Land at Penistone Road
Fenay Bridge
West Yorkshire

Written Scheme of Investigation
Archaeological Evaluation by Trial Trenching

2020/62/90725/W

Read & Understood by	Revision	Company/Position	Initial and Date

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1 Summary

1.1 This document sets out the details for the archaeological work required on land west of Penistone Road, Fenay Bridge, in order to inform West Yorkshire Archaeology Advisory Service, archaeological advisors to Kirklees Council, of the archaeological potential of the site, prior to the commencement of a residential development with associated infrastructure (2020/62/90725/W)

1.2 Condition 15, attached to the Outline planning permission (2020/62/90725/W) states that

"No development, including any demolition and groundworks, shall take place until the applicant, or their agent or successor in title, has submitted an archaeological evaluation to reflect the site's location close to an area of archaeological interest.

Thereafter the development shall only take place in accordance with the approved WSI and the development shall not be brought into use until the Local Planning Authority have confirmed in writing that the requirements of the WSI have been fulfilled or alternative timescales agreed. The evaluation shall include:

The programme and method of site investigation and recording.

An evaluation of any identified features of importance and any necessary preservation in situ of identified features of importance.

The programme for post-investigation assessment. The provision to be made for analysis and reporting.

Nomination of a competent person/persons or organisation to undertake the works.

The timetable for completion of all site investigation and post-investigation works.

Thereafter the development shall only take place in accordance with the approved evaluation and the development shall not be brought into use until the Local Planning Authority have confirmed in writing that the requirements of the evaluation have been fulfilled or alternative timescales agreed."

1.3 In accordance with the recommendations of the National Planning Policy Framework (2021) on 'Archaeology and Planning' the results of the Evaluation by Trial Trenching will be summarised in a report to allow an appropriate mitigation strategy to be formulated if necessary. Any further work will be outlined in a separate Written Scheme of Evaluation.

1.4 This Written Scheme of investigation has been commissioned by Newett Homes.

1.5 The Written Scheme of Investigation is valid for 1 year from the date of issue. After that time revision may be needed to take into account new working practices or changes in policy.

2 Site Description

2.1 The site, which measures approximately 2.28ha, is located to the east of Penistone Road, south of Fenay Bridge, in the Kirklees district of West Yorkshire (centred at SE 18608 14832, keep.bake.battle).

