mapparch

MAP Archaeological Practice

Land east of 28 Northorpe Lane
Mirfield
West Yorkshire

2021/62/91914/E
MAP 05.21.23

Written Scheme of Investigation-Archaeological Evaluation by Trial Trenching

maparch

MAP Archaeological Practice

Client	Newett Homes
Work Type	Archaeological Evaluation by Trial Trenching
Address	Land east of 28 Northorpe Lane, Mirfield, West Yorkshire
LPA Archaeologist	David Hunter. West Yorkshire Archaeological Advisory Service
NGR	SE 2148 2105
Planning Ref	2021/62/91914/E
Oasis Ref	maparcha1- 516092
Site Code	05.21.23
Project Manager	Charlie Puntorno
Version History	Edited/QA by
A300523	Max Stubbings
B010623	David Hunter (WYAAS)

Land east of 28 Northorpe Lane

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Archaeological Evaluation by Trial Trenching

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Read & Understood by	Revision	Initial and Date

1. Background

1.1 The site, which measures approximately 1.3ha is located to the east of 28 Northorpe Lane, in the northern-eastern reaches of the town of Mirfield, some 2.9kb west of Dewsbury town centre. The site is centred at NGR SE 2148 2105 (WhatThreeWords- mailers.decent.coveted. Fig. 1).

1.2 An application for planning permission has been made to Kirklees Council for the demolition of one dwelling and erection of 44 dwellings with access and associated infrastructure (planning reference 2021/62/91914/E). During the consultation process the Principal Archaeologist at West Yorkshire Archaeological Advisory Service, Archaeological advisor to Kirklees Council, stated that *'the applicant has carried out an archaeological geophysical survey which suggests a low archaeological potential. Based on this survey and the other evidenced mentioned the West Yorkshire Archaeology Advisory Service recommend the sites archaeological potential is fully established by excavating a number of archaeological evaluation trenches.'* Upon further discussion with the Principal Archaeologist, it was agreed that a post-determination condition was appropriate, given the sites low archaeological potential.

1.3 The results of the Geophysical Survey identified former field boundaries which are recorded on historical mapping and evidence of agricultural activity within the site boundary (WYAS. 2021). WYAS concluded that *'based on the interpretation of the geophysical survey, the archaeological potential is deemed to be low'*.

1.4 The work will be monitored under the auspices of the Principal Archaeologist at West Yorkshire Archaeological Advisory Service (henceforth WYAAS), who will be consulted at least one week before the commencement of site works. Where necessary the regional Science Advisor at Historic England may also be contacted about the work.

1.5 MAP will adhere to the 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).

1.6 The project will be continuously reviewed in order to monitor the projects progress towards meeting its aims and objectives. As a minimum the results of the evaluation will be assessed as the fieldwork is taking place, to allow for any necessary changes to the agreed methodology. Any deviance from the methodology outlined in this document must first be agreed by the Principal Archaeologist.

2. Site Information

2.1 *Land Use, Topology and Geology*

2.1.1 The site currently consists of pasture land, gardens and ponds, is bounded to the south and east by residential dwellings, to the north by pasture and to the east by a dismantled railway.

2.1.2 The site lies on bedrock geology of the Pennine Lower Coal Measures Formation (British Geological Society. 2023). No superficial deposits are recorded by the BGS, however Soilscapes (2023) suggests deposits are of slowly permeable, seasonally wet acid loamy and clayey soils.

2.2 *Archaeological Potential*

2.2.1 The first edition Ordnance Survey map depicts the site as consisting of three fields, with the northern most being much smaller than the other two. Highfield House and associated gardens are depicted to the north, and a school to the south. By the early 20th century the eastern boundary of the site was bounded by the Heaton Lodge & Wortley Line railway.

2.2.2 Evidence of prehistoric activity in the area is scant, with and largely restricted to change finds or small features being identified during archaeological work. A Bronze-Age axe (HER ID MWY13768) was found during the 19th century, close to Mirfield Church. The axe dates from between 1400-1200 BC.

2.2.3 Archaeological work was carried out in 2017, in support of a planning application, on land off Woodward Court, some 400m west of the site. The work identified a number coal mining features and earlier linear features which may relate to a late medieval strip field system, which was removed during the post-medieval and modern periods (WYAS. 2018, HER ID MWY20021). Four prehistoric pits were also identified, two of which showed evidence of in-situ burning and contained '*substantial amounts of burnt human remains*' (Ibid). pottery associated with the remains dated the cremations to the Bronze Age, although no other contemporary or associated features were found.

