

Purdis Heath, Purdis Farm, Suffolk

Planning application: NA

HER Ref: PFM 018

Archaeological Evaluation Report

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(January 2011)

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Site details for HER

Name: Purdis Heath, Purdis Farm, Suffolk, IP3 8UE

Client: Butterfly Conservation (Suffolk)

Local planning authority: Suffolk Coastal DC

Planning application ref: NA

Development: Heath land restoration to encourage local butterfly species

Date of fieldwork: 21 December 2010

HER Ref: PFM 018

OASIS ref: johnnewm1_91061

Grid ref: TM 2106 4272

Environmental designation: Purdis Heath SSSI

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Summary: Purdis Farm, land to east of Purdis Avenue (PFM 018, TM 2106 4272) evaluation trenching for a proposed area of heath land restoration revealed one pit containing evidence of in situ burning. It is likely that this feature was created during World War II when the heaths to the east of Ipswich were used for military training and for the creation of decoys areas to mislead bombing raids (John Newman Archaeological Services for Butterfly Conservation- Suffolk).

1. Introduction & background

1.1 Butterfly Conservation (Suffolk) commissioned John Newman Archaeological Services (JNAS) to undertake the archaeological evaluation works on an area of proposed heath land restoration within an existing SSSI at Purdis Heath, Purdis Farm. The evaluation requirements (see Appendix II) were set by Ms S Poppy of the Suffolk CC Archaeological Service as while not requiring planning permission the proposed works will cause ground disturbance. This proposal for heath land restoration is designed to create a suitable habitat for the Silver Studded Blue butterfly which once thrived on the heaths to the east of Ipswich but which is now locally endangered as land has either been developed or invaded by gorse as the grazing and active management of heath land has declined.

1.2 Purdis Farm is a small civil parish to the east of Ipswich which, until urban growth in recent years, has been dominated by extensive areas of heath land and sheepwalk. The few historically recorded farm and cottage sites being close to the northern edge of Purdis Farm close to the Mill River, the only water source for some distance. The underlying glaciofluvial drift geology is made up of very free draining deep sands which have created the ideal base for the original creation of heath land once the post-glacial habitat was cleared by early farmers in the later Neolithic and Bronze Age some 4/5,000 years ago. Early farmers, whose burial mounds are dotted across the Sandling heaths of Suffolk, while requiring water sources for more permanent habitation would have used extensive areas of the cleared higher ground to run sheep in particular. Subsequent use of the area as sheepwalk until recent times discouraging the invasion of plants, such as gorse in particular, which will smother heath land. The site in question, which covers an area of some 1,500m², is close to 34m OD on generally flat ground some 600m south of the Mill River (see Fig. 1) and is to the north of the Purdis Farm late Saxon and medieval settlement, church and burial ground in the Murrills Road area (HER PFM 008). At the time of the evaluation the site had been cleared of gorse above ground though any roots had been left in situ pending the trial trenching.

2. Evaluation methodology

2.1 The proposed development area at the Purdis Heath site was trenched to a previously agreed plan with two trenches forming an inverted T with the main arm being 30m long and the cross trench 15m (see Figs. 1 & 2). In all 45m of trench at a width of 1.8m were mechanically excavated under close archaeological supervision using a wide, toothless, ditching bucket giving a sample of 81m², or some 5%, of the proposed area. In addition a close examination of the exposed surface and upcast spoil was maintained by a reptile specialist in case any hibernating individuals were revealed. The exposed, naturally occurring, drift geological yellow sand surface was closely examined for archaeological features and any indistinct areas were hand cleaned. The upcast spoil from the trench was examined visually and the single exposed archaeological feature (see Fig. 2) was trowelled clean before being sectioned using a trowel and spade. Site visibility for features and finds is considered to have been good throughout the evaluation with the weather conditions being cold but clear. The trench was recorded in relation to existing mapped details. A full photographic record in digital format was taken of the trenching works (see Appendix I).