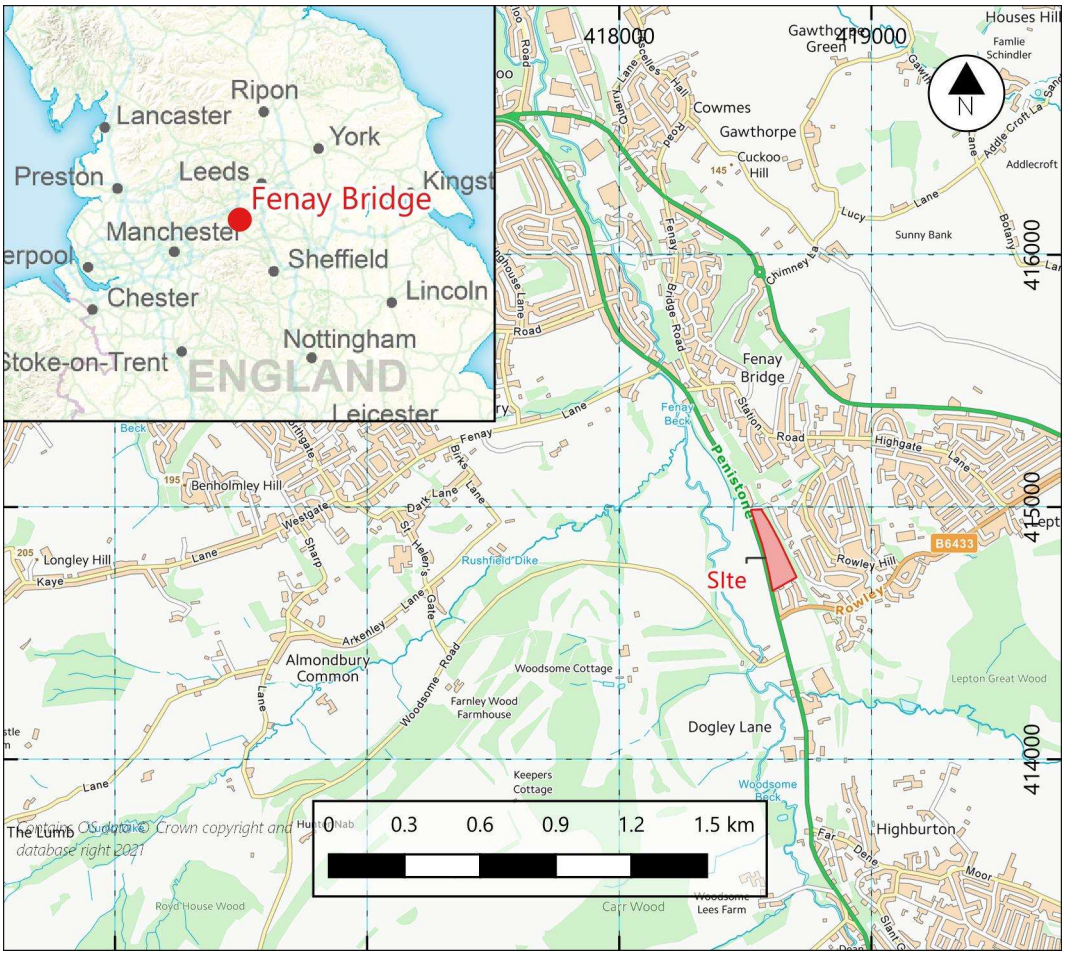

Figure 1. Site Location.

2.2 The site lies on bedrock geology of the Grenoside Sandstone Formation, (BGS, 2023).

2.3 The site is allocated for residential housing within the Kirklees Local Plan (Ref HS1).

3. Archaeological and Historical Background

3.1 Evidence of prehistoric activity within the immediate vicinity of the site is scant, although a Neolithic greenstone axe was found on land close to Woodsome Hall, some 520m west of the site (Historic England Research Record Monument Number 49161).

3.2 The West Yorkshire Historic Environment Record documents the presence of cropmarks of a large rectangular enclosure, to the west of Penistone Road (HER ID MWY1279). The ditched enclosure covers an area of approximately 0.25 hectares.

3.3 The first edition Ordnance Survey map depicts a four north-east to south-west orientated field boundaries within the site. Most had been removed by the late 19th century.

4. Aims and Objectives

4.1 The aim of the Archaeological Trial Trenching is to determine the presence/absence, nature, date, quality of survival and importance of archaeological deposits to enable an assessment of the potential and significance of the archaeology to be made.

4.2 Following the completion of archaeological work and subsequent post excavation assessment, the aim is to place the results in the public domain by depositing all results with the West Yorkshire Historic Environment Record.

4.3 It is conceivable that further work may be necessary, dependant on the results of this evaluation. Any further work will be agreed by West Yorkshire Archaeology Advisory Service who will agree the scale of works and an appropriate Written Scheme of Investigation.

5 Compliance

5.1 MAP will adhere to the general principles of the CIfA Code of Conduct (CIfA 2022) throughout the project and to the CIfA '*Standards and Guidance for Archaeological Field Evaluations*' (CIfA 2020).

5.2 All work will be carried out in accordance with chapter 16 of the National Planning Policy Framework (2021) on '*Archaeology and Planning*'.

5.3 The work will be monitored under the auspices of West Yorkshire Archaeological Advisory Service, archaeological advisors to Kirklees Council, who will be consulted before the commencement of site works.

5.4 The representative of the West Yorkshire Archaeology Advisory Service will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance at a time that the site's archaeological potential has been investigated and is available to inspect. A site tour will be given by the Attending Archaeologist and all trenches and finds which are still on site will be available for inspection.

5.5 All work will be carried out in respect of this Written Scheme of Investigation which will be approved by West Yorkshire Archaeological Advisory Service prior to submission. Any variations of the scheme of work must be discussed with and approved by West Yorkshire Archaeological Advisory Service.

5.6 The Attending Archaeologist will be supplied with and allowed time to study all documents relating to previous archaeological investigation of the site.

5.7 All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of His Majesty's Stationery Office, Crown

Copyright. License No. AL 50453A and also data derived from Open Street Map (https://www.opennstreetmap.org/copyright).

5.8 If human remains are encountered during the course of this evaluation, it is considered best practice to not remove the remains at this stage, however, this should be considered at a site-specific level. If it is deemed necessary to remove human remains, this will be carried out under the conditions of licences for the removal of human remains (issued by the Ministry of Justice) and in accordance with the Burial Act (1857) and '*Guidelines to the Standards for Recording Human Remains*' (Brickley & McKinley. 2017) to ensure that they are treated with due dignity.

5.9 MAP is a Chartered Institute for Archaeologists Registered Organisation. The status is awarded to organisations who can demonstrate commitment to professional standards, competence, and expertise in the sector.