2.2.4 It is likely that settlement has been established in the area during the Anglo-Saxon period, with a pre-conquest headstone (HER ID MWY5219) being identified at Mirfield Parish Church, suggesting an earlier chapel may have been present at the site of the current church.

3. Project Details

3.1 *Aims and Objectives*

3.1.1 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.

3.2 *Excavation Rationale*

3.2.1 Four trenches are proposed, positioned in order to assess features identified in the results of the Geophysical Survey and cropmark data, but also in areas supposedly devoid of features. (Fig 1).

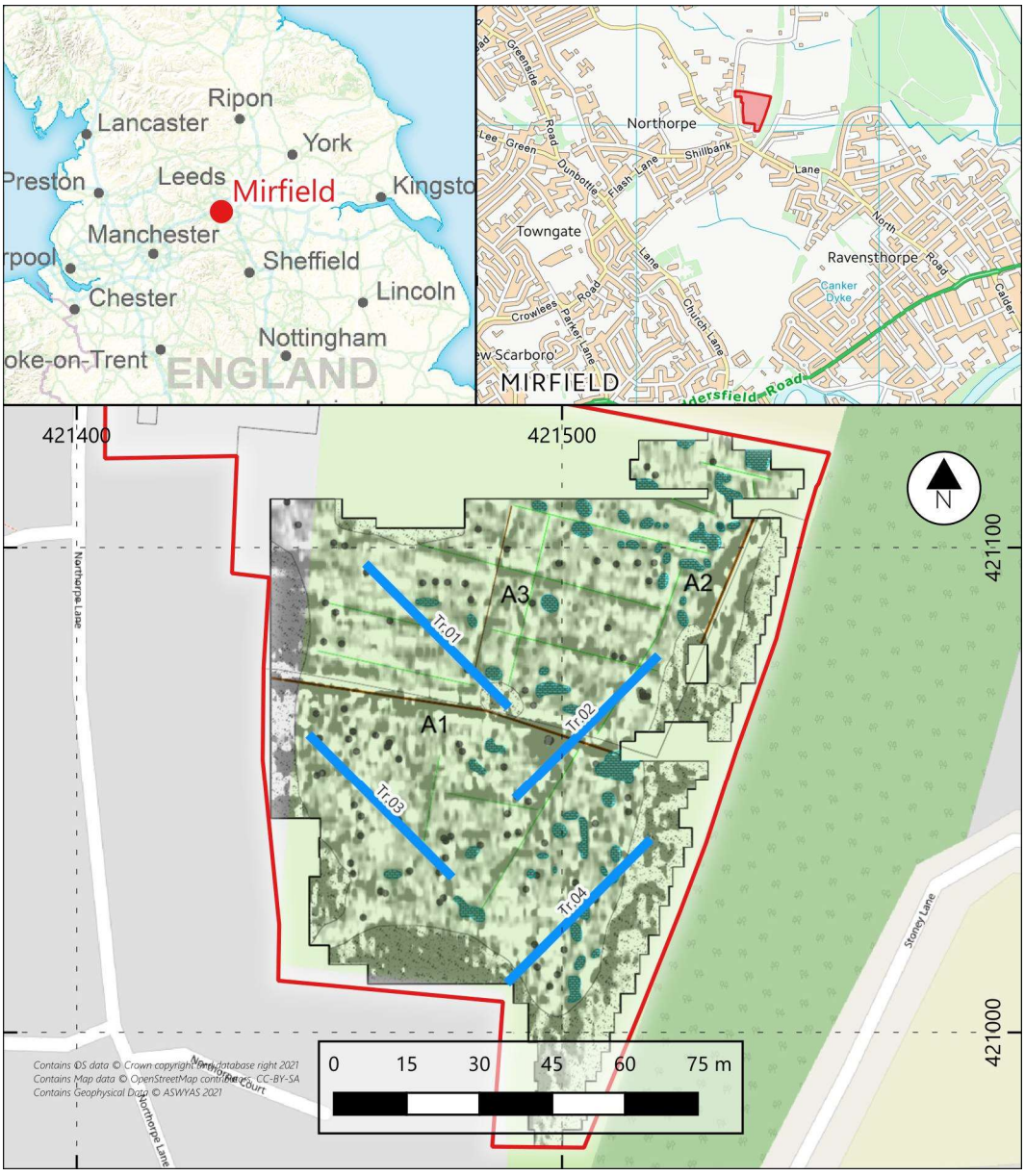

Figure 1. Site and Trench Location Plan

3.3 Trenches measure 40m x 2m.

3.4 *Output and Dissemination*

3.4.1 It is anticipated that the project will produce the following output

Data type	Detail
Physical Archive	Drawn plans and sections- permatrace Site indices (context, photograph, drawing, samples) Finds collected during the evaluation Environmental material retained from samples collected during the evaluation
Digital Archive	Diggit derived data (PDF context sheets and indices. .xlsx indices) GIS ESRI Shapefile (.shp & .shx & .dbf, plus associated files) Photographs .jpg, .raw (to be deposited as .tiff). to include all photographs taken during the project Reports (.docx & PDF). WSI, evaluation report and all associated specialist reports
Reports	Printed evaluation report

3.4.2 All digital data will be curated in line with the attached Data Management Plan.

3.4.3 MAP undertake public engagement for all appropriate projects. This will be offered in numerous ways to reflect the nature of the archaeological works. It is likely that public engagement will be via site notices and discussions with the public during the duration of the fieldwork. A copy of the evaluation report will be submitted to the West Yorkshire Historic Environment Record for public access.

4. Fieldwork Methodology

4.1 *Excavation Methodology*

4.1.1 The positions of all trenches will be located using a Trimble GPS Rover and necessary precaution will be taken over underground services and overhead lines. In line with HSG47 and GS6 guidance.

4.1.2 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 edge of each trench, or at an alternative location, to be determined in agreement 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).

4.1.3 Minor adjustments may be undertaken to avoid previously unknown obstacles such as vegetation or services, or to enable machine manoeuvring. Trenches located to target specific features will not be moved without prior agreement of the Principal Archaeologist.

4.1.4 Should trenches require stepping or shoring to reach their required depth, the base of the trench will reflect the size specified in section 3.2.

4.1.5 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.

4.1.6 Archaeological deposits will be cleaned and excavated by hand using appropriate tools. The stratigraphy of all trenches will be recorded, regardless of a lack of archaeological features.

4.1.7 The excavation sampling policy is:

- An initial half section of all discrete features. Where justified further excavation may be deemed necessary
