Land to the North of Orchard Close
Knaresborough
North Yorkshire

Archaeological Evaluation by Trial Trenching

05.11.2020

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North Yorkshire

14/03849/OUTMAJ

MAP 05.11.2020

Archaeological Evaluation by Trial Trenching

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Archaeological Evaluation by Trial Trenching

Non-technical Summary

An Archaeological Evaluation by Trial Trenching was carried out by MAP Archaeological Practice Ltd., on land to the north of Orchard Close, Knaresborough, North Yorkshire between the 22nd and the 23rd of March 2021. The evaluation was undertaken to assess the potential of archaeological remains and to allow the Principal Archaeologist at North Yorkshire County Council to make a reasoned decision regarding further mitigation that may be required prior to the development of the site. The work was undertaken on behalf of Persimmon Homes Yorkshire.

A total of six trenches were excavated, one of which contained an archaeological feature, suggestive of an eighteenth century field boundary.

1. Introduction

1.1 This report sets out the results of an Archaeological Evaluation by Trial Trenching that was carried out by MAP Archaeological Practice Ltd. on land north of Orchard Close, Knaresborough, North Yorkshire (SE 3553 5825) between 22nd March and 23rd February 2021.

1.2 The work was undertaken in order to inform the Principal Archaeologist at North Yorkshire County Council of the archaeological potential of this site, prior to the commencement of a residential development with associated infrastructure.

1.3 Condition 22 attached to planning application reference 14/03849/OUTMAJ states that;

No development shall take place until a scheme of archaeological investigation to identify and describe the nature and significance of any surviving archaeological remains within the development site, and any mitigation options for avoiding and minimising damage to, and/or the recording of any archaeological remains has been submitted to the Local Planning Authority for approval in writing. The scheme shall comprise geophysical survey followed by trial trenching where appropriate. The works shall be carried out in accordance with the approved details.

1.4 The work was carried out in accordance with the recommendations of the National Planning Policy Framework (February 2019) on 'Archaeology and Planning' and according to the Written Scheme of Investigation that was prepared by MAP Archaeological Practice Ltd. (Appendix 6).

1.5 MAP adhered to the general principles of both the CIfA '*Code of Conduct*' (2019) and '*Standard and Guidance for Archaeological Field Evaluation*' (2020) throughout the project.

1.6 The site code for the project was MAP 05.11.2020.

1.7 All maps within this report have been produced with permission of the Controller of Her Majesty's Stationary Office (© Crown copyright. License AL50453A). With additional mapping data derived from OpenStreetMap. (https://www.openstreetmap.org/copyright).

1.8 All work was funded by Persimmon Homes Yorkshire.

2. Site Description

2.1 The Proposed Development Area lays to the north or Orchard Close, at the northern edge of Knaresborough, approximately 5km north-east of Harrogate. It is approximately 2.5Ha and consists of two pasture fields.

2.2 The Archaeological Evaluation by Trial Trenching only took place in the eastern most field as it was deemed that no archaeological work is necessary in the western field of the Development Area.

2.3 At the time of the evaluation the site was dry, cut grass pasture, sloping up towards the north limit of the site (Pls. 1-2).

2.4 The geology of the site consists of Cadeby Formation, Dolostone, overlain by York Formation, clay sands and gravels (British Geological Survey, 2020).

Figure 1. Site Location.

3. Archaeological and Historical Background

3.1 Prehistoric and Romano-British activity is well documented in the area with the North Yorkshire Historic Environment Record recording the presence of enclosures, field systems and a double ditched trackway less than 300m to the north-west of the site (MNY36339). Archaeological work carried out on the site (WYAS 2013) confirmed the features are of Iron Age or Romano-British date, with field boundaries and a trackway identified. Work carried out in 2018 (WYAS 2018) revealed the field system continued south-east, into land immediately to the north of the Proposed Development Area.

3.2 Further work carried out by On Site Archaeology (2018), also to the north of the site, confirms a landscape dominated by late prehistoric and Roman-British features.

3.3 A hoard of bronze and iron Roman utensils were recovered to the south-east of the site in 1860. The hoard consisted of seven bowls, fragments of strainers and colanders, handles and large metal rings (MNY18880).