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

6 Fieldwork Methodology

6.1 Nine Trial Trenches are proposed, positioned in order to assess potential archaeology in the area of the proposed development (Fig. 2). All trenching measures 50m x 2m; a 10% contingency will be allowed for. Use of the contingency will be dependent upon the results of the aforementioned Trial Trenching and at the discretion of West Yorkshire Archaeological Advisory Service whose decision will be issued in writing. Use of the contingency may entail the excavation or further Trail Trenches or full excavation of a feature which may reduce the need for further work to be carried out at a later date.

6.2 All overburden, topsoil and any subsequent subsoils will be carefully removed by mechanical excavator using a wide toothless blade, under archaeological supervision, to the top of archaeological features or layers. Excavated topsoil will be redeposited in bunds around the sides of each trench, unless agreed otherwise with the client. Topsoil and subsoils will be stored separately, and all spoil will be stored and managed in line with the standards of the Construction Code of Practice for Sustainable Use of Soils on Construction Sites (DEFRA 2009).

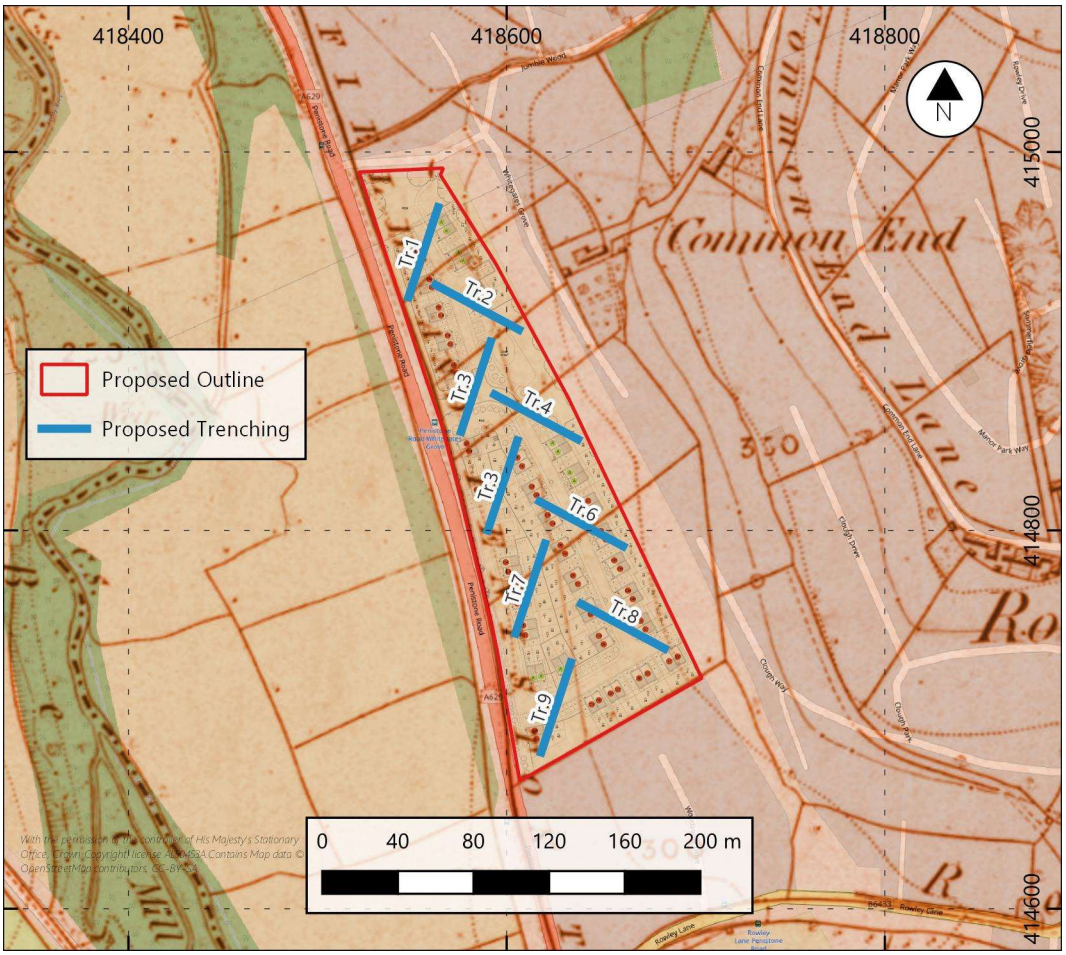

Figure 2. Trench Location Plan

6.1.3 Spoil heaps and trench bases will be scanned with a metal detector by an experienced archaeologist. All pre-19th century material will be retained and accounted for, whilst later material will be noted but not retained.

6.1.4 All excavation of archaeological features and deposits carried out will be by hand. Areas of intensive modern disturbance will be given a low priority in excavation. Where practicable, the fills of these features will be removed by mechanical excavator. The metal detector, the make and model of which will be noted in the final report, will be capable of discriminating between ferrous and non-ferrous metal artefacts. The make and model of the metal detector will be discussed in the report, as will an analysis of any finds.

