

**WRITTEN SCHEME OF INVESTIGATION FOR
ARCHAEOLOGICAL EVALUATION**

**WYKEHAM QUARRY
NORTH YORKSHIRE**

NGR SE 990 825

**Prepared by MAP Archaeological Consultancy Ltd
on behalf of Andrew Josephs**

WYKEHAM QUARRY NORTH YORKSHIRE

NGR SE 990 825

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

1. Summary

1.1 The Proposed Quarry Extension comprises of two areas, the northern area measures c.25ha and the southern 27.5ha. This Written Scheme of Investigation has been prepared by MAP Archaeological Consultancy Ltd in advance of a Planning Application to evaluate the archaeological deposits by pre-determination Fieldwalking, Geophysical Survey and Trial Trenching.

1.2 Accordingly, the Heritage and Environment Section of NYCC has advised the Local Planning Authority that a scheme of archaeological evaluation is undertaken at the site. The aim of this work is to establish the nature, location, extent and state of preservation of archaeological remains within the development area. The results of this work will enable the archaeological impact of the development to be fully appreciated and an appropriate design mitigation, and/or further archaeological work, to be agreed to preserve archaeological deposits either *in situ*, or by record. This scheme of investigation has been prepared to define the scope of this Archaeological Evaluation by MAP Archaeological Consultancy Ltd, acting on behalf of Andrew Josephs for Hanson Ltd.

2. Purpose

2.1 This written scheme of investigation represents a summary of the broad archaeological requirements to enable an assessment of the impact of development proposals upon the archaeological resource. This is in accordance with policies within the Scarborough Borough

Local Plan and the guidance of Planning Policy Guidance note 16 on *Archaeology and Planning*, 1990.

3. Location and Description (centred at NGR SE 990 825)

- 3.1 The extent of the application area is indicated on a site location plan (Fig. 1). The proposed development comprises of one area to the north of the existing quarry and one to the south.
- 3.2 The Proposed Development Areas are currently arable fields.
- 3.3 The site lies on soils of the Burlingham 2 Association (572o), which are "deep fine loamy soils with slowly permeable subsoils that are affected by seasonal waterlogging (SSEW 1983) over a solid geology of Kimmeridge clay (BGS 1998).

4. Historical and Archaeological Background

- 4.1 Excavation and fieldwork have demonstrated that at Star Carr, Flixton Carr and Seamer Carr. A Later Upper Palaeolithic and extensive Mesolithic landscape survives partially buried beneath accumulated peat deposits. All of these sites were located along the former shoreline of the lake close to the 24m to 25m OD subsurface contour where dry land provided an excellent base from which to exploit the rich wetland resource of the swamps, carr and open water.
- 4.2 Records of stray Palaeolithic, Neolithic and Bronze Age finds within the Vale (Sites 18 to 24) indicate that the area supported a population throughout earlier prehistory and that occupation and settlement was not just confined to the Mesolithic period. The nomadic nature of this population, however, makes it difficult to identify their settlement or occupation sites although it is considered that camp-sites may have favoured the slightly elevated sand hills around the margins of the lakes.

- 4.3 Within 1km of the proposed extensions, cropmark evidence from aerial photography record several enclosure, field system and trackway complexes (Sites 2 - 7). These complexes appear to be concentrated on the higher ground associated with the Wykeham moraine and the higher glacial ridges extending into the Vale. They probably have their origins in the Iron Age and Roman period, but as excavations at Wykeham (Site 11) and Crossgates (Site 12) have demonstrated these sites could also incorporate Anglo-Saxon remains. Site 6 lies 250m north-east of the northern extension area and this may be part of a ladder settlement extending southwards along defined ridges of glacial deposits from more extensive ladder settlement running east to west along the northern edge of the Vale (Sites 3, 4, 5 and 9). The ridge on which Site 6 is situated is at 30.25m AOD.
- 4.4 The proposed extensions lie within the former township of West Ayton that formed part of the Manor of Hutton Bushel. There is no cartographic or documentary evidence to suggest any settlement within the proposed extensions during either the Medieval or post-Medieval periods. A Plan of the Manor of Hutton Bushel dated 1838 (NYCRO ZDS M 3/3) suggests the land was probably owned at this date by Lady Hewley's Trustees and shows the extensions being unenclosed. Some fields are shown to the west and east of the northern extension, but none near the southern extension. This suggests that the areas were marginal, boggy carr in the Medieval and post-Medieval periods, and prone to seasonal flooding. Desk-based assessment, geophysical survey, fieldwalking and auger surveys were undertaken during 2003 as part of an EIA for the currently permitted working area (which extends to 19ha).
- 4.5 The geophysical survey did not identify any definitive archaeological targets, but anomalies indicative of palaeochannels indicate that the technique was effective when using a 1m gradiometer. Fieldwalking