3.4 A Geophysical Survey was carried out across the site in March 2020 (Phase Site Investigations. 2020). The results of the survey highlighted that the western most field (which has been excluded from the Evaluation) consisted of made ground, likely associated with the backfilling of a gravel pit which is depicted on early Ordnance Survey mapping. Anomalies in the eastern field include a 'strong but intermittent linear anomaly which forms a return' and is indicative of an infilled feature which may relate to the prehistoric and Romano-British field systems discussed above. Possible curvilinear features were also highlighted.

4. Aims and Objectives

4.1 The aim of the Archaeological Trial Trenching was 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.

5. Methodology

5.1 Six trenches were located (Fig. 2) and latterly levelled using a Trimble R8s GPS rover. Once positioned the trenches were excavated using a tracked

excavator fitted with a 2m wide toothless bucket. In each trench topsoil and subsoil was judiciously excavated down to the level of buried archaeological features or natural geology.

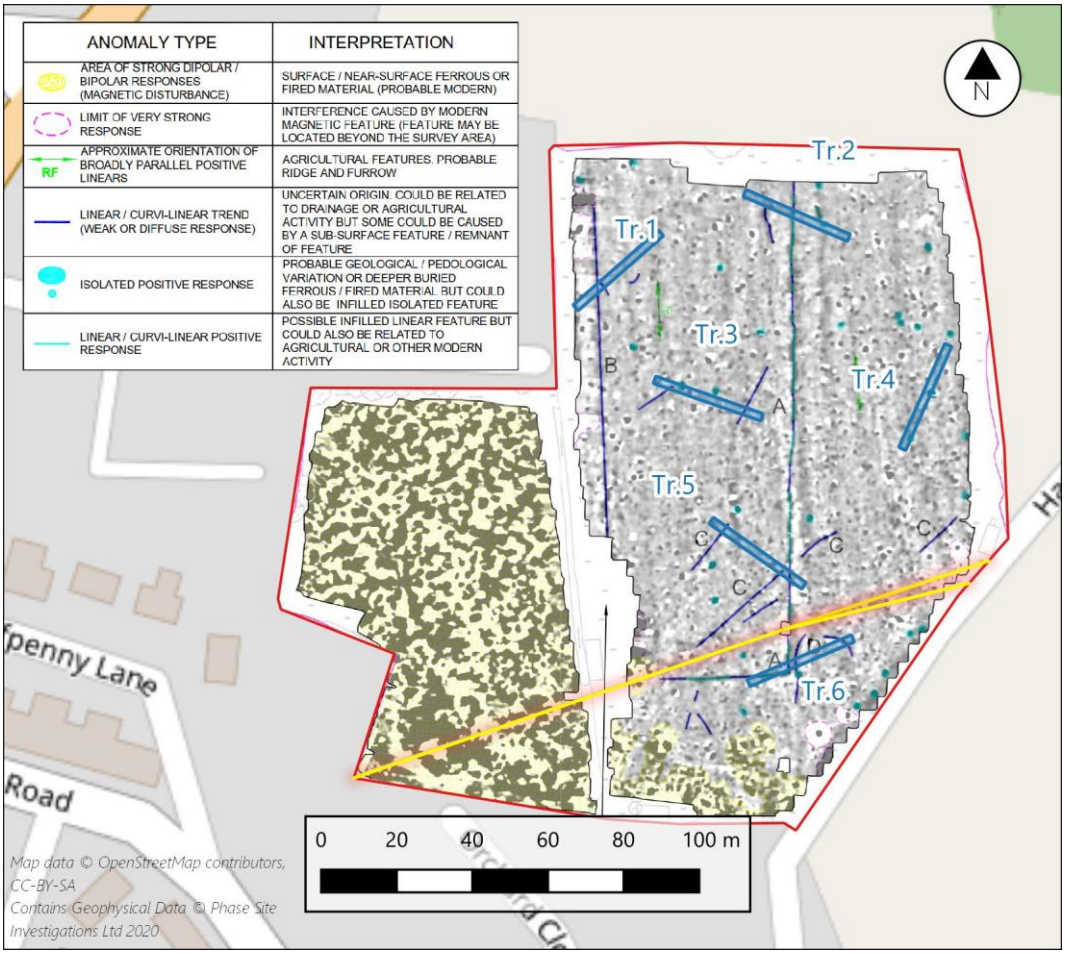

Figure 2. Trench Locations.

5.2 MAP adhered to the general principles of the CIfA Code of Conduct (CIfA 2019) throughout the project and to the CIfA "Standards and Guidance for Archaeological Field Evaluations" (CIfA 2020).

