

ARCHAEOLOGICAL MONITORING REPORT

Small Diameter Bomb Maintenance and Storage LKH 272 and 275

A REPORT ON THE ARCHAEOLOGICAL MONITORING, 2007
(Planning app. no. F/2005/0951/GOV)

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Summary

Archaeological monitoring during the construction of Small Diameter Bomb Maintenance and Storage Facilities on the airfield at RAF Lakenheath identified two undated possible ditches. There were no finds recovered. Further evidence for the variations in the character of the landscape from sand dunes and hollows on the west side of the airfield to flatter, low lying heathland on the east side of the airfield was also identified.

SMR information

Planning application no.	F/2005/0951/GOV
Date of fieldwork:	January-May 2007
Grid Reference:	LKH 272 – TL 7293 8163; LKH 275 – 7425 8177
Funding body:	MOD Defence Estates USF
Oasis reference.	Suffolkc1-29015

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Introduction

Archaeological monitoring was undertaken during the construction of new facilities for Small Diameter Bomb maintenance and storage at RAF Lakenheath. The archaeological work was required as a condition on planning application F/2005/0951/GOV and carried out to a Brief and Specification issued by Jude Plouviez (Suffolk County Council, Archaeological Service, Conservation Team). The work took place in two different locations within the airfield, and each was issued its own site code; LKH 272 and LKH 275 (Fig. 1). The majority of the construction took place at LKH 272 on the north-western edge of the airfield, centred on grid ref: TL 7293 8163 on a south-facing grassy slope, between 10m and 15m OD. It is known from previous work and historical evidence that this slope has been altered and disturbed during previous airfield construction activity, but the extent of this is not defined. There are a number of existing bomb igloos and associated roads within this area and recent monitoring of improvements to the road network in preparation for this work identified scattered undated ditches across the area (LKH 266, Caruth 2006b). A second smaller area of work, LKH 275, took place at grid ref: TL 7425 8177, in a low-lying, c.8m OD flat area of the airfield, near where recent archaeological monitoring (LKH 246 and LKH 291, Caruth 2006a and Craven 2004) has demonstrated the presence of heath and fen deposits, but little evidence of archaeological activity. The area of the new extension was already under a concrete surface.