recovered two flint artefacts at about 26.60m AOD: an end scraper and a serrated edge blade. Both implements could be found in later Mesolithic assemblages but an early to middle Neolithic date was considered most probable. The results of the auger survey showed that the deposits at Wykeham are very different from those at the eastern end of the Vale, and that the site was periodically covered by deep water associated with a former lake. No areas of outcropping gravels were identified and there were no thick deposits of post-glacial peat. The assessment showed that the deposit was laid down in varying depths of open water between about 10,000 bc and 8,000 bc and that although the lake water level fluctuated, there were periods when it exceeded 26m OD, considerably higher than that recorded to the east around Seamer.

- 4.6 The results of the above evaluation techniques accurately predicted the findings of post-consent investigations. No archaeological features have yet been discovered, but the palaeoenvironmental work funded by Hanson has already made a significant contribution to the palaeoenvironmental reconstruction of the Vale providing a high-resolution record of environmental change, as summarised below.

- 4.7 Since consent Northern Archaeological Associates have been co-ordinating the recording of quarry sections as part of each phase of development in fulfillment of the planning conditions. This has involved a multi-disciplinary approach to sampling using a combination of sediment physical properties, assessment for pollen, plant and insect remains and C14 dating.

- 4.8 The depositional sequence reflects a complex sequence of palaeoenvironmental change during the later Late glacial into the early

Holocene. The work done to date clearly demonstrates that this is an important palaeoenvironmental site both regionally and nationally.

- 4.9 It commences with diamict/gravel deposition in association with deglaciation and meltwater discharge through the Forge Valley. This material could have been deposited in a lake or outwash fan.
- 4.10 The lower organic clays/peat above this layer indicates wetland conditions dating to the Windermere Interstadial (Zone II). In some parts of the quarry the preservation of these deposits has been excellent and is showing two bands of shallow organic sediments separated by a shallow layer of silts. They indicate marginal lake deposits with the presence of fresh straps of *Phragmites* and plenty of seeds indicating that hydroseral development was occurring in Zone II. The pollen, plant and insect remains indicate warm climatic conditions much like today. This is probably the earliest hydroseral development sequence found in the Vale.
- 4.11 The overlying thick laminated clays date to the Loch Lomond Stadial (Zone III). They indicate deposition in standing water conditions, most likely a lake with a considerable extent and depth. These deposits were laid down in a periglacial environment over a period of about 1,000 years.
- 4.12 As the Loch Lomond Stadial came to an end, the deposits indicate that climatic warming led to the re-establishment of vegetation across the catchment with the formation of peat across the wetland. During this period lake levels fell and by the Mesolithic period this was an area of active river channel activity as the Derwent established itself across the floodplain. The river appears to have crossed the current quarry

several times, some of the ancient channels also being visible in both aerial photographs and the geophysical survey results.

4.13 Unfortunately, the post-glacial deposits within the current quarry have been heavily eroded through the effects of drainage and agriculture and only survive as a fragmentary, very thin layer overlying the Late-glacial deposit.

4.14 **Assessment of topography and archaeological potential**

The results of desk-based research and field-based investigations within the currently permitted quarry provide a useful model for predicting zones of archaeological potential within the proposed extensions.

Earlier prehistoric remains

4.15 The proposed extensions lies within the former Lake Pickering, although (unlike at the eastern end of the Vale) within an area where the depth of water did not remain static. Within the eastern end of the Vale, Late Palaeolithic and Mesolithic sites have been located on slightly elevated areas of dry land along the former shoreline of the lake marked roughly by the 25m OD contour. During investigations in the Vale this contour has been used as a means of successfully predicting the likely location of settlement during these periods. Within the current quarry the site has been covered by a Late-glacial deposit of clay and silt reaching an OD height in excess of 26m.

