



A61 Wakefield Road, Barnsley South Yorkshire

Written Scheme of Investigation for an Archaeological Watching Brief

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On behalf of: South Yorkshire Mayoral Combined Authority

Nat. grid ref.: SE 35044 07242

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Written Scheme of Investigation for an Archaeological Watching Brief at A61 Wakefield Road, Barnsley, South Yorkshire

1. Introduction

- 1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Services WYAS (ASWYAS) for South Yorkshire Mayoral Combined Authority (SYMCA). It details an archaeological watching brief at the site of the A61 Wakefield Road, Barnsley, South Yorkshire to be undertaken during road widening works.
- 1.2 The work consists of a project to widen the bridge on the A61, Old Mill Lane over the river Dearne. The location of the proposed works is shown on the attached plan (Fig. 1). The proposed scheme involves road widening and alterations to junctions that will necessitate extensive groundworks. The archaeological watching brief will cover the any ground reduction in the area formerly occupied by the mill (Fig. 2).
- 1.3 This document details a programme of archaeological watching brief and has been produced to the standards laid down in Historic England's guideline publication *Management of Research Projects in the Historic Environment (MoRPHE): Project Managers Guide* (2006a) and the *MoRPHE Project Planning Note 3: Archaeological Excavation (PPN3)* (2008).

2. Site Location, Description and Topography

- 2.1 The site lies along the A61 on Old Mill Lane north of Barnsley. The Site straddles the river Dearne and is in an area of vegetation. The site is located at SE 35044 07242. Located to the south of site are the Twibell Street Retail Park and ASDA Barnsley Superstore. The northern part of the site is located on grassland.

3. Geology and Soils

- 3.1 The underlying bedrock comprises Kent's Rock which is sandstone. sedimentary bedrock formed approximately 315 to 318 million years ago in the Carboniferous Period (BGS 2022). No superficial deposits are recorded. The soils are in an unclassified urban area (SSEW 1983).

4. Archaeological and Historic Background

- 4.1 As the name suggests, this area was the location of Barnsley Old Mill. The earliest mill recorded here is a corn mill dating from, at least, the 14th century. Evidence suggests that this was dismantled in 1802 and replaced by a flax spinning mill. This was later converted into a steam powered mill (SYAS 2018 pers comm).

- 4.2 Recent map regression work looked at the earliest map of the area, which is the 1779 Enclosure Map. Although not this map does not show a great deal of detail, it does show that the mill is already described as 'old'.
- 4.3 The earliest detailed OS map of the area is the 1852 OS Town Plan (Fig. 2), which shows the layout of the 'old mill'. Three of the interventions are likely to fall within the footprint of this linen mill, while those to the north are situated over a watercourse, possibly associated with a mill.
- 4.4 The first edition 6-inch Ordnance Survey (OS) map from 1892-93 (Fig. 3) shows an expansion of the north-west and a gasometer is now shown to the north-east.
- 4.5 The OS map published in 1929 shows development has taken place within the mill complex with a possible infilling between buildings to the north-east.
- 4.6 The OS map published in 1942 map shows no significant change to the mill or its immediate environs.
- 4.7 A walkover survey of the site in 2018 identified structural remains, including brick walls with iron fixings that probably relate to the former mill. An archaeological watching brief was undertaken on the site in 2018 comprising four boreholes and five test pits (Williams 2018). No archaeological remains were identified.
- 4.8 In 2018, ASWYAS undertook a desk-based assessment and monitored preliminary ground investigation works prior to an expansion scheme of Old Mill Lane in Barnsley, South Yorkshire (Hinchcliffe and Hawkins 2018). A map regression exercise and walkover survey identified remains relating to a 19th-century water management system to the north of the river. Due to modern commercial development, it was thought there was low potential of encountering further remains.
- 4.9 In 2021, ASWYAS undertook an archaeological watching brief during geotechnical investigations on the site (Moon 2021). The works formed the second phase of investigations following on from works in 2018. The watching brief identified deep demolition deposits associated with the former mill that previously occupied the site and deposits in filling the northern side of the river channel.