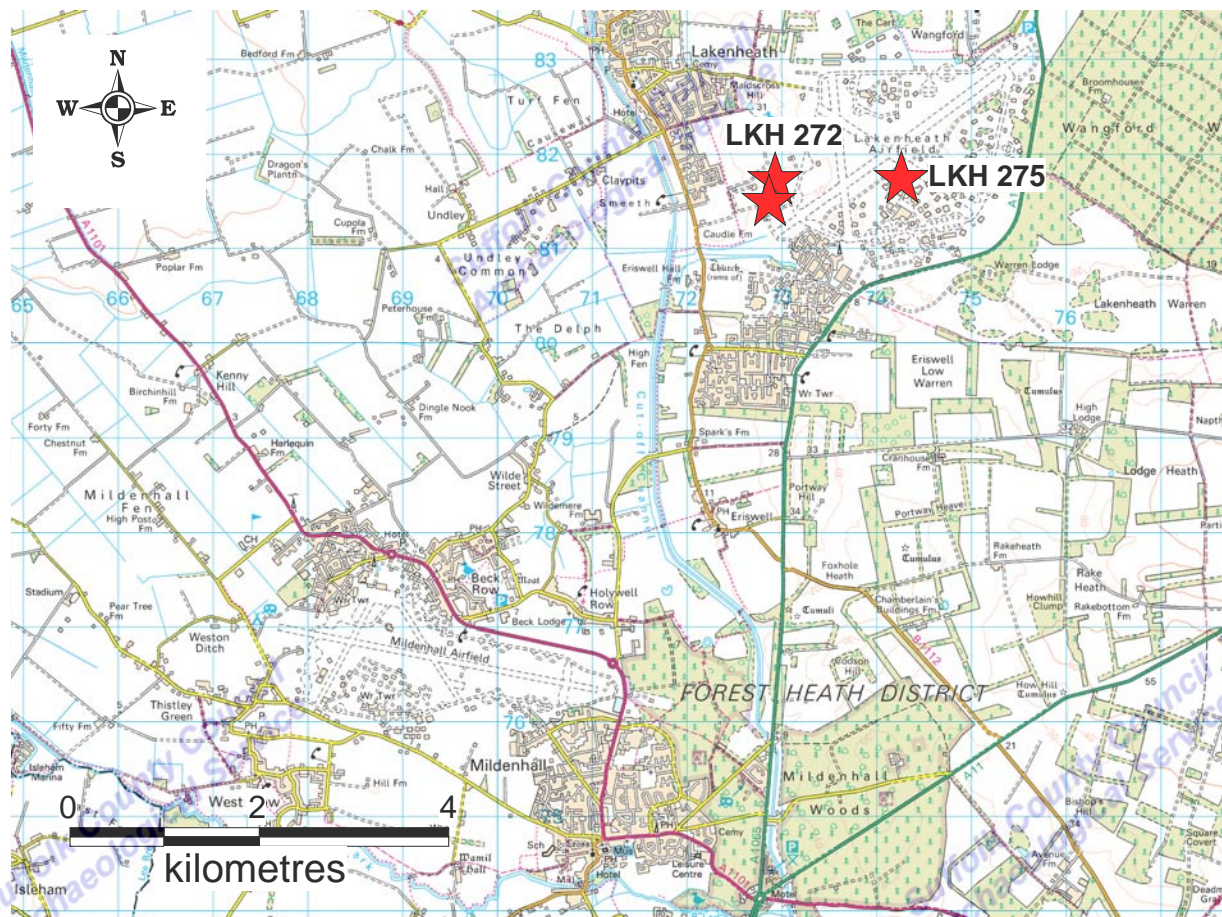


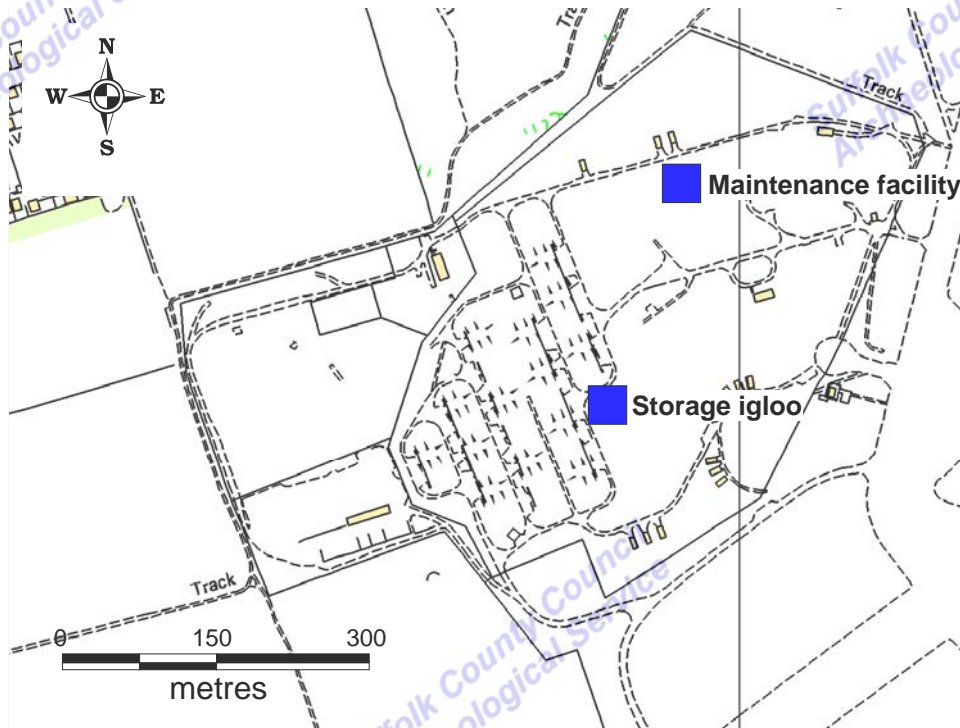
Figure 1. Site location

Methodology

Seven visits were made during the construction work, five to the area of LKH 272 and two to LKH 275. Most took place during January 2007 and a final visit in May 2007 to examine service trenches for the new maintenance

building. The topsoil strip and trenches for the storage igloo were observed during and after excavation, the service trenches were seen only after they had been excavated.