4.16 Thus, although it is difficult to draw conclusions at this stage about where the exact shoreline of the lake lay with respect to the proposed extensions during both the Late Palaeolithic and early Mesolithic periods, it can be stated with some confidence that the potential for preserved archaeological sites will lie above 26m AOD. Some

artefacts of the period may be found in the ploughsoil at lower levels AOD.

- 4.17 All but c.3ha of the northern extension lie above 26m AOD suggesting that the potential for earlier prehistoric archaeology in this area is high. The area rises gently from 25.62m in the south to 27.60m on the northern boundary and similar heights to the north-east boundary. Within the northern area the land is gently undulating and a high point of 27.95m is reached towards the northern boundary. The southern extension is almost flat with less than c.1.5m difference in elevation across the whole area. The highest point is 25.72m on the north-eastern boundary; the lowest 24.30m on the western boundary. As all land lies below the 26m contour, the potential for earlier prehistoric archaeological sites is considered very low.
- 4.18 It is conceivable, although investigations in the current quarry suggest it is extremely unlikely, that during the Later Upper Palaeolithic water levels of the lake may have been low enough for there to have been a dry shoreline along the interface between the mineral deposit and the basal moss peats around the 23.5m to 24.5m OD contour. Such a shoreline might have been attractive for Late Palaeolithic occupation, although given the amount of re-working and erosion this surface has been degraded during the period of deposition of the later clay and silt. The potential for extensive archaeological remains to have survived on this surface is extremely limited and unlikely to be located by evaluation techniques.
- 4.19 Later Mesolithic, Neolithic or Bronze Age remains could be located close to the interface between the late-glacial silt and the early post-glacial deposits which averages 25.25m AOD in the current quarry, although the surface of the late-glacial deposits above the water

margin probably remained waterlogged making access either for temporary occupation or exploitation at best seasonal. These layers within the current quarry have been shown to be degraded through drainage and agriculture, and it is likely that this will be repeated within the proposed extensions.

4.20 The whole of the northern extension therefore has potential to contain sites of these periods, and in the higher parts of the area these may be less disturbed by ploughing and drainage and could be well preserved.

4.21 The southern area lies right on the topographical limit for later Mesolithic, Neolithic or Bronze Age remains, and the interface at which archaeology could be found would most probably now lie within the ploughzone. Given the location of this area in the heart of the former lake it is extremely likely that it would have remained boggy and unattractive in comparison to drier and better drained land nearby.

Later prehistoric, Roman and post-Roman remains

4.22 Although there is extensive evidence within the broader area for later prehistoric, Roman and post-Roman settlements and agriculture, such sites are located on the higher glacial moraines to the north, west and east. The proposed extension areas are lower lying and would have been boggy carr land until at least the post-medieval.

4.23 However, 250m north-east of the proposed northern extension, a cropmark site suggestive of an Iron Age/Romano-British ladder settlement has been identified. This is located above the 30m contour and provides a useful pointer to the height at which later prehistoric, Roman and post-Roman archaeology may be sited.

4.24 The northern extension is therefore considered unlikely to contain settlement remains of these periods, although it is possible that field systems associated with the settlement to the north east may have extended southwards onto the lower ground and within the proposed extension.

4.25 It is considered extremely unlikely that any archaeology from this period will be found in the southern extension.

5. Objectives

5.1 The objectives of the archaeological evaluation work within the proposed development area are:

1. Fieldwalking of both areas to locate any finds that may indicate the presence of prehistoric activity on the site.
2. Geophysical Survey to provide areas for Trial Trenching
3. to determine by means of trial trenching, the nature, depth, extent and state of preservation of any archaeological deposits to be affected by the development proposals. Trial trench(es) of sufficient size and depth to provide this information will be excavated, and archaeological and palaeoenvironmental deposits will be explicitly related to depths below existing surface and actual heights in relation to Ordnance Datum.
4. to prepare a report summarising the results of the work and assessing the archaeological implications of proposed development,
5. to prepare and submit a suitable archive to the appropriate museum.