- linear features will be sampled a minimum of 10% 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,
- All junctions/intersections and corners of linear features will be investigated, and their stratigraphic relationships determined – if necessary, using box sections. All termini will be examined
- Funerary contexts, buildings and industrial features will be subject to sufficient excavation to establish the objectives of the evaluation
- No archaeological deposit will be entirely removed unless this is necessary to meet the aims of the project

4.2 *Recording Methodology*

4.2.1 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.

4.2.2 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 (Eg 1:10, 1:20, 1:50).

4.2.3 Digital photography will be undertaken in accordance with standards set by Historic England and the recipient archive. All digital photography will be undertaken using a high quality camera recommended to have no less than an APS-C or DX size sensor of 10 megapixels and to be capable of generating images in RAW to be converted to TIFF for archive and JPEG for reporting.

4.2.4 Appropriately sized scales will be used in all photography.

4.3 *Sampling Strategy*

4.3.1 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 2).

4.3.2 Where necessary provision will be made for relevant specialists to visit the site.

4.3.3 Bulk samples will 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. As standard a 40-litre sample will be taken, where this is not possible, entire contexts may be sampled. Structures will also be sampled; retention of structural material such as bricks will be implemented where necessary.

4.3.4 Sampling will also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Such sampling may be carried out at the request of WYAAS or following advice form the Historic England Science Advisor and may include, but is not restricted to, radiocarbon dating, luminescence dating and archaeomagnetic dating.

4.3.5 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.

4.3.6 Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of the fieldwork, or as soon as possible thereafter, partly to permit variation of sampling strategies.

4.4 *Human Remains*

4.4.1 Should any inhumation or cremation burials be encountered, their extent, number and state of preservation will be established, and the Principal Archaeologist will be notified to discuss an appropriate strategy for their management. Remains should not be removed or chased beyond the existing limits of excavation prior to agreement with the Principal Archaeologist.

4.4.2 It is considered best practice to not remove the remains during evaluation, 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, and after the receipt of, licences for the removal of human remains (issued by the Ministry of Justice) and in accordance with the Burial Act (1857), '*Updated Guidelines to the Standards for Recording Human Remains*' (Brickley & McKinley. 2017), CIfA guidelines 'Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains (McKinley & Roberts 1993), and all Historic England and Advisory Panel on the Archaeology of Burials in England (APABE) guidance, 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.