3. Results

3.1 Across the area trenched the trenching revealed a 500mm deep soil section made up of 100mm of gorse litter above 300mm of a dark brown sandy topsoil which in turn lay over 100mm of an iron stained yellow sand typical of a podsolised heath land profile. This basal podsolised component to the soil profile was mechanically removed as it can obscure cut archaeological features. The only feature revealed was a shallow pit (0002) located towards the northern end of the main arm of the trenching and which was clearly visible as the shallow topsoil was removed. This pit (see Fig. 2) had a diameter of 1.20m and was 250mm deep and it contained a fill (0003) comprising a very dark brown/black sand containing numerous charcoal fragments which were in a very fresh, compact, condition. Around the edges of this pit the naturally occurring yellow sand exhibited distinct signs of reddening indicative of burning in situ when the feature was open. No finds were recovered from the feature.

4. Conclusion

4.1 The low density of archaeological features and lack of finds from the evaluation is typical of heath land areas as past land use has typically been at a low intensity and largely involving little ground disturbance. While the single feature revealed (0002) contained no dateable finds a relatively recent origin seems likely as the charcoal fragments within the fill (0003) were in a fresh, compact condition and the pit was visible as the topsoil was removed. A relatively recent origin is also supported by background knowledge relating to the use of the heath areas to the east of Ipswich as they were utilised in World War II as military training zones and for the lighting of decoy fires to mislead bombing raids; either of which would present a likely interpretation for the presence of a pit with evidence of in situ burning.

4.3 Based on the evaluation results it can be concluded that this area of heath land restoration has a low archaeological potential with only occasional features of probable recent date. It should also be noted that apart from possible removal of isolated gorse roots the works planned for the heath land restoration to encourage breeding by the Silver Studded Blue butterfly will only affect the upper c250mm of the soil profile.

Archive- to be deposited with the Suffolk CC Archaeological Service under the HER ref. PFM 018.

Disclaimer- any opinions regarding the need for further archaeological in relation to this proposed development are those of the author's alone. Formal comment regarding the need for further work must be sought from the Conservation Team within the Archaeological Service at Suffolk CC .

(Acknowledgements: JNAS is grateful to Julian Dowding & Matt Berry for their assistance on site and to Rob Parker for his close liaison regarding arrangements for the evaluation).