6. Access, Safety and Monitoring

- 6.1 Access to the site will be arranged through the commissioning body.
- 6.2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled.
- 6.3 The project will be monitored by the Senior Archaeologist, North Yorkshire County Council, to whom written documentation should be sent before the start of the Evaluation confirming: a) the date of commencement, b) the names of all finds and archaeological science specialists likely to be used in the evaluation, and c) notification to the proposed archive repository of the nature of the works and opportunity to monitor the works.
- 6.4 Where appropriate, the advice of the Regional Archaeological Science Advisor for Archaeological Science (Yorkshire & The Humber region) at English Heritage will be called upon.
- 6.5 It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows:
1. a preliminary meeting or discussion at the commencement of the contract to agree the locations of the proposed trial trenches.
 2. progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed.
 3. a meeting during the post-fieldwork phase to discuss the draft report and archive before completion.
- 6.6 It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Archaeologist,

North Yorkshire County Council and the commissioning body as soon as is practically possible.

7. Brief

- 7.1 Fieldwalking above 25m AOD in the southern area approximately 18ha consisting of 10m transects and recording and retrieving finds in the area. In the northern area 25ha consisting of 10m transects.
- 7.2 Geophysics – detailed magnetometry survey of the northern area (25ha).
- 7.3 Trenching/Test pitting. The number of trenches will be agreed with NYCC after the results of the auger survey and geophysics.
- 7.4 In case of query as to the extent of investigation, a site meeting shall be convened with the Senior Archaeologist, North Yorkshire County Council.
- 7.5 In the area of each trench, overburden such as crop, turf, topsoil, made ground, rubble or other superficial fill materials may be removed by machine using a back-acting excavator which should be fitted with a toothless or ditching bucket. Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil (C Horizon or soil parent material), whichever appears first. hand-excavation of all deposits will be necessary. Topsoil will be kept separate from subsoil or fill materials. The need for, and any methods of, reinstatement will be agreed with the commissioning body in advance of submission of tenders.
- 7.6 Once overburden/topsoil has been removed, the will be cleaned and assess any archaeological remains on the site. Using the information and artefacts collected to this stage, all features and deposits should

be assessed as to their origin or function, probable date, and importance for further recording. Features and layers identified as having potential for further recording should be excavated by hand, sampled, and recorded as set out below.

- 7.7 All deposits should be fully recorded on standard context sheets, photographs and conventionally scaled plans and sections. Each trench area should be recorded to show the horizontal and vertical distribution of contexts. Normally, all four sides of a trench should be recorded in section. Fewer sections can be recorded only if there is a substantial similarity of stratification across the trench. The elevation of the underlying natural subsoil where encountered will be recorded. The limits of excavation will be shown in all plans and sections, including where these limits are coterminous with context boundaries.
- 7.8 Should any human remains be encountered, these will be left *in situ* following the determination of the extent of the remains and grave cut(s).
- 7.9 Metal detecting, including the scanning of topsoil and spoil heaps, will only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved. All metal detection should be carried out following the Treasure Act 1996 Code of Practice.
- 7.10 Due attention will be paid to artefact retrieval and conservation, ancient technology, dating of deposits and the assessment of potential for the scientific analysis of soil, sediments, biological remains, ceramics and stone. All specialists (both those employed in-house and those sub-contracted) should be named in project documentation, their prior agreement obtained before the fieldwork commences and opportunity afforded for them to visit the fieldwork in progress.