6.1.5 All archaeological deposits and features will be recorded using Diggit Archaeology, a digital recording system which is compatible with the MoLAS recording system. All indices will be produced using MAP's pro forma sheets. The MAP recording manual will be used on site where necessary. The stratigraphy of trenches will be recorded even if no archaeology is found.

6.1.6 The excavation sampling policy is :

a. A 100% sample of stakeholes
b. An initial 50% sample should be taken of all postholes, but where they are part of a building these should be 100% excavated
c. A 50% sample of pits with a diameter up to 1.5m (where justified, these should be 100% excavated,
d. A minimum 25% sample of all pits over 1.5m in diameter, but this should include a complete section across the pit to record a full profile (where justified, these should be 100% excavated)
e. 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.
f. All junctions/intersections and corners of linear features will be investigated, and their stratigraphic relationships determined – if necessary, using box sections and all ditch terminals will be examined,
g. Funerary contexts, buildings and industrial features will be subject to sufficient excavation to establish the objectives of the evaluation, but no archaeological deposit will be entirely removed unless this is unavoidable to meet the aims of the fieldwork.

6.1.7 In certain cases, the use of mechanical excavation equipment may also be appropriate for removing deep intrusions (e.g., modern brick and concrete floors or footings), or for putting sections through major features after partial

excavation (e.g., ditches), or through deposits to check that they are of natural origin

6.1.8 A full written, drawn, and photographic record will be made of all material revealed during the course of the Trial Trenching. Plans and section drawings will be drawn to a scale appropriate to the excavated feature. Where subsoils or other deposits are encountered, at least one representative section of each trench will be drawn, representative of the complete sequence of deposits from modern ground surface to natural geology. The photographic archive will comprise high quality digital photographs, which will be supplied in TIFF and JPEG format, and will be archived with the ADS.

6.1.9 A sampling strategy for the recovery for environmental remains has been formulated in accordance with an Environmental Strategy written by an Environmental Consultant (Diane Aldritt, appendix 1) and also follows the guidance of the Association for Environmental Archaeology (1995) and Historic England (2011).

6.1.10 Soil samples must be taken from all securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the English Heritage (2011) *'Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)'* guidance. Positive features will also be sampled; retention of structural material such as bricks will be implemented where necessary. Sampling will also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Animal bones will be hand collected, and bulk samples collected from contexts containing a high density of bones. Spot finds of other material will be recovered where applicable. Flotation samples and samples taken for coarse-mesh sieving from dry

deposits will be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies, if necessary, but also because processing at a later stage could cause delays.

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

6.1.12 All artefacts are to be retained for processing and analysis except for unstratified 20th-century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in First Aid for Finds (3rd edition).

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

6.1.14 We will make provision within our excavation strategies, where necessary and in consultation with the client and WYAAS, for use of shoring, pumps, or

artificial lighting. Such strategies will also follow for sampling for radiocarbon, archaeomagnetic and/or dendrochronological determinations, as appropriate: where in situ timbers are found to survive in good condition, samples will be taken for dendrochronological assay.

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

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

6.1.17 Necessary precautions will be taken over underground services and overhead lines. Further information and guidance will be available in the Risk Assessment and Method Statement which will be compiled prior to commencement of site work. Appropriate standoff distances will be agreed prior to the commencement of the evaluation.

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

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

7. Post Excavation Analysis and reporting

7.1 On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines.

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

7.3 On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines.

7.4 Samples should be processed for the recovery of artefactual material, animal/fish/human bones, industrial residues (including hammerscale), shell, molluscs, charcoal and mineralised plant remains as a minimum. 'Specialist' samples (e.g. monoliths, cores, plant/invertebrate macrofossils) should be processed separately as appropriate.

7.5 Material suitable for scientific dating (e.g. charcoal) should be identified to species and assessed for suitability by an environmental specialist prior to submission to a dating laboratory. Any human remains submitted for C14 dating should also have carbon (delta 13C) and nitrogen isotope analysis carried out by the radiocarbon laboratory.

7.6 All finds and biological material must be analysed by a qualified and experienced specialist.

7.7 Following identification, finds of 20th-century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date should be retained and archived.

7.8 Any samples taken shall be processed and any finds shall be cleaned, identified, assessed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines and reporting on ceramic artefacts and pottery should follow the guidance given in '*A Standard for Pottery Studies in Archaeology*' (2016) and endorsed by the Prehistoric Ceramics Research Group; the Study Group for Roman Pottery & the Medieval Pottery Research Group. A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints. An index to the field archive is to be deposited with the WYAAS (preferably as an appendix in the report).