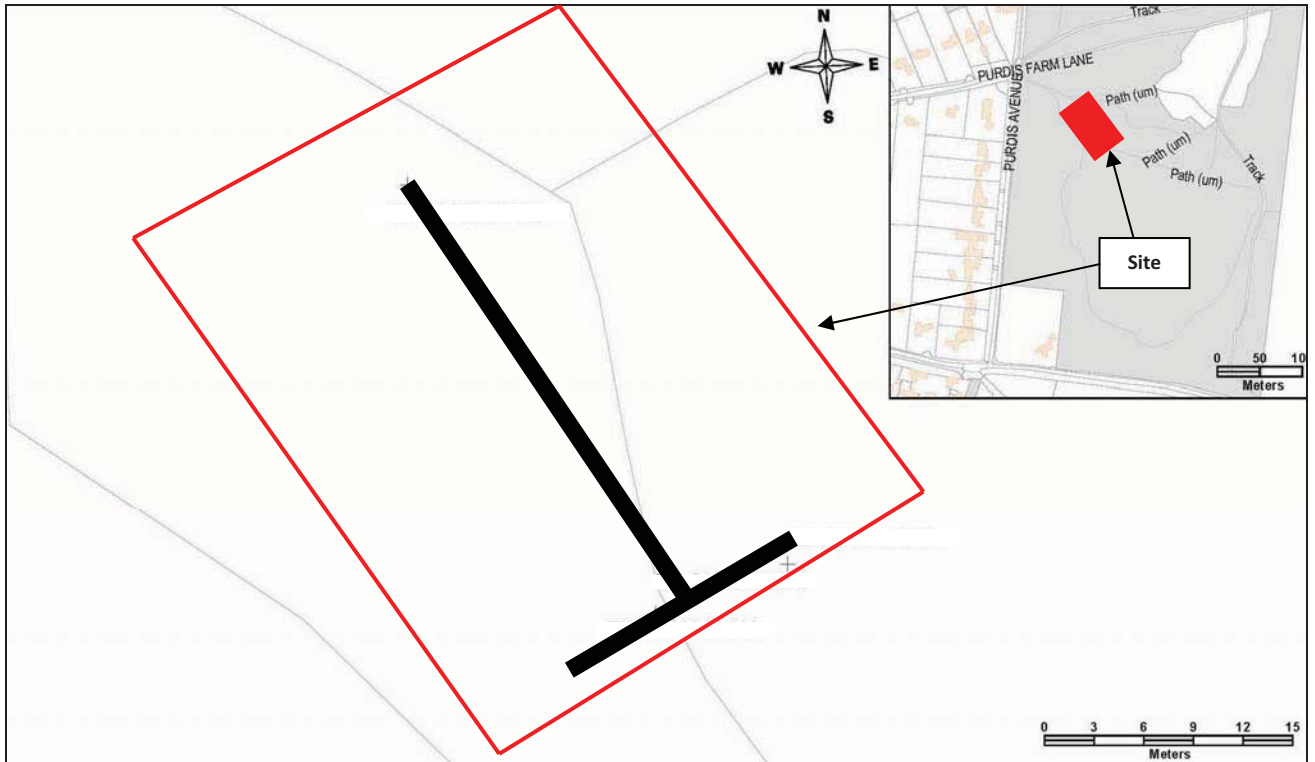


Fig. 1: Site location (Ordnance Survey © Crown copyright 2010. All rights reserved
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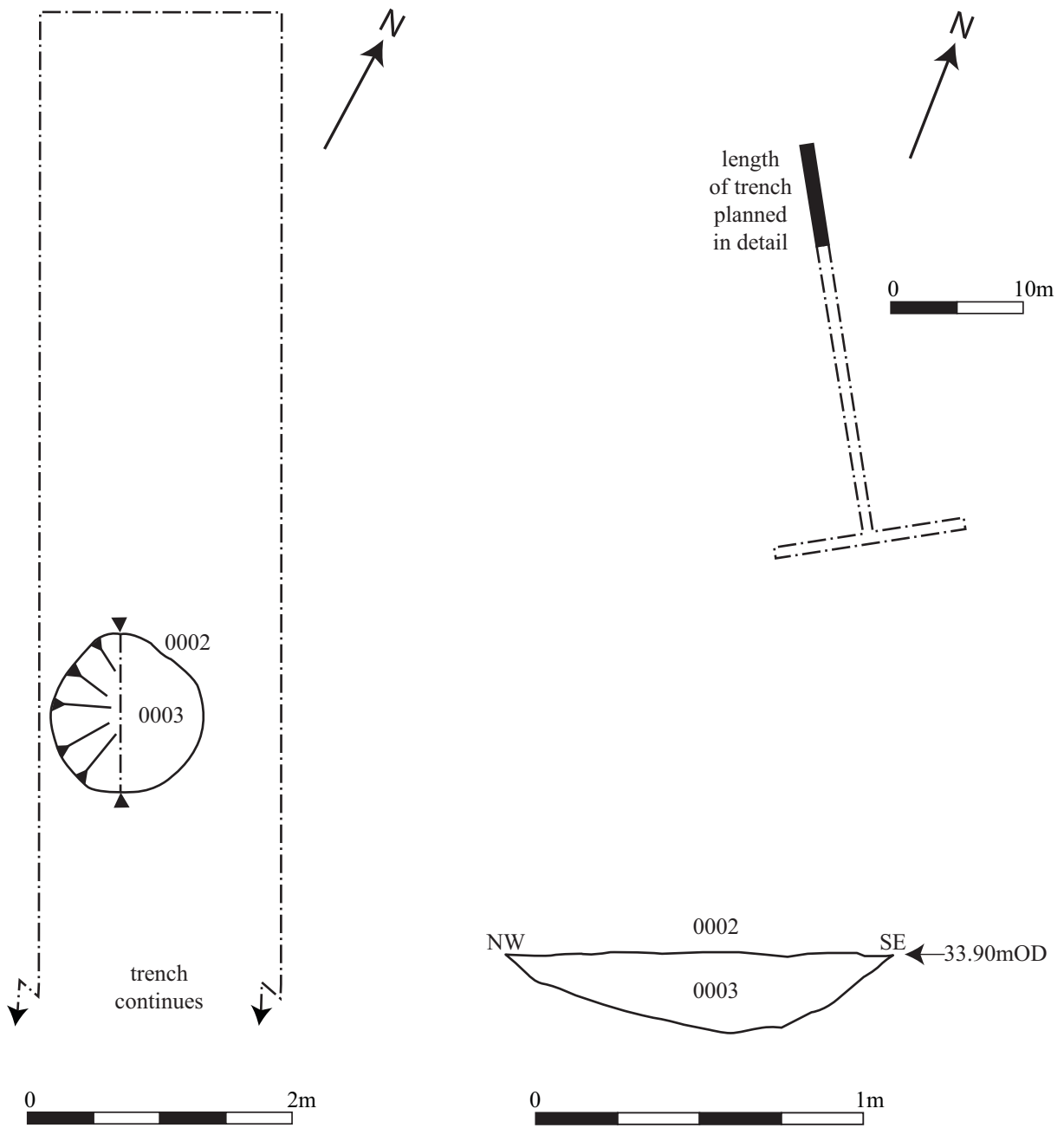


Fig. 2. Trench plans and section.