- 7.11 Finds should be appropriately packaged and stored under optimum conditions, as detailed in *First Aid for Finds* (Watkinson & Neal, 1998).
- 7.12 The character, information content and stratigraphic relationships of features and deposits should be determined and a running section along the excavation area, from highest to lowest point, should be recorded to show the vertical distribution of layers. All linear features, such as ditches, should have their shape, character, and depth determined by hand excavation of sections. A minimum sample of 20% of each linear feature of less than 5m in length and a minimum sample of 10% of each linear feature greater than 5m in length (each section will be not less than 1m wide) should be excavated. All junctions of linear features should have their stratigraphic relationships determined, if necessary using box sections. A 100% sample of all stake-holes should be excavated, and all pits, post-holes and other discrete features should be half-sectioned by hand to record a minimum of 50% of their fills, and their shape. Any other unknown or enigmatic features should be investigated similarly. Large pits, post-holes or deposits of over 1.5m diameter should be excavated sufficiently to define their extent and to achieve the objectives of the investigation, but should not be less than 25%. All intersections should be investigated to determine the relationship(s) between features.
- 7.13 Scientific investigations should be undertaken in a manner consistent with the English Heritage best-practice guidelines (2003).
- 7.14 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (c. 10ml) should be collected for micro-slugs hammer-scale and spherical droplets). In these instances, the guidance of English Heritage (2001) and Jones (*ed* 2006) should be followed.
- 7.15 Samples should be collected for scientific dating (radiocarbon, dendrochronology, luminescence dating, archaeomagnetism and/or

other techniques as appropriate), following an outline strategy presented to the Senior Archaeologist, NYCC.

- 7.16 Where appropriate, buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Samples may be collected for analysis of chemistry, magnetic susceptibility, particle size, micromorphology and/or other techniques as appropriate, following an outline strategy presented to the Senior Archaeologist, NYCC, and in consultation with the geoarchaeologist. The guidance of English Heritage (2007) *Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record*: should be followed.
- 7.17 **Detailed Sampling Strategy to be supplied by Quest.**
- 7.18 **Detailed Sampling Strategy to be supplied by Quest.**
- 7.19 Coarse sieved samples for the recovery of animal bones and other artefact/ecofact categories should be 100 litres plus. Flotation samples, for the recovery of charred plant remains, charcoal, small animal bones and mineralised plant remains, should be between 40 and 60 litres in size, although this will be dependent upon the volume of the context. Entire contexts should be sampled if the volume is low. Whenever possible, coarse sieved samples (wet or dry) and flotation samples should be processed during fieldwork to allow the continuous reassessment and refinement of sampling strategies. Samples from waterlogged and anoxic deposits, which might contain plant macros and entomological evidence, taken for General Biological Analysis (GBA), should normally be 20 litres in size. The English Heritage guidance should be consulted for details of sample size for other specialist samples which may be required. Allowance should be made for a site visit from the contractor's environmental specialists/consultants where appropriate.

7.20 The specialists that MAP Archaeological Consultancy Ltd. use are as follows:

Conservation	Ian Panter	YAT	01904 612529
Prehistoric Pottery	Terry Manby		01430 873147
Roman Pottery	Paula Ware	MAP	01653 697752
Pre-conquest Pottery	Mark Stephens	MAP	01653 697752
Medieval Pottery	Mark Stephens	MAP	01653 697752
Post Medieval Pottery	Mark Stephens	MAP	01653 697752
Clay Tobacco Pipe	Mark Stephens	MAP	01653 697752
CBM	Anne Finney	MAP	01653 697752
Animal Bone	Anne Finney Jen Wooding WYAS	MAP	01653 697752
Small Finds	Hilary Cool		0116 981 9065
Leather	Ian Carlisle		
Textile	Penelope Walton Rogers	Textile Research in Archaeology	01904 634585
Slag/Hearths	Jerry McDonnell	Bradford University	01274 383 5131
Flint	Pete Makey		01377 253695
Environmental Sampling		Quest	01904 433873
Human Remains	Malin Holst	York Osteology Ltd	01904 737509

7.21 Upon completion of archaeological field recording work, an appropriate programme of analysis and publication of the results of the work should be completed. Post excavation assessment of material should be undertaken in accordance with the guidance of MAP2 (English Heritage, 1991).

7.22 Where appropriate, the advice of the English Heritage Regional Advisor for Archaeological Science, Yorkshire Region may be called upon to monitor the archaeological science components of the project.

8. Archive

8.1 A field archive should be compiled consisting of all primary written documents, plans, sections and photographs should be produced and cross-referenced. Archive deposition should be undertaken with reference to the County Council's *Guidelines on the Transfer and Deposition of Archaeological Archives*.

8.2 The archaeological contractor should liaise with an appropriate museum to establish the detailed requirements of the museum and discuss archive transfer in advance of fieldwork commencing. The relevant museum curator should be afforded to visit the site and discuss the project results. In this instance, the Malton Museum is suggested.