Site notes were made during visits, but as nothing of archaeological interest was seen further recording was not undertaken. No photographs were taken as the main site, LKH 272, lay within a secure area where the taking of photographs is forbidden.



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Figure 2. LKH 272, location of storage igloo and maintenance facility

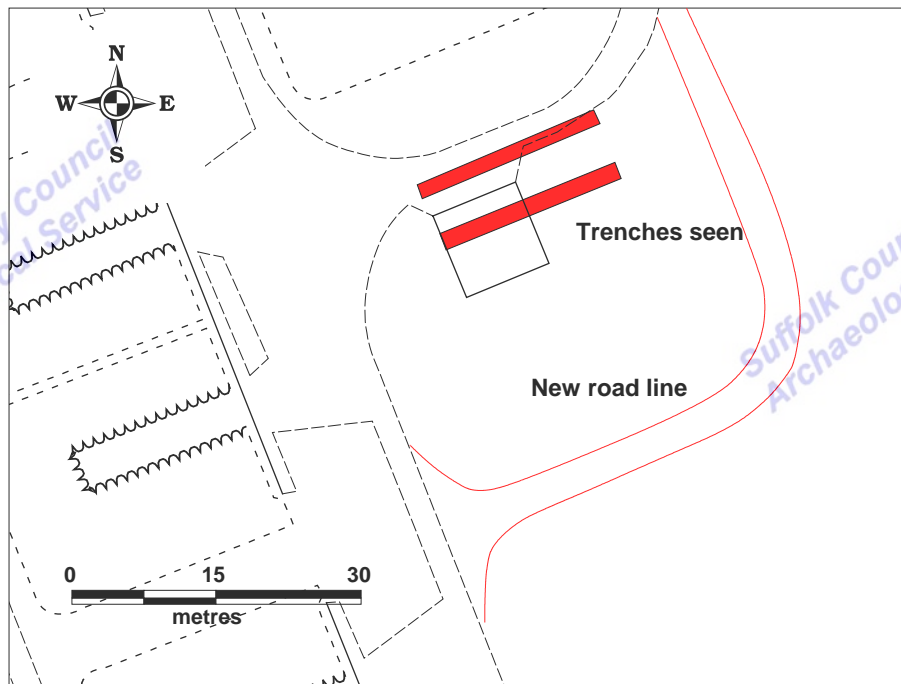
Results

LKH 272 Bomb storage igloo and maintenance facility

The work in this area involved the construction of a small diameter bomb storage igloo and a maintenance facility (Fig. 2) on the north side of the runway.

Igloo

This was monitored during January 2007 and the initial stripping for the igloo and associated road and two 1.2m deep x 1.2m wide construction trenches for the igloo were seen (Fig. 3). No archaeological features or finds were present but a soil profile of 0.4m of modern deposits over buried topsoil c. 0.15m deep over an irregular layer of red-brown sand subsoil, which lay onto natural chalk at c. 0.8m from the present ground surface, was recorded.