Appendix I- Images



Main trench from north- pit 0002 in mid distance



Pit 0002 from west



Pit 0002, detail of section & burnt edge



Shorter cross trench from east

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Brief and Specification for an Archaeological Evaluation

HEATHLAND RESTORATION, PURDIS HEATH SSSI, PURDIS FARM, SUFFOLK

This is the brief for the first part of a programme of archaeological work. There is likely to be a requirement for additional work, this will be the subject of another brief.

The commissioning body should be aware that it may have Health & Safety and other responsibilities.

1. Background

- 1.1 Proposals for heathland restoration at Purdis Heath (TM 2106 4272) have been submitted to Natural England by Butterfly Conservation, in part involving scrapping the nutrient rich upper soil layers. **Please contact the applicant for an accurate plan of the site.**
- 1.2 The applicant has been advised that the location of the proposed groundworks could affect important heritage assets with archaeological interest. The applicant should be required to undertake an archaeological assessment of the area to inform the proposals, in particular:
 - to evaluate the proposal area under full archaeological supervision;
 - to excavate and record any archaeological remains encountered; and
 - to provide an understanding of the density and depth of any archaeological features in order to inform the applicant and the Conservation Team of Suffolk County Council Archaeological Service.
- 1.3 The site (c.0.1ha. in area) is located in Purdis Heath SSSI, on the north side of Bucklesham Road at c. 34.00m OD. The underlying glaciofluvial drift geology of the site comprises deep sand.
- 1.4 This application lies in an area of archaeological interest, recorded in the County Historic Environment Record, to the north of Purdis Farm late Saxon and medieval settlement, church and burial ground (HER no. PFM 008). Moreover the area has not been subject to systematic archaeological investigation. The proposed works will cause significant ground disturbance that has potential to damage any archaeological deposit that exists.
- 1.5 In order to inform the archaeological mitigation strategy, the following work will be required:
 - A linear trenched evaluation of the area of soil scrapping.
- 1.6 The results of this evaluation will enable the archaeological resource, both in quality and extent, to be accurately quantified. Decisions on the need for and scope of any mitigation measures, should there be any archaeological finds of significance, will be based upon the results of the evaluation and will be the subject of an additional specification.
- 1.7 All arrangements for the field evaluation of the site, the timing of the work, access to the site, the definition of the precise area of landholding and area for proposed development are to be defined and negotiated with the commissioning body.

- 1.8 Detailed standards, information and advice to supplement this brief are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003.
- 1.9 In accordance with the standards and guidance produced by the Institute for Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (9–10 The Churchyard, Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory. The WSI will provide the basis for measurable standards and will be used to satisfy the requirements of the planning condition.
- 1.10 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit which exists; proposals for sampling should be discussed with the Conservation Team of the Archaeological Service of SCC (SCCAS/CT) before execution.
- 1.11 The responsibility for identifying any constraints on field-work, e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c., ecological considerations rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such constraints or imply that the target area is freely available.
- 1.12 Any changes to the specifications that the project archaeologist may wish to make after approval by this office should be communicated directly to SCCAS/CT and the client for approval.

2. Brief for the Archaeological Evaluation

- 2.1 Establish whether any archaeological deposit exists in the area, with particular regard to any which are of sufficient importance to merit preservation *in situ*.
- 2.2 Identify the date, approximate form and purpose of any archaeological deposit within the application area, together with its likely extent, localised depth and quality of preservation.
- 2.3 Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- 2.4 Establish the potential for the survival of environmental evidence.
- 2.5 Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.
- 2.6 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), all stages will follow a process of assessment and justification before proceeding to the next phase of the project. Field evaluation is to be followed by the preparation of a full archive, and an assessment of potential. Any further excavation required as mitigation is to be followed by the preparation of a full archive, and an assessment of potential, analysis and final report preparation may follow.