8.3 The archiving of any digital data arising from the project should be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson, 2000). The archaeological contractor should liaise with an appropriate digital archive repository to establish their requirements and discuss the transfer of the digital archive.

8.4 The archaeological contractor should also liaise with the HER Officer, North Yorkshire County Council, to make arrangements for digital information arising from the project to be submitted to the North

Yorkshire Historic Environment Record for HER enhancement purposes. The North Yorkshire HER is not an appropriate repository for digital archives arising from projects.

9. Report

- 9.1 A summary report shall be produced following the County Council's guidance on reporting: Reporting Check-List.
- 9.2 All excavated areas should be accurately mapped with respect to nearby buildings and roads.
- 9.3 At least five copies of the report should be produced and submitted to the commissioning body, North Yorkshire County Council Heritage Section HER, the Local Planning Authority, the museum accepting the archive and the English Heritage Regional Advisor for Archaeological Science.
- 9.4 Copyright in the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of an additional licence in favour of the museum accepting the archive and North Yorkshire County Council to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions.
- 9.5 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'. Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements, and ensure that any information disclosure issues are resolved before

completion of the work. Intellectual property rights are not affected by the EIR.

- 9.6 If the archaeological fieldwork produces results of sufficient significance to merit publication in their own right, allowance should be made for the preparation and publication of a summary in a local journal, such as the *Yorkshire Archaeological Journal*. This should comprise, as a minimum, a brief note on the results and a summary of the material held within the site archive, and its location.
- 9.7 Upon completion of the work, the archaeological contractor should make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (<http://ads.ahds.ac.uk/project/oasis/>). Submission of data to OASIS does not discharge the planning requirements for the archaeological contractor to notify the Senior Archaeologist, NYCC of the details of the work and to provide the Historic Environment Record (HER) with a report on the work.

10. References

- | | | |
|---|------|---|
| Association for Environmental Archaeology | 1995 | Environmental Archaeology and Archaeological Evaluations, Recommendations concerning the Environmental Archaeology component of Archaeological Evaluations in England. Working papers of the Association for Environmental Archaeology, Number 2. |
| British Geological Survey | 1998 | Scarborough. England and Wales Sheet 54. Solid and Drift Geology. 1:50000 Provisional Series. |
| Canti, M | 1996 | Guidelines for carrying out Assessments in Geoarchaeology, <i>Ancient Monuments Laboratory Report 34/96</i> , English Heritage. |
| English Heritage | 1991 | Management of Archaeological Projects. |

- | | | |
|------------------------------|------|--|
| English Heritage | 2001 | Archaeometallurgy: Centre for Archaeology Guidelines 2001/01
http://194.164.61.131/Filestore/archaeology/pdf/cfa_archaeometallurgy.pdf |
| English Heritage | 2002 | <u>Environmental Archaeology : A guide to the theory and practice of methods, from sampling and recovery to post-excavation [2002/01].</u>
http://194.164.61.131/Filestore/archaeology/pdf/enviroarch.pdf (5.93mb) |
| English Heritage | 2003 | Archaeological Science at PPG16 interventions: Best Practice Guidance for Curators and Commissioning Archaeologists
http://194.164.61.131/filestore/archaeology/pdf/briefs%20version%2022.pdf |
| English Heritage | 2007 | The guidance of English Heritage (2007) Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record |
| Institute for Archaeologists | 2001 | Standard and Guidance for Archaeological Excavation |
| Jones, DM (ed) | 2006 | Guidelines on the X-radiography of archaeological metalwork. English Heritage |
| SSEW | 1983 | Soils of England and Wales, Sheet 1: Northern England. |
| Watkinson, D & Neal, V | 1998 | First Aid for Finds (3 rd edition), RESCUE & the Archaeological Section of the United Kingdom Institute for conservation. |

11. Additional Information

This brief was completed on 16th July 2009 by:

Paula Ware
MAP Archaeological Consultancy Ltd
Showfield Lane
Malton
North Yorkshire
YO17 6BT

Tel: 01653 697752

Email: paulaware@map-arch-ltd.demon.co.uk