5. Aims and Objectives

- 5.1 The overall aim of the watching brief is to provide information on the presence or absence and the extent, character, date, depth of burial and degree of survival and nature of preservation of any archaeological features or deposits which may be exposed during the monitoring of any excavation works in the area of the former mill site. It will also record any parts of the structure that are altered.

- 5.2 The specific aim of the watching brief is to identify any remains associated with the 14th-century corn mill and other remains pre-dating the 19th-century mill structures.

6. Methodology

- 6.1 All excavations will be undertaken in line with the ClfA guidelines Standard and Guidance for Archaeological Watching Brief (2014), and in compliance with the Historic England's MoRPHE PPN3: Archaeological Excavation (2008).
- 6.2 All ground reduction works will be machine excavated with an archaeologist in attendance during any works within the watching brief area.
- 6.3 Mill remains are expected towards the south of the site and care will be taken to leave significant archaeological remains in situ. Any resulting surface where possible will be inspected for archaeological remains.
- 6.4 Should archaeological remains need to be removed ASWYAS will first plan and then manually excavate the archaeological features in an archaeologically controlled and stratigraphic manner in order to meet the aims and objectives outlined above.
- 6.6 Features, where excavated, will be investigated employing the following sampling strategies, these will be subject to
- All structural remains will be planned and included levels and detailed context information
 - Floor surfaces will be planned and sample excavated.
 - A 100% sample should be taken of all stake-holes.
 - A 50% sample should be taken of all post-holes, and of pits with a diameter of up to 1.5m.
 - A minimum 25% sample should be taken of pits with a diameter of over 1.5m; but this should include a complete section across the pit to recover its full profile.
 - A minimum 20% sample should be taken of all linear features, up to 5m in length; for features greater than this, a 10% sample would suffice. Sufficient excavation will be carried out to investigate the depth, profile and fills of a ditch or gully and to recover dating and environmental evidence from its fills.
- 6.7 A full written, drawn and photographic record of all material revealed during the course of the work shall be made. The excavation limits will be surveyed using electronic survey equipment with larger scale hand drawn plans of features at

1:20 or 1:50, as appropriate. Sections of linear and discrete features will be drawn at 1:10. All sections, plans and elevations will include spot-heights related to Ordnance Datum in metres as correct to two decimal places and survey. Tie-in information will be undertaken during the course of the evaluation and will be fixed in relation to nearby permanent structures and roads and to the Ordnance Survey National Grid.

- 6.8 All artefacts recovered will be retained and removed from the site for assessment and analysis, and where it is appropriate finds shall be recorded three dimensionally. Non-modern artefacts will be collected from the excavated topsoil and subsoil. Finds material will be stored in controlled environments, where appropriate. All artefacts recovered will be retained, cleaned, labelled and stored as detailed in the guidelines laid out in the ClfA Guidelines Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (2020). Any conservation work will be undertaken by approved conservators working to UKIC guidelines. The following guidelines will also be adhered to: Historic England 2001 Centre for Archaeology Guidelines: Archaeometallurgy (<http://www.english-heritage.org.uk/publications/archaeometallurgy/>), Historic England 2006b Guidelines on the X-radiography of archaeological metalwork (<http://www.english-heritage.org.uk/publications/x-radiography-of-archaeological-metalwork>), Historic England, 2010 Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood (3rd edition) (<http://www.helm.org.uk/guidance-library/waterlogged-wood>), and Historic England 2012 Waterlogged Organic Artefacts. Guidance on their Recovery, Analysis and Conservation (<http://www.helm.org.uk/guidance-library/waterlogged-organic-artefacts>).
- 6.9 ASWYAS shall fully record all excavated archaeological contexts by detailed written records giving details of location, composition, shape, dimensions, relationships, finds, samples, and cross-references to other elements of the record and other relevant contexts, in accordance with best practice. All contexts, and any small finds and samples from them will be given unique numbers. Bulk finds will be collected by context. The photographic record must consist of high-quality digital un-interpolated images of at least 10 megapixels taken using a camera with an APS-C or larger sensor. Graduated metric scales of appropriate lengths should be used, ensuring the use of vertical scales used against deep sections in combination with horizontal scales. Digital photographs intended for archive purposes must comply with best practice available at the current time – i.e. high quality nonproprietary raw files (DNG) or TIFF images. The incorporation of clear digital images within ensuing reports, to augment the drawn record, is expected.
- 6.10 A soil-sampling programme from undisturbed archaeological deposits and features shall be undertaken during the course of the works for the identification and recovery of carbonised and waterlogged remains, vertebrate