Each stage will be the subject of a further brief and updated project design; this document covers only the evaluation stage.

- 2.7 The developer or his archaeologist will give SCCAS/CT (address as above) five working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored.
- 2.8 If the approved evaluation design is not carried through in its entirety (particularly in the instance of trenching being incomplete) the evaluation report may be rejected. Alternatively the presence of an archaeological deposit may be presumed, and untested areas included on this basis when defining the final mitigation strategy.
- 2.9 An outline specification, which defines certain minimum criteria, is set out below.

3. Specification: Trenched Evaluation

- 3.1 The following trenched evaluation is required:
- Two linear trenches, measuring 30m and 10m in length respectively, are to be excavated across the footprint of the proposed soil scrape.
- 3.2 If excavation is mechanised a toothless 'ditching bucket' at least 1.20m wide must be used. A scale plan showing the proposed locations of the trial trenches should be included in the WSI and the detailed trench design must be approved by SCCAS/CT before field work begins.
- 3.3 The topsoil may be mechanically removed using an appropriate machine with a back-acting arm and fitted with a toothless bucket, down to the interface layer between topsoil and subsoil or other visible archaeological surface. All machine excavation is to be under the direct control and supervision of an archaeologist. The topsoil should be examined for archaeological material.
- 3.4 The top of the first archaeological deposit may be cleared by machine, but must then be cleaned off by hand. There is a presumption that excavation of all archaeological deposits will be done by hand unless it can be shown there will not be a loss of evidence by using a machine. The decision as to the proper method of excavation will be made by the senior project archaeologist with regard to the nature of the deposit.
- 3.5 In all evaluation excavation there is a presumption of the need to cause the minimum disturbance to the site consistent with adequate evaluation; that significant archaeological features, e.g. solid or bonded structural remains, building slots or post-holes, should be preserved intact even if fills are sampled. For guidance:
- For linear features, 1.00m wide slots (min.) should be excavated across their width;
- For discrete features, such as pits, 50% of their fills should be sampled (in some instances 100% may be requested).
- 3.6 There must be sufficient excavation to give clear evidence for the period, depth and nature of any archaeological deposit. The depth and nature of colluvial or other masking deposits must be established across the site.
- 3.7 Archaeological contexts should, where possible, be sampled for palaeoenvironmental remains. Best practice should allow for sampling of interpretable and datable archaeological deposits and provision should be made for this. The contractor shall show what provision has been made for environmental assessment of the site and must provide details of the sampling strategies for retrieving artefacts, biological remains (for palaeoenvironmental and palaeoeconomic investigations), and samples of sediments and/or soils (for

micromorphological and other pedological/sedimentological analyses. Advice on the appropriateness of the proposed strategies will be sought from Helen Chappell, English Heritage Regional Adviser for Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*) is available for viewing from SCCAS.

- 3.8 Any natural subsoil surface revealed should be hand cleaned and examined for archaeological deposits and artefacts. Sample excavation of any archaeological features revealed may be necessary in order to gauge their date and character.
- 3.9 Metal detector searches must take place at all stages of the excavation by an experienced metal detector user.
- 3.10 All finds will be collected and processed (unless variations in this principle are agreed SCCAS/CT during the course of the evaluation).
- 3.11 Human remains must be left *in situ* except in those cases where damage or desecration are to be expected, or in the event that analysis of the remains is shown to be a requirement of satisfactory evaluation of the site. However, the excavator should be aware of, and comply with, the provisions of Section 25 of the Burial Act 1857.
- 3.12 Plans of any archaeological features on the site are to be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. All levels should relate to Ordnance Datum. Any variations from this must be agreed with SCCAS/CT.
- 3.13 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies and/or high resolution digital images.
- 3.14 Topsoil, subsoil and archaeological deposit to be kept separate during excavation to allow sequential backfilling of excavations.
- 3.15 Trenches should not be backfilled without the approval of SCCAS/CT. Suitable arrangements should be made with the client to ensure trenches are appropriately backfilled, compacted and consolidated in order to prevent subsequent subsidence.