5.3 Paper and digital records were maintained using MAP Proforma sheets, draft paper, and a high-resolution digital camera.

6. Results (Pls. 3-4)

6.1 Excavation of the six trenches revealed a deposit of topsoil that consisted of a dark grey-brown sandy silt and an underlying deposit of subsoil of pink, red sandy clay. Natural sandy clay deposits were observed in all trenches The total depths of excavation, depths of the topsoil and elevations of all four trial trenches are displayed in the below table along with their orientation within the site.

Trench	*Elevation*	*Depth of Excavation*	*Depth of Topsoil*	*Depth of Subsoil*
Tr.1	North – East – 49.12m AOD South – West – 48.05m AOD	0.52- 0.68m	0.26- 0.28m	0.25- 0.40m
Tr.2	North-West – 49.55m AOD South-East –47.25 m AOD	0.49- 0.63m	0.25- 0.29m	0.24- 0.34m
Tr.3	West – 46.57m AOD East – 46.43m AOD	0.62- 0.70m	0.23- 0.25m	0.37- 0.47m
Tr.4	North-East – 44.38m AOD South-West –44.12 m AOD	0.57m- 0.63m	0.28m- 0.30m	0.29m- 0.33m
Tr.5	North-West – 45.95m AOD South-East – 44.31m AOD	0.54- 0.67m	0.28- 0.30m	0.26- 0.37m
Tr.6	North-East –43.28 m AOD South-West –44.40 m AOD	0.46- 0.58m	0.22- 0.26m	0.22- 0.34m

6.2 Features of an archaeological interest were only observed in Trench 2. (Fig. 3) which was located along the northern boundary of the site, on a north-west/south-east orientation positioned over one north to south aligned geophysical anomaly.

6.3 Gully [2004], which ran on a north to south orientation, had a U-shaped profile measuring 0.75m wide by 0.28m deep, and an irregular base. It

contained a single fill (2003) of mid grey-brown sandy clay. No archaeological material was recovered from the feature.

7. Discussion

7.1 Gully [2004] corresponds to the Geophysical Survey (Phase, 2020) however its continuation through trench 5 and 6 were not observed. No dating material nor environmental evidence was recovered from the feature.

7.2 No further archaeological finds, features or deposits were identified during the evaluation, offering a low archaeological potential for the remainder of the site.

8. Conclusion

8.1 The archaeological feature identified on the site was true to the geophysical survey, however geophysical anomalies in the southern portion of the site were not observed. Other geophysical anomalies were noted to be of geological origin.

8.2 It is likely that the gully identified in Trench 2 relates to a former shallow field boundary, possibly connected to the eighteenth-century Enclosure Act, however the lack of archaeological material makes the dating of the feature difficult.

8.3 The archaeological potential of the site is considered to be low.

9. Bibliography

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Chartered Institute for Archaeologists. 2014. Standards and Guidance for Archaeological Field Evaluation. Available at; https://www.archaeologists.net/sites/default/files/CIfAS&GFieldevaluation_1.pdf [accessed 24.03.2021]

MAP Archaeological Practice Ltd. 2020. Land to the North of Orchard Close, Knaresborough, North Yorkshire. Written Scheme of Investigation for Archaeological Evaluation by Trial Excavation.

Phase Site Investigations. 2020. Orchard Close, Knaresborough. Archaeological Geophysical Survey.