4.5 *Artefact recovery*

4.5.1 All stratified archaeological artefacts and ecofacts will be collected, except for modern (mid-20th century or later) finds from topsoil and subsoil contexts unless it is determined that they are of archaeological interest. All artefacts will be bagged and labelled by type and context.

4.5.2 Removal, packaging, and labelling of finds will be undertaken in accordance with '*First Aid for Finds*' and specific Historic England guidance as required.

4.5.3 Artefacts defined as treasure under the Treasure Act 1996 (as supplemented by the Treasure (Designation) Order 2002) will be treated in accordance with the Treasure Act 1996 Code of Practice. All finds of treasure must be reported to the local coroner within 14 days of discovery. In the first instance, it is recommended that details of the find are provided to the local Portable Antiquities Scheme Finds Liaison Officer to confirm that it constitutes treasure; they will be able to apply for a Treasure Reference Number and declare the find to the coroner. The Principal Archaeologist will also be notified. A short Treasure Report will be compiled for submission to the coroner.

4.5.4 Where recovery of treasure cannot be undertaken on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

5. Post-Investigation Assessment, Analysis and Reporting

5.1 *Assessment & Analysis*

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

5.1.2 A rapid scan of all excavated material will be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording.

5.1.3 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).

5.1.4 Allowance will be made for preliminary conservation and stabilisation of all objects and an assessment of long term conservation and storage needs.

5.1.5 Assessment of artefacts will 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

5.1.6 Once assessed, all material will be packed and stored in optimum conditions, as described in First Aid for Finds.

5.1.7 Waterlogged organic materials will 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.

5.1.8 Processing of all samples collected for biological assessment, or subsamples of them, will be completed. Bulk and site-riddled samples from dry deposits will have been processed during excavation, where possible.

5.1.9 The preservation state, density and significance of material retrieved will be assessed, following methods presented in Environmental Archaeology (Historic England, 2011). Unprocessed sub-samples will be stored in conditions specified by the appropriate specialists.

5.1.10 Assessments for any technological residues will be undertaken. Any required samples for dating will be submitted to laboratories promptly, so as to ensure that results are available to aid development of specifications for subsequent mitigation strategies.

5.1.11 Basic stratigraphic information will be supplied to the project specialists outlined in section 7.

5.2 *Reporting*

5.2.1 A brief, interim report may be required shortly after the completion of fieldwork.

5.2.2 On completion of the post-excavation assessment, an assessment report will be prepared, to include the following as a minimum;

- An introduction including background information (with planning application details, where appropriate);
- The original research aims and objectives and rationale for selected area of investigation;
- An archaeological and historical baseline;
- A description of results;
- A report of all find and sample categories to assessment level, by appropriate specialists, including their research potential;
- The results of any scientific dating;
- A discussion of the results including a phased interpretation of the site

- A summary of the results in their local, regional, and national context, and the extent to which the work has addressed the project aims and objectives;
- An assessment of the effectiveness of the evaluation strategy, including earlier stages of work
- Recommendations for any further investigation, specialist analysis or conservation, recording and/or preservation of in situ archaeological remains, to be determined in consultation with the Principal Archaeologist;
- Supporting illustrations, including as a minimum:
    - A detailed location map
    - A detailed site plan showing all trenches, as excavated;
    - Plans for all trenches where archaeological features were identified;
    - Detailed plans of archaeological features;
    - Detailed sections of archaeological features;
    - An overall (phased) site plan showing all archaeological features recorded
    - Selection of photographs of work in progress;
    - Select artefact illustrations and/or photographs
- Supporting tables of data
- Acknowledgements identifying those involved in the project, including WYAAS.

5.2.3 Where an updated WSI is necessary, the updated document should contain

- Any changes to the aims and objectives of the project;
- The requirement and content of the final analysis report;
- Any changes to the archive arrangements, including details of proposed specialist conservation.
- Any updates to the Selection Strategy and Data Management Plan.

5.2.4 Copies of the report will be submitted to the commissioning body, the Local Planning Authority and the Principal Archaeologist within 3 months of the completion of the evaluation, unless an alternative timescale is agreed.

5.2.5 We will provide a physical and digital copy of the report to the West Yorkshire Historic Environment Record. A digital copy will also be lodged with Oasis.