7.9 A report will be prepared to include the following:

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

b) An introduction which should include

- the site code/project number
- planning reference number and HER Casework number
- dates when fieldwork took place
- grid reference

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

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

e) A specialist assessment of the artefacts recovered with a view to their potential for further study. Allowance should be made for preliminary conservation and stabilisation of all objects and an assessment of long-term conservation and storage needs.

Assessment of artefacts must include inspection of X-radiographs of all iron objects, a selection of non-ferrous artefacts (including coins), and a sample of any industrial debris relating to metallurgy. A rapid scan of all excavated material should be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration will be given to possible investigative procedures (e.g., glass composition studies, residues in or on pottery, and mineral preserved organic material). Once assessed, all material will be packed and stored in optimum conditions, as described in First Aid for Finds. Waterlogged organic materials should be dealt with, following Historic England documents, Guidelines for the care of waterlogged archaeological leather, and guidelines on the recording, sampling, conservation, and curation of waterlogged wood.

f) A specialist assessment of environmental samples taken, with a view to their potential for subsequent study.

Processing of all samples collected for biological assessment, or sub-samples of them, will be completed. Bulk and site-riddled samples from dry deposits should have been processed during excavation, where possible. The preservation state, density and significance of material retrieved must be assessed, following methods presented in Environmental Archaeology and archaeological evaluations, or existing local guidelines, until national guidelines are available. Unprocessed sub-samples must be stored in conditions specified by the appropriate specialists.

Assessments for any technological residues will be undertaken. Samples for dating must be submitted to laboratories promptly, so as to ensure that

results are available to aid development of specifications for subsequent mitigation strategies.

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

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

i) A conclusion with recommendations for further post-excavation work, if required.

j) Detailed archive location and destination.

k) Appendices and figures, as appropriate, including a copy of the specification and/or project design.

l) References and bibliography of all sources used

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

7.11 We will provide a physical and digital copy of the report in PDF format to the West Yorkshire Historic Environment Record.

7.12 A Brief, interim report may be prepared shortly after the completion of fieldwork. WYAAS reserve the right to delay making any further

recommendations until any necessary specialist assessment has been carried out.

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

Pottery - T G Manby (Prehistoric),
M R Stephens (medieval and post-medieval)
P A Ware (Roman)

Flint - P Makey

Animal Bone – Jane Richardson

Environmental Sampling – Diane Alldritt

Conservation – York Archaeological Trust

Human Remains – York Osteology

Ceramic Building Material – Dr Phil Mills

Clay Tobacco Pipe - M R Stephens

8. Copyright, Confidentiality and Publicity

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

8.2 By depositing the report with WYAAS, the contractor gives permission for the material presented to be used by the WYAAS, 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 Ace 1988 (Chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

9. Archive Preparation and Dissemination

9.1 The requirements for archive preparation and deposition must be addressed and undertaken in a manner agreed with the recipient museum: in this instance Kirklees Museum Services is recommended. Kirklees Museum Service's collections manager will be notified in writing (copied to WYAAS) to determine the museum's requirements for the deposition of an excavation archive.

9.2 A site archive should be prepared in accordance with the specification outlined in *Management of Archaeological Projects* (MoRPHE (Lee, E, 2006). See also *Towards an Accessible Archaeological Archive, the Transfer of Archaeological Archives to Museums: Guidelines for use in England, Northern Ireland, Scotland, and Wales* Society of Museum Archaeologists 2007.

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

9.4 Archive deposition must be arranged in consultation with the recipient museum and the West Yorkshire Archaeology Advisory Service and must take account of the requirements of the recipient museum and the relevant guidelines (see above) relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative.

9.5 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds, in a publicly accessible archive. In the absence of this agreement the field archive (less finds) is to be deposited with the West Yorkshire Archaeology Advisory Service

10. Bibliography

British Geological Society. Geology of Britain Viewer. Available at;

[accessed 25.01.23]

11. Best Practice & Scientific Guidance

Archaeological Conservation

Investigative Conservation: Guidelines on how the Detailed Examination of Artefacts from Archaeological Sites can Shed Light on their Manufacture and Use (2008): Officially archived, but available on request.

Guidelines on the X-radiography of Archaeological Metalwork (2006): https://historicengland.org.uk/images-books/publications/x-radiography-of-archaeological-metalwork/

Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation (2018): https://historicengland.org.uk/images-books/publications/waterlogged-organic-artefacts/

Environmental Archaeology

Animal Bones and Archaeology - Recovery to Archive (2019): https://historicengland.org.uk/images-books/publications/animal-bones-and-archaeology/

Deposit Modelling and Archaeology: Guidance for Mapping Buried Deposits (2020): https://historicengland.org.uk/images-books/publications/deposit-modelling-and-archaeology/

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

Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (2015): https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/

Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains (2008): Currently being revised, but available on request.