remains, molluscs and small artefactual material. Environmental and soil specialists will be consulted during the course of the excavation with regard to the implementation of this sampling programme should waterlogged deposits be identified. Provision should be made for the removal of soil samples of all types of deposits relevant to the aims of the sampling strategy. Coarse-sieved samples will normally be between 40-60 litres in volume or 100% of smaller features. Particular attention will be paid to the sampling of primary ditch fills and any surviving buried soils beneath banks or other positive features. Environmental material removed from site will be stored in appropriate controlled environments. The collection and processing of environmental samples will be undertaken in accordance with guidelines set out in the Association for Environmental Archaeology's (1995) Working Paper No. 2, "Environmental Archaeology and Archaeological Evaluations - Recommendations concerning the environmental archaeology component of archaeological evaluations in England" and Historic England's Environmental Archaeology Guidelines (2011; <http://www.english-heritage.org.uk/publications/environmental-archaeology-2nd/environmental-archaeology-2nd.pdf>). In addition, the processing of environmental samples will only take place within facilities approved for such purposes by the Historic England Science Advisor for Yorkshire.

- 6.11 In the event of human remains being discovered they will be left in situ and covered and protected in the first instance. It is not anticipated that human remains will be lifted at this evaluation phase. If excavation of human remains is unavoidable, their removal will only take place in compliance with the Burial Act 1857 and with an exhumation licence obtained from the Ministry of Justice (MoJ) prior to the removal of the remains. Provision will be made for the specialist reporting of the remains by a recognised osteoarchaeologist. The following guidelines will be adhered to: Advisory Panel on the Archaeology of Burials in England (APABE) 2013, Historic England 2013, Science and the dead: A Guideline for the Destructive Sampling of Archaeological Human Remains for Scientific Analysis (<http://www.english-heritage.org.uk/content/publications/publicationsNew/guidelines-standards/science-and-dead/science-and-dead.pdf>), Brickley, M & McKinley, J.I 2004 Guidelines to the standards for recording human remains, IFA paper no. 7 (<http://www.babao.org.uk/HumanremainsFINAL.pdf>), Historic England 2004 Human Bones from archaeological sites: Guidelines for producing assessment documents and analytical reports. Centre for Archaeology Guidelines (<http://www.helm.org.uk/guidance-library/human-bones-from-archaeological-sites>) and Historic England and The Church of England 2017 Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England (<http://www.helm.org.uk/guidance-library/human-remains-excavated-from-christian-burial-grounds-in-england>).
- 6.12 Provision will be made for the recovery of samples suitable for scientific dating (e.g. radiocarbon/AMS dating, archaeomagnetic and dendrochronological

dating) using the following guidelines: Historic England 1998 Dendrochronology: Guidelines on producing and interpreting dendrochronological dates (<http://www.helm.org.uk/guidance-library/dendrochronology-guidelines/>), Historic England 2008 Luminescence Dating: Guidelines on using luminescence dating in archaeology (<http://www.helm.org.uk/guidance-library/luminescence-dating/>) and Historic England 2006c Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates (<http://www.helm.org.uk/guidance-library/1682224/>).