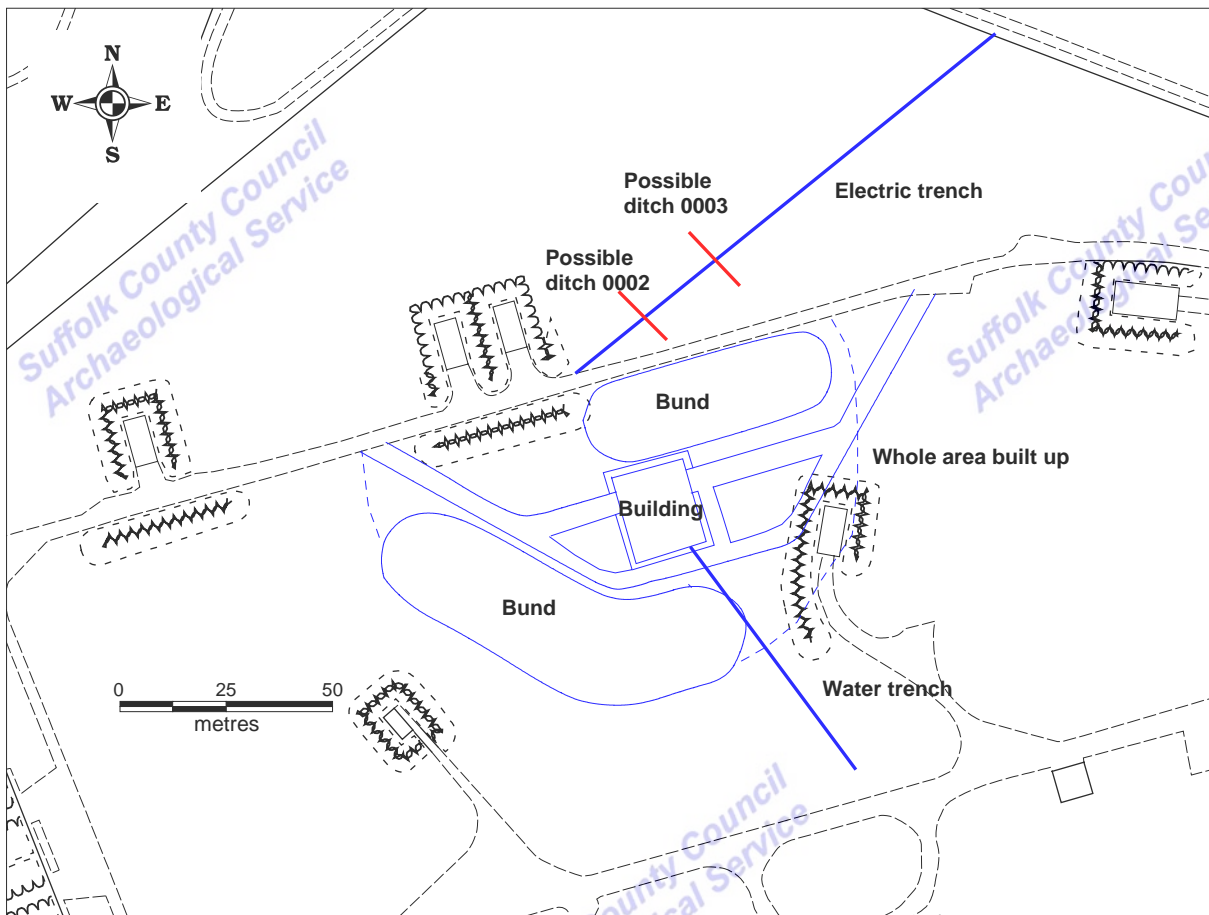


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Figure 3. LKH 272, storage igloo detail

Maintenance Building

This consisted of a building with associated bunds, and service trenches. An extensive area was seen after the initial site strip where up to 0.2m of turf and topsoil was removed, revealing mainly clean natural yellow sand, with no sign of archaeological features. Nearly all of this area was built-up from the stripped level during construction and many of the trenches seen during a subsequent visit in May were dug into recently deposited ground. A trench for an electric cable running for c.125m from the building was observed after it was excavated (Fig. 4). This showed two possible ditches, but neither was well enough defined to be certain (Fig. 5). Otherwise the soil profile showed an undulating surface to the natural yellow sand at between 0.4m and greater than 1.4m, suggestive of the natural topography of sand dunes and hollows. This was sealed by a thin dark band, probably indicating buried topsoil, under a variable depth of pink-brown deflated (coarse sand from which the finer particles have been redeposited by windblow) sand, under a more recent topsoil of brown sand. The details of the trench are contained in the table below. A further trench for the water supply was seen travelling south from the maintenance building. The northern 30m were cut entirely through ground made-up during this development (Fig. 4), but beyond this a natural soil profile was increasingly visible. This showed c.0.25m of brown sand topsoil, over a thin band of buried turf, over c.0.6m of coarse pink-brown sand (slightly deflated, but less so than higher up the hill within the electric trench), onto fine yellow sand natural. This profile was consistent throughout the south end of the trench.