Mineralised Plant and Invertebrate Remains: A Guide to the Identification of Calcium Phosphate Replaced Remains (2020): https://historicengland.org.uk/images-books/publications/mineralised-plant-and-invertebrate-remains/

Geophysical Survey

EAC Guidelines for the Use of Geophysics in Archaeology: Questions to Ask and Points to Consider (2016) [Europae Archaeologiae Consilium]: https://historicengland.org.uk/images-books/publications/eac-guidelines-for-use-of-geophysics-in-archaeology/

Geophysical Survey in Archaeological Field Evaluation (2008): Officially archived, but available on request.

Marine Geophysics Data Acquisition, Processing and Interpretation: Guidance Notes (2013): https://historicengland.org.uk/images-books/publications/marine-geophysics-data-acquisition-processing-interpretation/

Human Remains

Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England (Second Edition) (2017) [Advisory Panel on the Archaeology of Burials in England]: https://www.archaeologyuk.org/apabe/pdf/APABE_ToHREfCBG_FINAL_WEB.pdf

Guidance for the Care of Human Remains in Museums (2005) [Department for Culture, Media and Sport]: https://www.archaeologyuk.org/apabe/pdf/DCMS_Guidance_Human_Remains_in_Museums.pdf

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Science and the Dead: A Guideline for the Destructive Sampling of Archaeological Human Remains for Scientific Analysis (2013) [Advisory Panel on the Archaeology of Burials in England]: https://www.archaeologyuk.org/apabe/pdf/Science_and_the_Dead.pdf

The Role of the Human Osteologist in an Archaeological Fieldwork Project (2018): https://historicengland.org.uk/images-books/publications/role-of-human-osteologist-in-archaeological-fieldwork-project/

Updated Guidelines to the Standards for Recording Human Remains (2017) [Chartered Institute for Archaeologists / British Association for Biological Anthropology and Osteoarchaeology]: https://babao.org.uk/assets/Uploads-to-Web/14-Updated-Guidelines-to-the-Standards-for-Recording-Human-Remains-digital.pdf

Materials Science and Industrial Processes

A Standard for Pottery Studies in Archaeology (2016) [Prehistoric Ceramics Research Group, the Study Group for Roman Pottery and the Medieval Pottery Research Group]: https://historicengland.org.uk/images-books/publications/standard-for-pottery-studies-in-archaeology/

Archaeological and Historic Pottery Production Sites: Guidelines for Best Practice (2015): https://historicengland.org.uk/images-books/publications/archaeological-and-historic-pottery-production-sites/

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Land Contamination and Archaeology: Good Practice Guidance (2017): https://historicengland.org.uk/images-books/publications/land-contamination-and-archaeology/

Piling and Archaeology: Guidance and Good Practice (2019): https://historicengland.org.uk/images-books/publications/piling-and-archaeology/

Preserving Archaeological Remains: Decision-taking for Sites under Development (2016): https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/

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(https://www.bradford.ac.uk/archaeomagnetism/) hosted by the University of Bradford.

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APPENDIX 1

Conservation Strategy By Ian Panter of York Archaeological Trust

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

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

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

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, Waterlogged wood: sampling, conservation and curation of structural wood (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

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

References

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

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

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

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

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

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

APPENDIX 2

Environmental Strategy By Diane Alldrit

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

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

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in

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

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

There is the possibility that the waterlogged deposits may require parasite egg analysis. It is proposed that the 'squash' technique is adapted, this would require small lumps of raw sediment approximately 3mm in diameter taken from three separate points from within the sample and homogenised in a little water by shaking. After allowing coarse particles to settle for a few moments, a drop of the supernatant was removed. This work would be undertaken by either John Carrott or Harry Kenwood if necessary.

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

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

References

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

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

Appendix 3
Digital Data Management Plan

Project Administration	
Project Name	Penistone Road, Fenay Bridge
Site Code	05.04.23
Project Description (Eg, number of trenches, area of excavation)	Excavation of nine 50m x 2m trenches
OASIS ID	maparcha1- 512576
Museum Name & Accession code (where applicable)	TBC
Client/ Landowner (where applicable)	Newett Homes
Attending Archaeologist	TBC
Project Manager	Charlie Puntorno (MAP)
Date & Version	A 25.01.23