- 6.13 Any finds that are defined as Treasure under the Treasure Act 1996 as amended, will be reported to the coroner as required by law.

7. Analysis and Reporting

- 7.1 Following completion of the watching brief, a report shall be produced within six weeks of the completion of the fieldwork. This may be subject to extension if archaeological/artefactual/ecofactual evidence of particular significance is identified that requires a longer period of study.
- 7.2 The site archive will be assembled in line with the recommendations provided in Historic England's MoRPHE Project Planning Note 3: Archaeological Excavation (PPN3).
- 7.2 In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain all the data collected during the excavations, including records, finds and environmental samples. It will be quantified, ordered, indexed and internally consistent. Adequate resources will be provided during fieldwork to ensure that all records are checked and internally consistent. Archive consolidation will be undertaken immediately following the conclusion of fieldwork and will involve:
- the site record being checked, cross-referenced and indexed as necessary;
 - all retained finds being cleaned, conserved, marked and packaged in accordance with the requirements of the recipient museum (Experience Barnsley Museum & Discovery Centre);
 - all retained finds being assessed and recorded using pro forma recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated within the site matrix; and
 - all retained environmental samples being processed by suitably experienced and qualified staff and recorded using pro forma recording sheets.

- 7.3 In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain:
- site matrices where appropriate;
 - a summary report synthesising the context record;
 - a summary of the artefact record; and
 - a summary of the environment record.
- 7.4 The integrity of the primary field record will be preserved. Security copies will be maintained where appropriate.
- 7.5 Provision will be made for the deposition of the archive, artefacts and environmental material, subject to the permission of the relevant landowner, in the appropriate recipient museum, in this case, Experience Barnsley Museum & Discovery Centre. The museum will be advised of the timetable of the proposed watching brief prior to excavation commencing. The archive will be prepared in accordance with industry guidelines (United Kingdom Institute for Conservation, 1990; Museums and Galleries Commission 1994). Provision will be made for the stable storage of paper records and their long-term storage.
- 7.6 Upon completion of the watching brief, the artefacts, ecofacts and stratigraphic information shall be assessed as to their potential and significance for further analysis.
- 7.7 A report will be prepared following the completion of on-site archaeological watching brief and will include the following:
- a non-technical summary of the results of the work;
 - a summary of the project's background, including the planning application number;
 - the dates the fieldwork took place;
 - the site location, including National Grid Reference;
 - an account of the method;
 - the results of the excavations, including phasing and interpretation of the site sequence;
 - plan(s) showing the location of the proposed development site at least 1:10,000;
 - general and detailed plans at appropriate scales, showing the location of the test pits accurately positioned on an up-to-date Ordnance Survey base;

- detailed plans and sections of individual features where necessary;
 - all scales used on any drawings should be standard scales such as would appear on a normal scale rule;
 - the analysis of each category of data;
 - conservation assessment;
 - an assessment of the stratigraphic and other written, drawn and photographic records;
 - a catalogue of the archaeological material recovered during the excavations;
 - a summary of the contents of the project archive and its location;
- 7.8 The report will outline the archaeological significance of the deposits identified and provide an interpretation of the results in relation to other sites in the vicinity where appropriate.
- 7.9 One copy of the complete draft report including figures will be submitted to the client for review. In finalising the report, ASWYAS will take into account all comments and remedy any faults identified. Revised drafts shall be submitted to within three working days of receipt of comments.
- 7.10 Copies of the report (paper and/or digital as required) will be supplied to the archaeological advisor to SYAS. A digital copy (as a single PDF document) will also be provided as required. If required, a final report, including all finds analysis and scientific dating results, shall be produced.
- 7.11 Upon completion of the work, ASWYAS will make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (<http://ads.ahds.ac.uk/project/oasis/>).