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Figure 4. LKH 272, maintenance facility detail

Distance along trench	Description
0-20m	Topsoil 0.2m deep over 0.25m pink deflated sand, over 0.05m dark band of buried turf over natural yellow sand.
21-22m	Possible NW-SE aligned ditch, 0002, indicated by depression filled with deflated pink-brown sand over yellow-brown coarse sand which continued into the base of the trench at 1.4m. The edges were not well defined and this may have been a natural feature. This does, however look different from the undulations in the natural seen at the NW end of the trench.
23-25m	As 0-20m.
26-28m	Looks like modern disturbance.
29-40m	As 0-20m.
41-42m	Another possible NW-SE aligned ditch, 0003, filled with pink-brown sand and deeper than the trench, but again indistinct and uncertain.
43-48m	As 0-20m.
49-end of trench at 125m	The surface of the natural yellow sand becomes undulating between 0.4m below the surface and not visible in the base of the trench at 1.4m. The surface of the natural rises to 0.4m at 64m, drops to greater than 1.4m at 86m and rises slightly so that yellow sand can be seen at 1.4m at 100m. The surface of the natural rises to c.0.4m at the end of the trench near the control tower trench.

Table 1. LKH 272, soil profile within electric trench from east-west

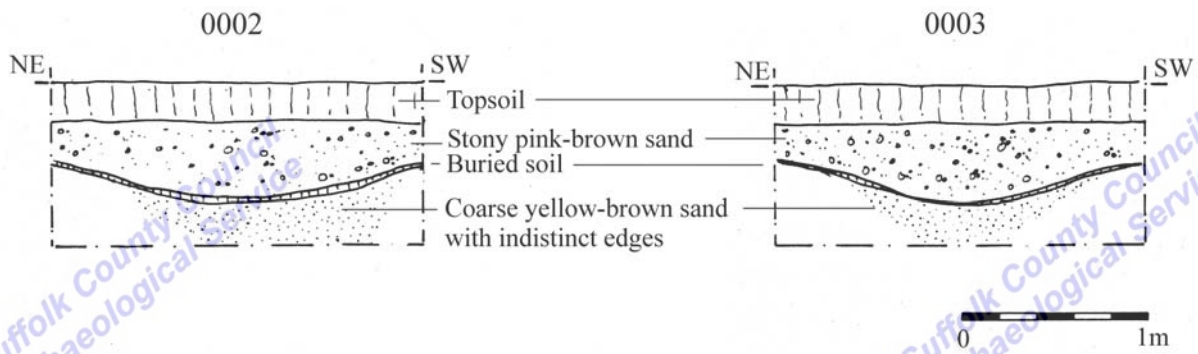
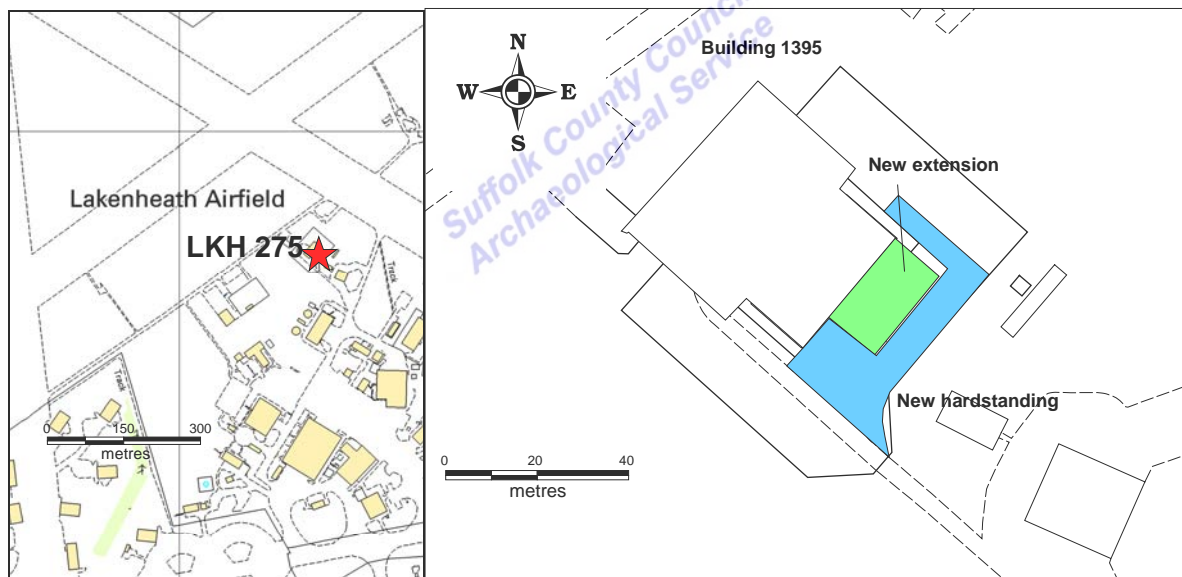