10. List of Contributors

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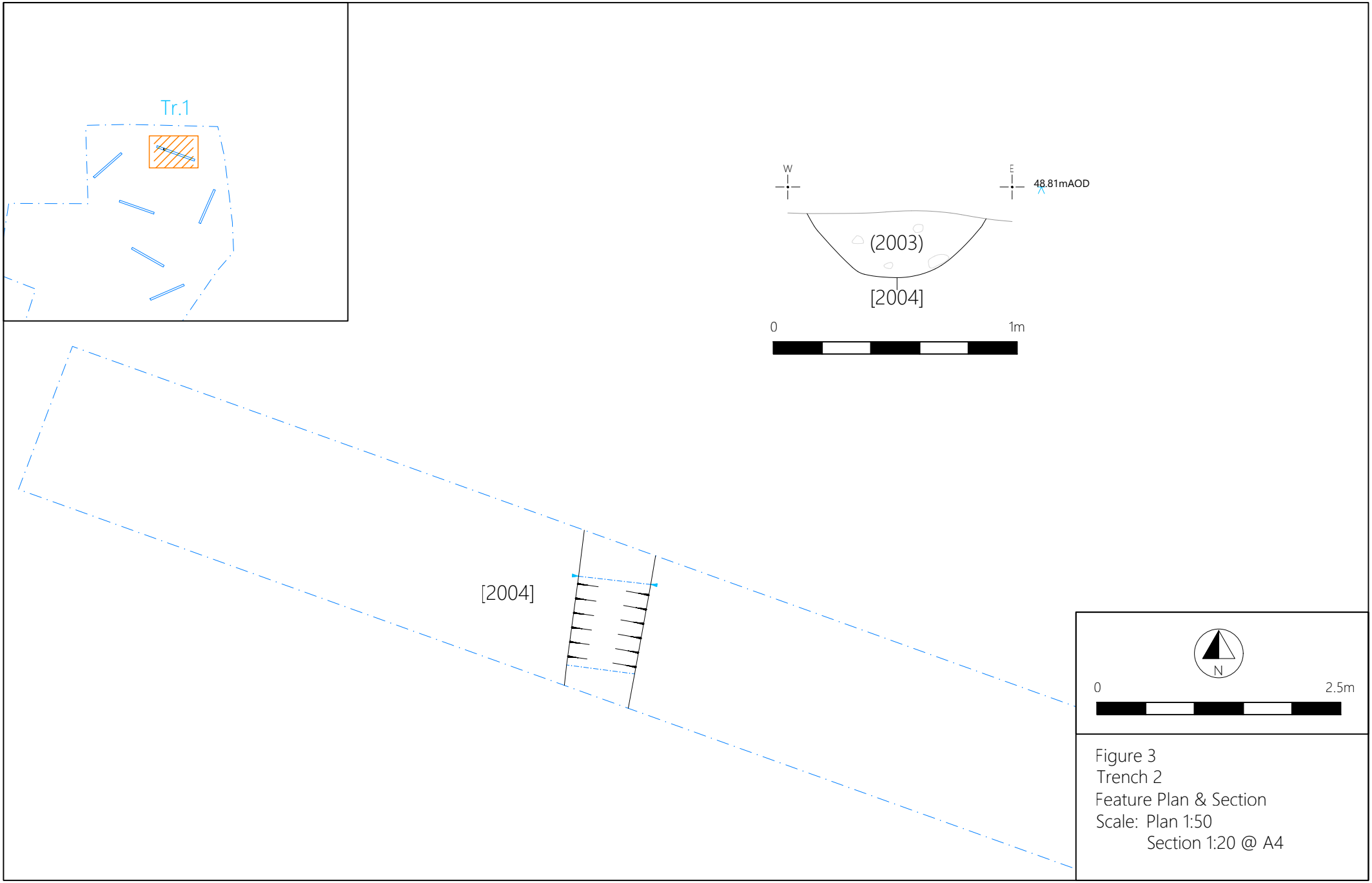

Figure 3
Trench 2
Feature Plan & Section
Scale: Plan 1:50
Section 1:20 @ A4

Plate 1: General view of site, facing North.

Plate 2: General view of site, facing South-west.

Plate 3: General view of Trench 3, facing East.

Plate 4: General view of Trench 4, facing North-east.

Plate 5: South facing section of Gully [2004], facing North.

APPENDIX 1

Context Listing

Context	Context Type	Fill of	Description
1001	Deposit	-	Topsoil: dark grey brown, sandy silt.
1002	Deposit	-	Subsoil: pink red, sandy clay.
2001	Deposit	-	Topsoil: dark grey brown, sandy silt.
2002	Deposit	-	Subsoil: pink red, sandy clay.
2003	Fill	[2004]	Mid grey brown, sandy clay. Single fill of gully [2004].
2004	Cut	-	Cut of gully.
3001	Deposit	-	Topsoil: dark grey brown, sandy silt.
3002	Deposit	-	Subsoil: pink red, sandy clay.
4001	Deposit	-	Topsoil: dark grey brown, sandy silt.
4002	Deposit	-	Subsoil: pink red, sandy clay.
5001	Deposit	-	Topsoil: dark grey brown, sandy silt.
5002	Deposit	-	Subsoil: pink red, sandy clay.
6001	Deposit	-	Topsoil: dark grey brown, sandy silt.
6002	Deposit	-	Subsoil: pink red, sandy clay.