8. Copyright, Confidentiality and Publicity

- 8.1 By depositing the report, the contractor gives permission for the material presented within the document to be used by the SYAS, in perpetuity, although The Contractor 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 SYAS to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.
- 8.2 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'.

- 8.3 Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. ASWYAS should inform the client of EIR requirements and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.
- 8.4 Unless the Client commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic record and reports will rest with the originating body (ASWYAS).

9. Health and Safety

- 9.1 Archaeological Services WYAS has its own Health and Safety policy which has been compiled using national guidelines. These guidelines conform to all relevant Health and Safety legislation.
- 9.2 In addition each project undergoes a 'Risk Assessment' which sets project specific Health and Safety requirements to which all members of staff are made aware of prior to on-site work commencing. Health and Safety will take priority over archaeological matters. Necessary precautions will be taken over underground services and overhead lines at the outset of the project. Archaeological Services WYAS will ensure that Health and Safety requirements of the main contractor are adhered to.

10. Insurance

- 10.1 ASWYAS is covered by the insurance and indemnities of the West Yorkshire Joint Services Committee. Insurance has been effected with: Zurich Municipal, Zurich House, 2 Gladiator Way, Farnborough, Hampshire GU14 6GB (policy number QLA-03R896-0013). Any further enquiries should be directed to: Head of Finance, Wakefield Council, Wakefield One, PO Box 700, Wakefield, WF1 2EB

11. Monitoring

- 11.1 The project will be monitored by archaeological advisors SYAS, and where appropriate, the advice of the Historic England Science Advisor for Yorkshire will be called upon. Notification will be sent to SYAS before the commencement of work to confirm the start date.
- 11.2 It is the responsibility of ASWYAS to ensure that any significant results are brought to the attention of SYAS and the client as soon as is practically possible.