Figure 5. LKH 272 sections

LKH 275 Extension to building 1395

This area was hard-surfaced and a first visit saw only sub-base during the concrete breaking operations. A second visit found the site unmanned, but it was possible to see exposed sands indicative of heathland topsoils, similar to soil profiles seen during the works for the Cargo Bay Deployment, LKH 246, (Caruth 2006a) and AEF Processing facilities, LKH 291 (Craven 2004). No further visits were thought worthwhile, as these two extensive previous projects have not identified archaeological deposits in this area.



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Figure 6. LKH 275, site location and plan.

Summary and Conclusion

The archaeological monitoring of this project identified two undated possible ditches towards the upper end of the hillside on the airfield north of the new maintenance building. No finds were recovered from any of the monitored areas. However it did provide further evidence for the variations in the character of the landscape from sand dunes and hollows on the west side of the airfield to flatter, low lying heathland on the east side of the airfield.

Jo Caruth
December 2007

References

Caruth, J., 2006. *Archaeological Monitoring Report. Cargo Bay deployment Facility, RAF Lakenheath LKH 246*. SCCAS report no. 2006/038. Unpublished.

Caruth, J., 2007. *Archaeological Monitoring Report. Munitions Areas 1 and 2, RAF Lakenheath, LKH 266*. SCCAS report no. 2007/006. Unpublished.

Craven, J., 2004. *Archaeological Monitoring Report. AEF processing facility, RAF Lakenheath*. SCCAS report no. 2004/041. Unpublished

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Appendix 1

SUFFOLK COUNTY COUNCIL

ARCHAEOLOGICAL SERVICE - CONSERVATION TEAM



Brief and Specification for Archaeological Monitoring of Development

SDB STORAGE & MAINTENANCE, RAF LAKENHEATH

Although this document is fundamental to the work of the specialist archaeological contractor the developer should be aware that certain of its requirements are likely to impinge upon the working practices of a general building contractor and may have financial implications, for example see paragraphs 2.3 & 4.3. The commissioning body should also be aware that it may have Health & Safety responsibilities, see paragraph 1.5.

1. Background

1.1 Planning permission to develop on this site has been granted conditional upon an acceptable programme of archaeological work being carried out (application F2005/0951/GOV) available archaeological evidence indicates that the area affected by development can be adequately recorded by archaeological monitoring.

1.2 The application involves work at three locations:

- a. An extension to Building 1395, an area which has produced topographic evidence but little archaeology.
- b. A new storage igloo and associated roadway at c. TL 728 815; this area has been very little investigated and certainly has potential for prehistoric deposits, but there is extensive recent disturbance in the vicinity.
- c. A new maintenance facility with associated works at TL 729 817. Again this area has seen little archaeological investigation and has good potential for undisturbed prehistoric deposits.

1.3 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Project Design or Written Scheme of Investigation (PD/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 (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 PD/WSI as satisfactory. The PD/WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met.

1.4 Detailed standards, information and advice to supplement this brief are to be found in "Standards for Field Archaeology in the East of England" Occasional Papers 14, East Anglian Archaeology, 2003.

- 1.5 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 this office before execution.

2. **Brief for Archaeological Monitoring**

- 2.1 To provide a record of archaeological deposits which are damaged or removed by any development [including services and landscaping] permitted by the current planning consent.
- 2.2 The main academic objective will centre upon the potential of this development to produce evidence for earlier occupation of the sites.
- 2.3 The significant archaeologically damaging activities in this proposal are likely to be the site preparation works involving topsoil stripping (e.g. the construction of roads, hard standing construction, and landscaping) and the excavation of building footing or ground-beam trenches, and other underground structures.

If site preparation works involve topsoil stripping the stripping process and the upcast soil are to be observed whilst they are excavated by the building contractor.