Data Collection

Data to be Collected/ Created (to be updated throughout duration of project)		
Type	Format	Volume
GIS	ESRI Shapefile (.shp & .shx & .dbf, plus associated files) (Metadata to be deposited as .csv)	WSI- 2x shapefile
CAD	.dwg, .dxf (Metadata to be deposited as .csv)	
Spreadsheets & databases	Excel (.xlsx) Access (.accdb) (to be deposited as .csv)	Inc (Context Register / Finds & Samples Register / Photo Register / Drawing Register / Specialist data tables x 6 / Metadata tables)
Images	.jpg, .raw (to be deposited as .tiff)	WSI- 2x .Jpg
Text/ Documents	Word (.docx) PDF (.pdf)	WSI- 1x word doc, 1x PDF

- All data will be collected in line with the project specific Written Scheme of Investigation, *Guides to Good Practice* produced by the ADS and MAP's

guidance on the *Creation and Treatment of Documentary, Digital and Material Archives*.

- The digital archive will be stored in an appropriately named project specific folder which will be regularly backed up. All data raw data will be stored in the appropriate folder. Version control will be maintained throughout the project.

Documentation and Metadata

- Data collected will include standard formats which maximise opportunities for use and reuse in the future

- Data documentation will meet the requirement of the Museum Deposition Guidelines, Digital Repository Guidelines and the methodology described in the Written Scheme of Investigation. Following the completion of the project all paper-based material will be digitised and included within the archive.

- A metadata form consistent with ADS examples will be completed for each dataset and included within the final archive. As a minimum the metadata will include a file name, keywords & dates, creator & date of creation, copyright holder, location (site address or coordinates as appropriate), software and version

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

Ethics and Legal Compliance

- MAP staff must only participate in work which conforms to accepted ethical standards and which they are able to competently preform. Where there is any doubt, which should be raised with management.

- MAP places an emphasis on internal peer review of documents and the discussion of results. All Written Schemes of Investigations are reviewed by the relevant Local Authority Archaeologists prior to submission. Where confidentiality is requested by a client, this is strictly upheld by MAP.

- The project archive will include the names of all individuals who contributed to the project unless it is requested otherwise. No personal data will be held within the project archive.

- MAP have a GDPR compliant Privacy Policy underpins the management of all personal data. Such data is not retained in project specific folders and is not accessible to unauthorised staff nor will it be shared with any third-party companies.

- Unless otherwise agreed at the inception of a project, the copyright of all data collected throughout the project belongs to MAP. The inclusion of data derived from external specialists and/or contractors is secured at the point of agreement of their participation on the project.

- By depositing an archive with an HER or museum MAP gives permission for the material presented to be used by the recipient, in perpetuity, although MAP 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).

- All relevant licences and permissions to reproduce external data are discussed in the site-specific Written Scheme of Investigation and all subsequent reporting, including Desk Based Assessment. Where site specific licences are required (i.e. for the removal of human remains), licence numbers and dates will also be included within site reports and a copy of the licence held within the archive.

Data Security: Storage and Backup

- MAP's current IT infrastructure is divided between SharePoint for documents and an NAS (Network Attached Storage) drive for larger data files (acting as back up of locally held files on work laptops). Both require username and password intrinsic to the individual users.

- Digital Recording is currently provided by DiggitArchaeology.com, who provide access to their mobile app and web app via email and password login. The backup of recorded material is provided by Diggit's use of the three-point server system with automatic backups working in tandem. Diggit's data is encrypted in transit and stored and backed up on a MongoDB Atlas server cluster of 3 replicate nodes in the Repubic of Ireland (in the GDPR-compliant EEA). In the rare event that one server is down, a replicate node instantly replaces it with no perceptible change in behaviour or functionality. These servers are backed up daily, and the datacentres housing them are accredited to ISO 27001 (2005) or higher. In the very unlikely scenario that data must be restored from a backup, we estimate the Recovery Time Objective (RTO) for restoring this data to be approximately 10 minutes of downtime. At the close of the site material will be downloaded and stored using SharePoint.

- In regard to filing within the SharePoint and NAS, a folder template sets out the associated locations of files; these folders should be appropriately named and populated with file names for field data stored on the NAS. See section on "Naming Conventions"

- SharePoint is maintained/delivered under licence by Practical Networks with in-house maintenance by the Commercial Director. The NAS drive is a WD PR2100 and is maintained by the Archaeology and Geomatics Manager with weekly backups and checks of the data; field data such as photographs and survey data to be uploaded weekly by the Project Officer.

- Field and in-house access to the SharePoint and the NAS drive is limited/restricted by user email and password.

- Files such as databases, tables and documents required by the external specialists and in-house post-excavation team will be distributed using the SharePoint system. Any further data such as photographs, AutoCAD files, QGIS projects etc will be distributed via secure alternative means (WeTransfer or similar) to protect the integrity of the NAS Drive.