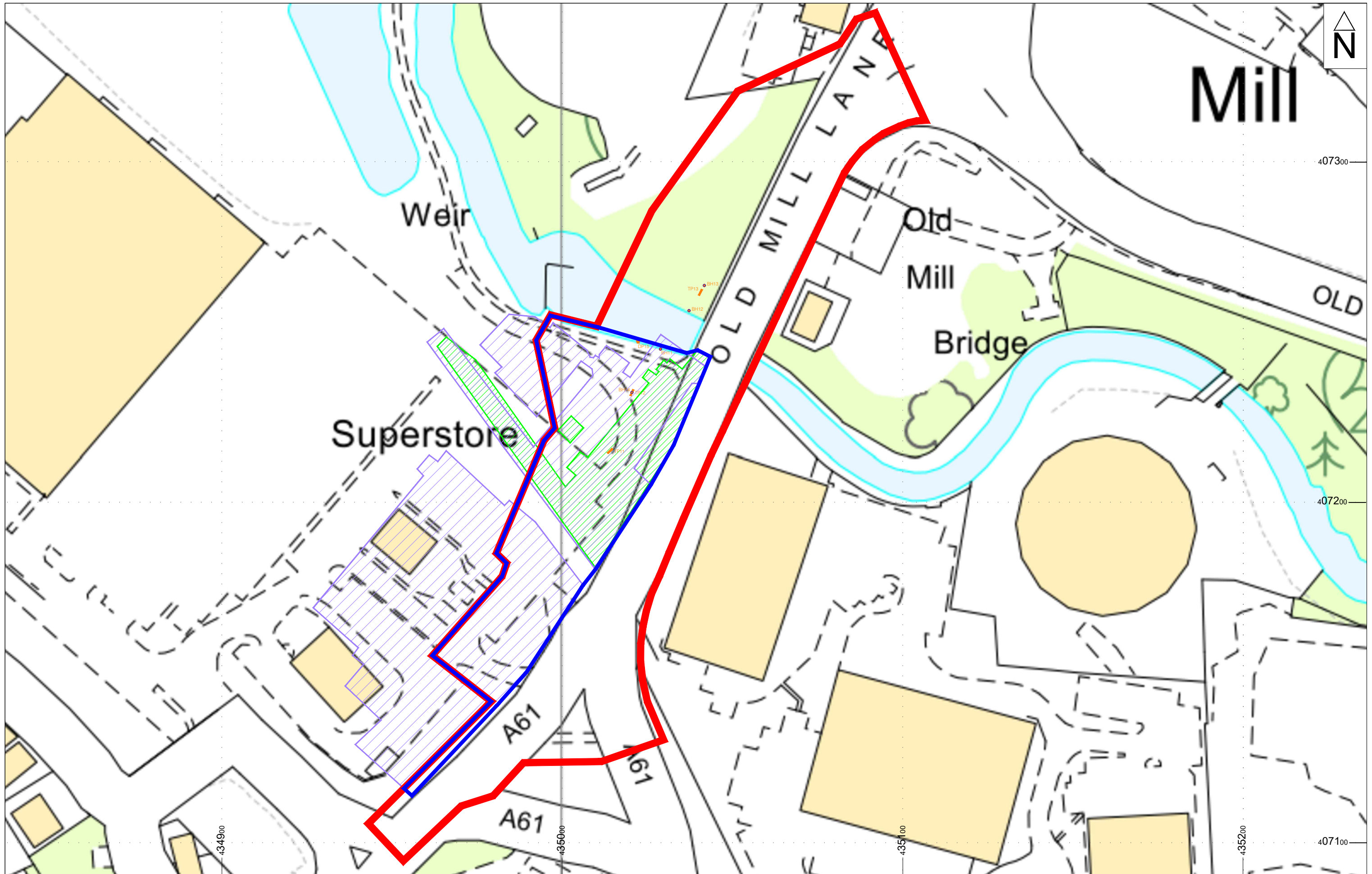
12. Bibliography






- Association for Environmental Archaeology, 1995, *Environmental Archaeology and Evaluations*
- British Geology Survey 2022,
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- Chartered Institute for Archaeologists, 2014, *Standard and Guidance for Archaeological Watching Brief*
- Chartered Institute for Archaeologists, 2020, *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*
- Hinchcliffe, S. and Hawkins, E., 2018, A61 Old Mill Lane Scheme, Barnsley, South Yorkshire, Desk-based Assessment and Archaeological Watching Brief (ASWYAS report no. 3158)
- Historic England, 2006a, Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide
- Historic England, 2006b, Guidelines on the X-radiography of archaeological metalwork
- Historic England, 2006c, Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates
- Historic England, 2008, *Management of Research Projects in the Historic Environment (MoRPHE). PPN 3: Archaeological Excavation*
- Historic England, 2011, '*Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation*'
- Moon, K., 2021, A61 Old Mill Lane Scheme, Barnsley, South Yorkshire Archaeological Watching Brief (ASWYAS report no. 3642)
- Museums and Galleries Commission, 1994, *Standards in the Museum Care of Archaeological Collections*
- Soil Survey of England and Wales 1893, Northern Sheet
- United Kingdom Institute for Conservation, 1990, *Guidelines for the Preparation of Excavation Archives for Long-term Storage*
- Williams, D., 2018, A61 Old Mill Lane Scheme, Barnsley, South Yorkshire, Desk-based Assessment and Archaeological Watching Brief (ASWYAS report no. 3158)