APPENDIX 2

Drawn Archive Listing

Drawing	Scale	Context	Description
1	1:10	(2003)-[1004]	South Facing Section of Gully [2004]
2	1:20	(2003)-[2004]	Plan of Gully [2004]

APPENDIX 3

Photographic Archive Listing

Frame	Context	Scale	Facing	Description
001	-	-	North	General Site Shot
002	-	-	East	General Site Shot
003	-	-	South-west	General Site Shot
004	-	-	South	General Site Shot
005	-	-	West	General Site Shot
006	-	2 x 1m	North-west	General Shot of Trench 5
007	-	2 x 1m	South-east	General Shot of Trench 5
008	-	2 x 1m	West	General Shot of Trench 3
009	-	2 x 1m	East	General Shot of Trench 3
010	-	2 x 1m	North-east	General Shot of Trench 1
011	-	2 x 1m	South-west	General Shot of Trench 1
012	-	2 x 1m	South-east	General Shot of Trench 2
013	-	2 x 1m	North-west	General Shot of Trench 2
014	-	2 x 1m	South-west	General Shot of Trench 4
015	-	2 x 1m	North-east	General Shot of Trench 4
016	-	2 x 1m	West	General Shot of Trench 6
017	-	2 x 1m	East	General Shot of Trench 6
018	(2003)-[2004]	1m	North	South facing section of Gully [2004]
019	(2003)-[2004]	1m	North	South facing section of Gully [2004]
020	(2003)-[2004]	1m	North	South facing section of Gully [2004]

APPENDIX 4

Sample Listing

Sample No.	Context No.	Cut No.	Type	Description	Finds	Flot
1	(2003)	[2004]	GBA	Mid grey brown, sandy silt. Single fill of gully [2004].	-	Yes

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Written Scheme of Investigation
Archaeological Evaluation by Trial Trenching
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WRITTEN SCHEME OF INVESTIGATION:
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Written Scheme of Investigation
Archaeological Trial Trenching

1 Summary

1.1 This document sets out the details for the archaeological work required in the eastern field at land to the north of Orchard Close, Knaresborough, North Yorkshire in order to inform the Principle Archaeologist at North Yorkshire County Council of the archaeological potential of the site, prior to the commencement of a large residential development with associated infrastructure. The Written Scheme of Works has been commissioned by Persimmon Homes Yorkshire.

1.2 No archaeological work is necessary in the western field of the Development Area and as such construction can commence in this area prior to the Archaeological Evaluation taking place.

1.2 In accordance with the recommendations of the National Planning Policy Framework (June 2019) on 'Archaeology and Planning' a staged scheme of archaeological work is proposed. The results of the Trial Trenching, which follows a Geophysical Survey, will be summarised in a report and an appropriate mitigation strategy will be formulated if necessary.

2 Site Description and Planning Background

2.1 The Proposed Development Area lays to the north or Orchard Close, at the northern edge of Knaresborough, approximately 5km north-east of Harrogate.

2.2 The Proposed Development Area covers approximately 2.5Ha and consists of 2 pasture fields. The Archaeological Evaluation by Trial Trenching will take place only in the eastern most field.

Figure 1. Site Location.

2.3 The site is bounded to the east and north by agricultural land and to the south and west by residential dwellings.

2.4 The geology of the majority of the site consists of deposits of the Vale of York Formation, clay sands and gravels (BGS. 2020).

2.5 Condition 22 attached to planning application reference 14/03849/OUTMAJ states that;

No development shall take place until a scheme of archaeological investigation to identify and describe the nature and significance of any surviving archaeological remains within the development site, and any mitigation options for avoiding and minimising damage to, and/or the recording of any archaeological remains has been submitted to the Local Planning Authority for approval in writing. The scheme shall comprise geophysical survey followed by trial trenching where appropriate. The works shall be carried out in accordance with the approved details.

2.6 In agreement with the Principal Archaeologist at North Yorkshire County Council, no archaeological work is necessary in the western area of the site and as such construction can commence in this area prior to the evaluation taking place.

3. Archaeological and Historical Background

3.1 Prehistoric and Romano-British activity is well documented in the area with the North Yorkshire Historic Environment Record recording the presence of enclosures, field systems and a double ditched trackway less than 300m to the north-west of the site (MNY36339). Archaeological work carried out on the site (WYAS 2013) confirmed the features are of Iron Age or Romano-

British date, with field boundaries and a trackway identified. Work carried out in 2018 (WYAS 2018) revealed the field system continued south-east, into land immediately to the north of the Proposed Development Area.