4. General Management

- 4.1 A timetable for all stages of the project must be agreed before the first stage of work commences, including monitoring by SCCAS/CT. The archaeological contractor will give not less than five days written notice of the commencement of the work so that arrangements for monitoring the project can be made.
- 4.2 The composition of the archaeology contractor staff must be detailed and agreed by this office, including any subcontractors/specialists. For the site director and other staff likely to have a major responsibility for the post-excavation processing of this evaluation there must also be a statement of their responsibilities or a CV for post-excavation work on other archaeological sites and publication record. Ceramic specialists, in particular, must have relevant experience from this region, including knowledge of local ceramic sequences.
- 4.3 It is the archaeological contractor's responsibility to ensure that adequate resources are available to fulfill the Brief.
- 4.4 A detailed risk assessment must be provided for this particular site.
- 4.5 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.

- 4.6 The Institute for Archaeologists' *Standard and Guidance for archaeological field evaluation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

5. Report Requirements

- 5.1 An archive of all records and finds must be prepared consistent with the principles of English Heritage's *Management of Archaeological Projects*, 1991 (particularly Appendix 3.1 and Appendix 4.1).
- 5.2 The report should reflect the aims of the WSI.
- 5.3 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 5.4 An opinion as to the necessity for further evaluation and its scope may be given. No further site work should be embarked upon until the primary fieldwork results are assessed and the need for further work is established.
- 5.5 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 5.6 The Report must include a discussion and an assessment of the archaeological evidence, including an assessment of palaeoenvironmental remains recovered from palaeosols and cut features. Its conclusions must include a clear statement of the archaeological potential of the site, and the significance of that potential in the context of the Regional Research Framework (*East Anglian Archaeology*, Occasional Papers 3 & 8, 1997 and 2000).
- 5.7 The results of the surveys should be related to the relevant known archaeological information held in the County Historic Environment Record (HER).
- 5.8 A copy of the Specification should be included as an appendix to the report.
- 5.9 The project manager must consult the County HER Officer (Dr Colin Pendleton) to obtain a HER number for the work. This number will be unique for each project or site and must be clearly marked on any documentation relating to the work.
- 5.10 Finds must be appropriately conserved and stored in accordance with *UK Institute of Conservators Guidelines*.
- 5.11 Every effort must be made to get the agreement of the landowner/developer to the deposition of the full site archive, and transfer of title, with the intended archive depository before the fieldwork commences. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, scientific analysis) as appropriate.
- 5.12 If the County Store is not the intended depository, the project manager should ensure that a duplicate copy of the written archive is deposited with the County HER.
- 5.13 The project manager should consult the intended archive depository before the archive is prepared regarding the specific requirements for the archive deposition and curation, and regarding any specific cost implications of deposition. The intended depository should be stated in the WSI, for approval. The intended depository must be prepared to accept the entire archive resulting from the project (both finds and written archive) in order to create a complete record of the project.

- 5.14 If the County Store is the intended location of the archive, the project manager should consult the SCCAS Archive Guidelines 2010 and also the County Historic Environment Record Officer regarding the requirements for the deposition of the archive (conservation, ordering, organisation, labelling, marking and storage) of excavated material and the archive. A clear statement of the form, intended content, and standards of the archive is to be submitted for approval as an essential requirement of the WSI.
- 5.15 The WSI should state proposals for the deposition of the digital archive relating to this project with the Archaeology Data Service (ADS), and allowance should be made for costs incurred to ensure the proper deposition (<http://ads.ahds.ac.uk/project/policy.html>) with ADS or another appropriate archive depository.
- 5.16 Where positive conclusions are drawn from a project (whether it be evaluation or excavation) a summary report, in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the *Proceedings of the Suffolk Institute for Archaeology*, must be prepared. It should be included in the project report, or submitted to SCCAS/CT, by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.
- 5.17 An unbound hardcopy of the evaluation report, clearly marked DRAFT, must be presented to SCCAS/CT for approval within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.
- Following acceptance, two hard copies of the report should be submitted to SCCAS/CT together with a digital .pdf version.
- 5.18 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County HER. AutoCAD files should be also exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.
- 5.19 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 5.20 All parts of the OASIS online form must be completed for submission to the County HER, and a copy should be included with the draft report for approval. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

Specification by: Sarah Poppy

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9-10 The Churchyard, Shire Hall
Bury St Edmunds
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Tel: 01284 352199
Email: sarah.poppy@suffolk.gov.uk

Date: 2 December 2010

Reference: / Purdis Heath_2010

This brief and specification remains valid for six months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.