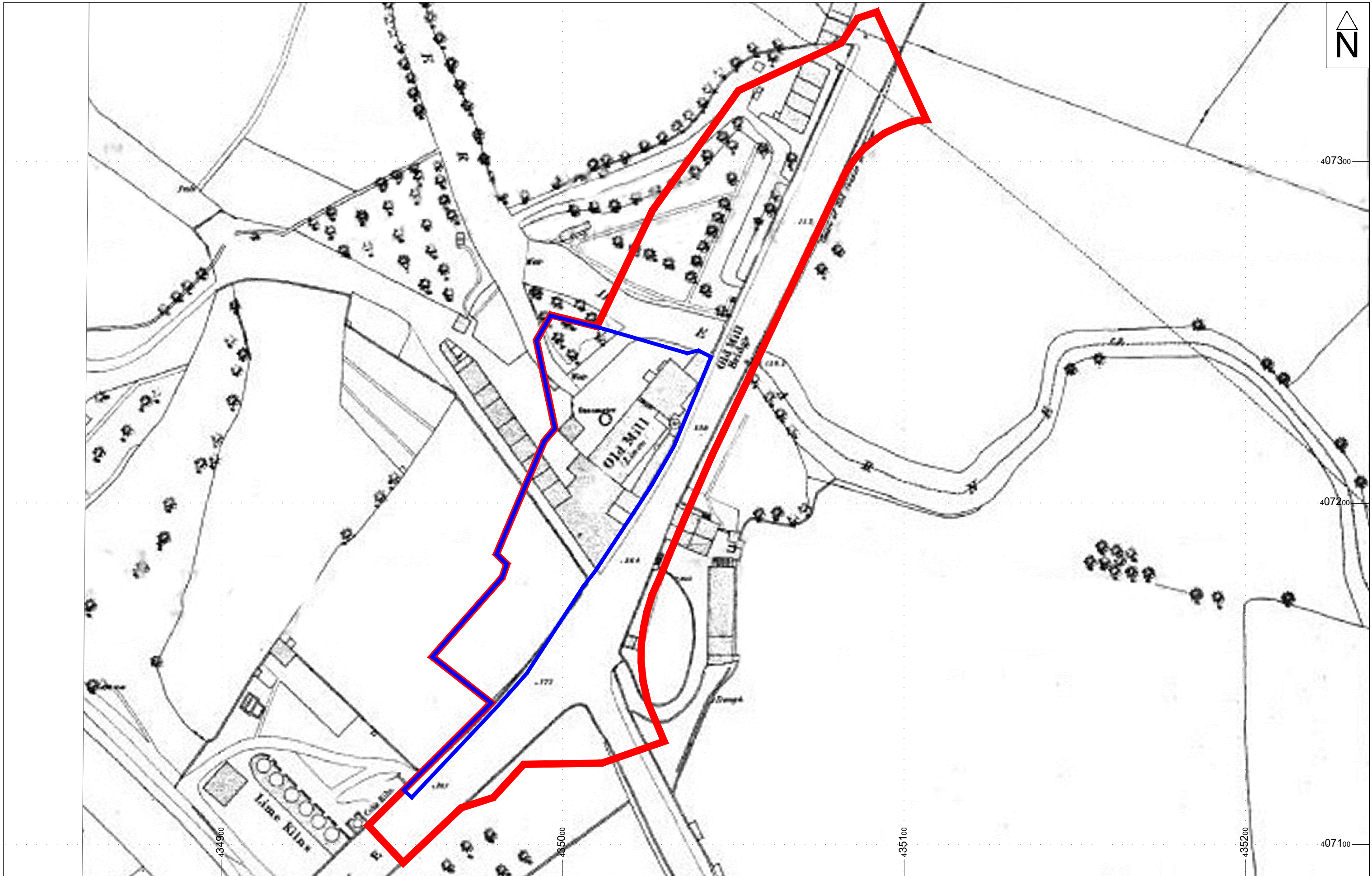
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

	SITE BOUNDARY		OLD MILL 1852
	2021 ARCHAEOLOGICAL WORKS		OLD MILL 1892
	WATCHING BRIEF AREA		

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Project No. XH92
 Fig. 2.
 Site plan showing site boundary and watching brief area overlying
 the 1852 Barnsley Town Plan

 SITE BOUNDARY
 WATCHING BRIEF AREA

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