3.2 Further work carried out by On Site Archaeology (2018), also to the north of the site, confirms a landscape dominated by late prehistoric and Roman-British features.

3.3 A hoard of bronze and iron Roman utensils were recovered to the south-east of the site in 1860. The hoard consisted of seven bowls, fragments of strainers and colanders, handles and large metal rings (MNY18880).

3.4 A Geophysical Survey was carried out across the site in March 2020 (Phase Site Investigations. 2020). The results of the survey highlighted that the western most field (which has been excluded from the Evaluation) consisted of made ground, likely associated with the backfilling of a gravel pit which is depicted on early Ordnance Survey mapping. Anomalies in the eastern field include a 'strong but intermittent linear anomaly which forms a return' and is indicative of an infilled feature which may relate to the prehistoric and Romano-British field systems discussed above. Possible curvilinear features were also highlighted.

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.

5 Compliance

5.1 MAP will adhere to the general principles of the CIfA Code of Conduct (CIfA 2014) throughout the project and to the CIfA 'Standards and Guidance for Archaeological Field Evaluations' (CIFA 2014b).

5.2 All work will be carried out in accordance with chapter 16 of the National Planning Policy Framework (February 2019) on 'Archaeology and Planning'.

5.3 The work will be monitored under the auspices of the Principle Archaeologist at North Yorkshire County Council who should be consulted before the commencement of site works.

5.4 All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. License No. AL 50453A and also data derived from Open Street Map (https://www.opennstreetmap.org/copyright).

5.5 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. 2004) to ensure that they are treated with due dignity.

5.6 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 Excavation and Recording

6.1.1 Six Trial Trenches are proposed, positioned across the eastern field to investigate geophysical anomalies but also areas which appear void of archaeology in the results of the survey. All trenches measure 30m x 2m (Fig. 2). No archaeological work is necessary in the western field and as such, this area is not covered under this Written Scheme of Investigation.

