specified within the Written Scheme of Investigation (report ref: TJC2023.06).

Where appropriate, project contributors external to the organisation will be required to include data standards, collection methodology and metadata with individual reports and data.

The digital working project archive will be stored in a specific project folder and structured in accordance with a logically ordered template file hierarchy. File naming conventions will follow established organisational procedures, based on ADS file naming guidance, and include a project identifier, descriptor, and version number.

Quality Assurance

Instruments used in the collection of data are calibrated prior to use and checked to ensure they are in full working order.

All site records and data collected will be reviewed during project delivery to ensure data is accurate and secure.

Documentation and Metadata

Data collected will include standard formats which maximise opportunities for use and reuse in the future (see 'Data Collection' above).

Metadata will be captured at point of creation through the completion of registers recording relevant details, including date of creation, creator, and descriptors.

Metadata tables for each data type will be populated as the project progresses and will use the standard format for each data type as recommended by ADS, who are the intended repository for the digital data archive.

An archive catalogue documenting both physical and digital archive products will be maintained and submitted with both the Museum and Trusted Digital Repository.

Ethics and Legal Compliance

Copyright for all data collected by the project team belongs to the organisation, and formal permission to include data from external specialists and contractors is secured on the engagement of the specialist or contractor.

It is not intended that any personal data will be gathered or stored as part of this project. Should this change, a GDPR compliant privacy policy will be written and appended to this document.

Data Security: Storage and Backup

The digital archive will be stored on secure cloud-based servers managed by an external data management provider (Dropbox), which is ISO certified (ISO 27001, 27017, 27018 & 22301) and GDPR compliant. Unlimited storage space is available, and automatic backups are maintained of all file versions and deletions retained for a 180 day period.

Digital project files are accessibly remotely to support back-up of raw data while fieldwork is ongoing. Where internet access for data back up is not possible, the raw data will be backed up to a separate media device (such as laptop and portable external hard drive).

All files are encrypted, with secure log-ins and permission-based access provided to project staff.

Selection and Preservation

Data selection will be undertaken in accordance with the Archive Selection Strategy (**Appendix 1**) and data will be compiled in accordance with this DMP.

The Barnsley Museum will be contacted during project initiation and confirmed that the digital archive component should be deposited with a trusted digital repository; and ADS have been contacted as the intended repository for digital data (a certified repository with Core Trust Seal).

Sufficient resources have been afforded in the project budget to account for deposition costs.

Data Sharing

Data will be disseminated in accordance with the Written Scheme of Investigation (report ref: TJC2023.06) including archival of digital project outputs, and reports, with the ADS.

Responsibilities

The Project Manager will be responsible for implementing the DMP, and ensuring it is reviewed and revised at each stage of the project.

Data capture, metadata production, quality assurance, storage, and archiving is the responsibility of the Project Team, assured by the Project Manager.

Data backup will be managed by ASWYAS's choice of server.

Details of the core project team can be provided upon request.