Selection and Preservation

- A selection strategy and the DMP for each project will be considered from the inception of the work. The process of selection should be devised in consultation with LPA frameworks, guidance and individual stakeholders, reviewed by the Appointed Project Manager at each milestone of a project's lifespan; inclusive a peer review and appropriate consultation with stakeholders to provide quality assurance.

- The strategy should dictate which parts of the archive, both digital and analogue, are relevant and would provide future generations with a soundly curated archive. Documents and Data should be quality assured prior to deposition, checking for consistency and following any deposition guidance of the eventual repository.

- All costs relating to the digital archiving have been factored into the original quote and intended repository will be notified. At each milestone costing considerations must be undertaken to ensure that deposition is not out of pocket or unexpectedly above factored levels.

Data Sharing

- A summary of the site will be made available at the earliest opportunity, latterly curated and adapted at each major milestone to reflect most up to date information regarding the site.

- All reports relevant to the site will also be curated and added to the OASIS record, updated at pertinent milestones of the project; the final report must be lodged with the HER in the first instance.

- Any archive material must be authorised for dissemination by the relevant stakeholders, primarily this is likely to be the client; though any such action will only be temporary, and usually as a result of planning issues.

Responsibilities

- The appointed Project Manager shall ensure the DMP is correctly followed, reviewed and adapted (where appropriate) at each milestone. In the unlikely event that the project changes hands, the responsibility will ultimately rest with the Managing Director, who will ensure the needs of the DMP are addressed and properly handed over to the next Project Manager.

- Curation of the field data, data synthesis/analysis, quality assurance should be the responsibility of senior figures of the project team, usually the Project Officer/Supervisor. They will make sure that all data is stored correctly and backed up to minimise any loss of integrity of the archive.

- Reports both internal and external shall be subject to MAP's ideal naming preferences of project files. It is the responsibility of each department to ensure their curated report/work is correct, quality assured and seek clarification from the authors (external or otherwise) of any document which contains errors.

- All work will be latterly audited by the Project Manager working towards creating an archive and level of reporting which is both ethically sound, accurate and reliable for future use by anyone internal or external to the company.

Naming Conventions

- Files and Folders should be named consistently throughout the project folder. The use of an _ (underscore) should be used to separate words instead of spaces e.g. use Pott_Asmnt instead of Pottery Assessment. File names vary according to the content of the file, the _ rule still applies here.
  - There should be no spaces in any file naming
  - No symbols (e.g. #?,) should be used as they are not ADS compliant
  - Full stops in file names are not accepted, except between file name and file type
  - Abbreviate where possible, losing extraneous vowels and consonants, as file paths are cumulative and cannot exceed a certain number of characters

  - Naming Examples.

    - Reports and digitised registers

    Should follow the structure of: Site Code, Type of Work (Adding excavation Phase if required), Component, Version. Varied slightly for digitised registers as per example:

    e.g. 05-08-20-TT_FINALReport_A210622

    05-26-19-EXC_PhsB_App01_CtxtListing

    - Digital Photographs and Black & White Photographs

    Should include the Site Code, Type of Work (Adding excavation Phase if required), and Frame No, varied slightly for B&W film:

    e.g. 05-08-20-TT_Digi_001

    05-26-19-EXC_PhsB_BW_FLM01-001

    NB be aware that jpegs and raw (as well as selected archive tiff's) should be in separate folders and be concurrent with each other

- Scanned Site Registers

Should be scanned in pdf format and be formatted as: Site Code, Type of Work (Adding excavation Phase if required), Register Name.

e.g. 05-08-20-TT_CtxtReg

05-26-19-EXC_PhsB_DrawReg

- Scanned Context Sheets & other site sheets

Should be scanned in pdf format and be formatted as: Site Code, Type of Work (Adding excavation Phase if required), Type of Sheet, Sheet Nos.

e.g. 05-08-20-TT_Ctxt-0001-0050

05-26-19-EXC_PhsB_Ctxt0001-0050

- Site Drawings and Plans

Should be scanned as TIFF's and be formatted as: Site Code, Type of Work (Adding excavation phase if required), Drw, Sheet No

e.g. 05-08-20-TT_Drw_Sh-001

05-26-19-EXC_PhsB_Drw_Sh-001

NB. The phase of work or field numbers may only be relevant at the time the work was undertaken, if work is part of a larger continuing outline, check where the next tranche of numbers will start and bare that in mind or check with PM prior to archiving reports.

List of Abbreviations

Registers

Ctxt

Drw

Digi

BW

Env

SF

Specialist Reports

Pott Pottery

ABn Animal Bone

FeR Iron Waste Residues

Crbn Carbonised Plant Remains

Cnsrv Conservation