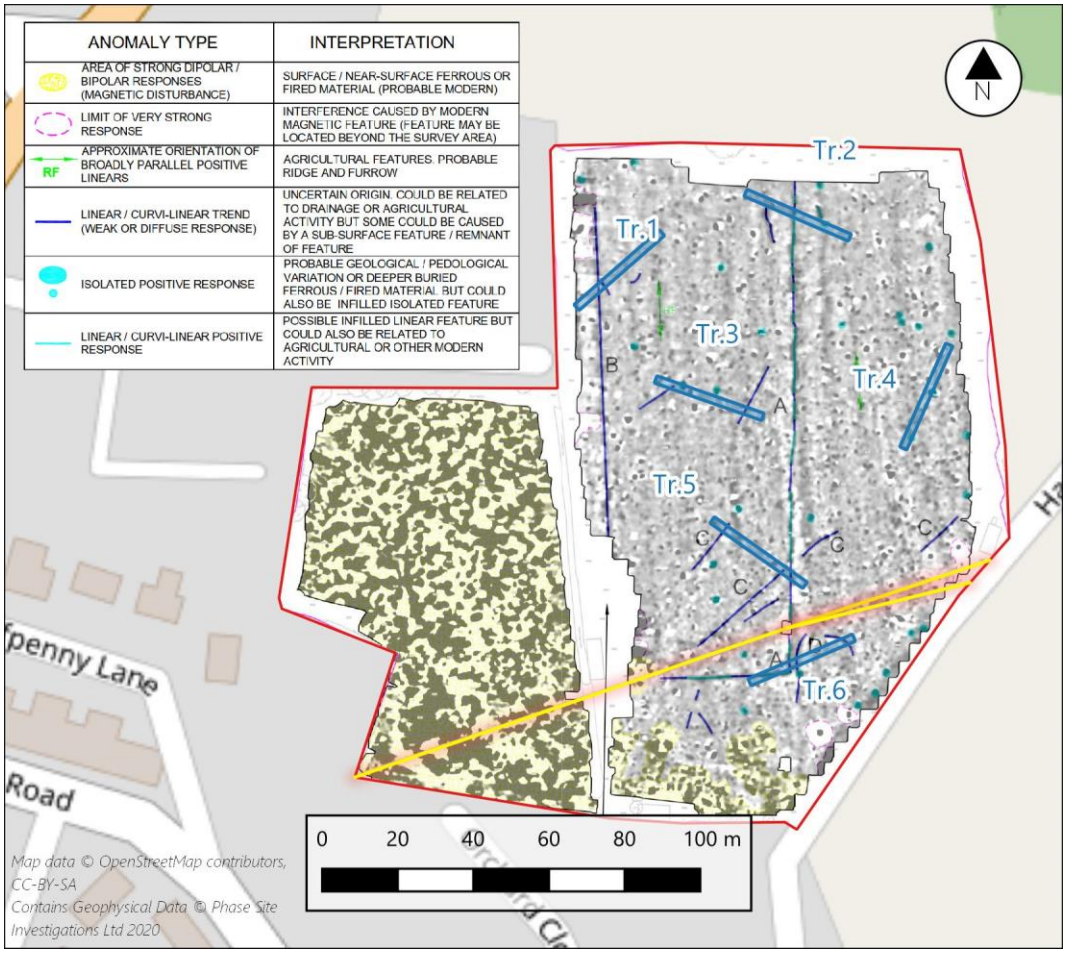

Figure 2. Proposed Trench Location.

61.2 All overburden 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 the site, 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).

6.1.3 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.

6.1.4 Context recording methodologies and systems will be used. All archaeological deposits will be recorded according to principles of stratigraphic excavation on MAP's *pro forma* sheets, which are compatible with the MoLAS recording system. The MoLAS recording manual will be used on site where necessary. The stratigraphy of trenches will be recorded even if no archaeology is found.

6.1.5 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. 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,

f. All funerary contexts, all buildings and all industrial features will be subject to 100% excavation. As noted above, postholes and the enclosing ditches around barrows and roundhouses would be first subject to sample excavation, sectioning and recording, but then should be fully excavated

6.1.6 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

6.1.7 A full written, drawn and photographic record will be made of all material revealed during the course of the Trial Trenching. Plans should be completed at a scale of 1:50 or 1:20 (as appropriate), whilst section drawings should be at a scale of 1:10. High resolution digital photographs should form the basis of the photographic archive.

6.1.8 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).

6.1.9 Samples will be collected from primary and secondary contexts, where applicable, from a range of representative features, including pit and ditch fills, postholes, floor deposits, ring gullies and other negative features. Where features allow between 40 and 60 litres will be taken although entire contexts will be sampled if the volume is low, and specialist samples, such as for General Biological Analysis (GBA) or column samples, will be of the order of 20 litres. 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.

6.1.10 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.

6.1.11 A finds recovery and conservation strategy will be discussed with the Archaeology Manager and recipient museum in advance of the project commencing, and a policy for finds recording should be agreed and submitted to the Archaeology Manager, before commencement of site works. Any recording, marking and storage, materials will be of archive quality, and recording forms and manuals will be submitted to the Archaeology Manager, prior to the commencement of on-site works, if these have not been supplied previously. Allowance will be made for preliminary conservation and stabilisation of all objects and an assessment of long-term conservation and storage needs We have made an allowance for a minimum four boxes in calculating estimates for museums storage grant.

6.1.12 All finds (artefacts and ecofacts) visible during excavation will be collected and processed, unless variations in this principle are agreed with the Local Authority. 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.

6.1.13 We will make provision within our excavation strategies, where necessary, 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 should be taken for dendrochronological assay.

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

6.1.15 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.

6.1.16 All archaeological staff and visitors to the site will comply with current government guidance regarding COVID-19. All precautions, including those concerning social distancing will be outlined in MAP's risk and method statement. A remote site visit by the Principal Archaeologist may be required.

6.1.17 Necessary precautions should be taken over underground services and overhead lines.

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

7.2 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

7.3 Copies of the report will be submitted to the commissioning body, the Local Planning Authority and the North Yorkshire Historic Environment

Record within an agreed timetable and subject to any contractual requirements on confidentiality (see 8.1 below).

7.4 We will provide a digital copy of the report in PDF format to the North Yorkshire Historic Environment Record Office.

7.5 A Brief, interim report may be required shortly after the completion of fieldwork.

7.6 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.

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, the Yorkshire Museum is recommended. The recipient museum will be contacted at an early stage, before submission of the project design and before commencement of fieldwork.

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 1995.

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, a copy of which should be deposited with the NMR (Historic England). 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 Principle Archaeologist at North Yorkshire County Council 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.

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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.

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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.

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