5.2.6 Printed copies of reports will be included with the physical archive to the recipient museum (see section 6).

5.2.7 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.

6. Archive

6.1 *Working Archive*

6.1.1 All material (whether digital or physical) recovered or generated through the duration of the field evaluation project will be appropriately and securely stored in a working project archive. This will be undertaken in accordance with the selection strategy and digital data management plan set out at the commencement of the project (appendix 1).

6.1.2 All physical documents or drawings will be indexed, collated, and stored in a secure location when not in use.

6.1.3 Secure digital security copies will be made of physical and born digital records at regular intervals, to be stored and backed up in a secure location. Documents and drawings will be scanned at an appropriate resolution (see appendix 1).

6.2 *Archive Deposition*

6.2.1 The requirements for archive preparation and deposition must be addressed and undertaken in a manner agreed with the recipient museum, who will be contacted before commencement of fieldwork. In line with the '*Archaeological Archive Deposition Policy for Museums in Yorkshire and the Humber*', produced by Renaissance Yorkshire, the museum will also be contacted during a mid-point review of the project during which information will be passed to the Kirklees Museum Service regarding the archive and the proposed timescale for deposition, and following the completion of work.

6.2.2 Guidance set out in the CIfA Toolkit for Selecting Archives (2019) will be followed, prior to the commencement of fieldwork in order to establish project-specific strategies for the retention or discarding of material. The retention of material will also be discussed with the Museum with regards to the significance and research potential of the archive.

6.2.3 Archive deposition will be arranged in consultation with the museum and in accordance with their deposition policy relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative.

6.2.4 The digital archive will be deposited with the Archaeology Data Service (ADS) at the University of York. A link to the final digital archive will be provided to the West Yorkshire Historic Environment Record.

7. Staffing

7.1 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.

7.2 At the time of writing the field work team is to be confirmed however as a minimum the following contacts will be relevant for the duration of the project.

- Charlie Puntorno -MAP Project Manager

  Telephone- 07879791369

  Email- charlie@maparchltd.co.uk

- David Hunter- Principal Archaeologist- WYAAS

  Telephone- 07917587400

  Email- David.hunter@wyjs.org.uk

- Andy Hammon-Historic England Science Advisor

  Telephone- 07747486255

  Email- andy.hammon@historicengland.org.uk

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

- Prehistoric pottery - T. Manby
- Medieval & Post-medieval pottery - M. Stephens (MAP)
- Roman pottery - P Ware (MAP)

- 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 (MAP)

8. Bibliography

British Geological Society. Geology of Britain Viewer. Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html [accessed 30.05.23]

Chartered Institute for Archaeologists. 2021. Code of Conduct: Professional Ethics in Archaeology

Chartered Institute for Archaeologists. 2020. Standards and Guidance for Archaeological Field Evaluation

Soilscapes, 2023. Cranfield University, National Soil Resources Institute. Available at http://landis.org.uk [Accessed 30.05.23]

WYAS Archaeological Services. 2018. Land off Woodward Close, Mirfield, West Yorkshire. Trial Trenching Evaluation

WYAS Archaeological Service. 2021. East of 28 Northorpe Lane, Mirfield, West Yorkshire. Geophysical Survey

Appendix 1

Digital Data Management Plan

Project Administration	
Project Name	Land east of 28 Northorpe Lane, Mirfield
Site Code	05.21.23
Project Description **(Eg, number of trenches, area of excavation)**	Excavation of four archaeological trenches (40m x 2m)
OASIS ID	maparcha1- 516092
Museum Name & Accession code (where applicable)	Kirklees Museum & galleries Accession number TBC
Client/ Landowner (where applicable)	Newett Homes
Project Lead	TBC
Project Manager	Charlie Puntorno
Date & Version	B 01.06.23

Data Collection

Geophysical survey has previously been undertaken at the site and will be used to inform the excavation strategy. The data images including interpretation are likely to be included within the project report with permission, but the original data copyright resides with the original researchers (WYAS) and will not be deposited with this project archive

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= 2 shapefiles
CAD	.dwg, .dxf (Metadata to be deposited as .csv)	
Spreadsheets & databases	Excel (.xlsx) Access (.accdb) (to be deposited as .csv)	
Images	.jpg, .raw (to be deposited as .tiff)	WSI=1 .jpg
Text/ Documents	Word (.docx) PDF (.pdf)	WSI = 3.docx & 5 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

    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

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

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.