In the case of footing trenches the excavation and the upcast soil, are to be observed after they have been excavated by the building contractor. Adequate time is to be allowed for the recording of archaeological deposits during excavation, and of soil sections following excavation (see 4.3).

3. **Arrangements for Monitoring**

- 3.1 To carry out the monitoring work the developer will appoint an archaeologist (the archaeological contractor) who must be approved by the Conservation Team of Suffolk County Council's Archaeological Service (SCCAS) - see 1.3 above.
- 3.2 The developer or his archaeologist will give the Conservation Team of SCCAS 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. The method and form of development will also be monitored to ensure that it conforms to previously agreed locations and techniques upon which this brief is based.

- 3.3 Allowance must be made to cover archaeological costs incurred in monitoring the development works by the contract archaeologist. The size of the contingency should be estimated by the approved archaeological contractor, based upon the outline works in paragraph 2.3 of the Brief and Specification and the building contractor's programme of works and time-table.
- 3.4 If unexpected remains are encountered the Conservation Team of SCCAS must be informed immediately. Amendments to this specification may be made to ensure adequate provision for archaeological recording.

4. **Specification**

- 4.1 The developer shall afford access at all reasonable times to both the County Council Conservation Team archaeologist and the contracted 'observing archaeologist' to allow archaeological observation of building and engineering operations which disturb the ground.
- 4.2 Opportunity must be given to the 'observing archaeologist' to hand excavate any discrete archaeological features which appear during earth moving operations, retrieve finds and make measured records as necessary.
- 4.3 In the case of topsoil stripping for site preparation, roads, hard standings and landscaping unimpeded access to the stripped area at the rate of one hour per 100 square metres must be allowed for archaeological recording at the interface between topsoil and clean sub-soil surface before the area is further deepened, traversed by machinery or sub-base deposited.

In the case of trenches etc, unimpeded access at the rate of one and a half hours per 10 metres of trench must be allowed for archaeological recording before concreting or building begin. Where it is necessary to see archaeological detail one of the soil faces is to be trowelled clean.

- 4.4 All archaeological features exposed must be planned at a minimum scale of 1:50 on a plan showing the proposed layout of the development.
- 4.5 All contexts must be numbered and finds recorded by context. The data recording methods and conventions used must be consistent with, and approved by, the County Sites and Monuments Record.
- 4.6 Developers should be aware of the possibility of human burials being found. If this eventuality occurs they must comply with the provisions of Section 25 of the Burial Act 1857; and the archaeologist should be informed by '*Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England*' (English Heritage & the Church of England 2005) which includes sensible baseline standards which are likely to apply whatever the location, age or denomination of a burial.

5. Report Requirements

- 5.1 An archive of all records and finds is to be prepared consistent with the principles of *Management of Archaeological Projects (MAP2)*, particularly Appendix 3. This must be deposited with the County Sites and Monuments Record within 3 months of the completion of work. It will then become publicly accessible.
- 5.2 Finds must be appropriately conserved and stored in accordance with *UK Institute of Conservators Guidelines*. The finds, as an indissoluble part of the site archive, should be deposited with the County SMR if the landowner can be persuaded to agree to this. If this is not possible for all or any part of the finds archive, then provision must be made for additional recording (e.g. photography, illustration, analysis) as appropriate.
- 5.3 A report on the fieldwork and archive, consistent with the principles of *MAP2*, particularly Appendix 4, must be provided. The report must summarise the methodology employed, the stratigraphic sequence, and give a period by period description of the contexts recorded, and an inventory of finds. The objective account of the archaeological evidence must be clearly distinguished from its interpretation. The Report must include a discussion and an assessment of the archaeological evidence. Its conclusions must include a clear statement of the archaeological value of the results, and their significance in the context of the Regional Research Framework (*East Anglian Archaeology*, Occasional Papers 3 & 8, 1997 and 2000).
- 5.4 A summary report, in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the *Proceedings of the Suffolk Institute of Archaeology*, must be prepared and included in the project report.
- 5.5 County Sites and Monuments Record sheets must be completed, as per the county SMR manual, for all sites where archaeological finds and/or features are located.
- 5.6 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.

- 5.7 All parts of the OASIS online form must be completed for submission to the SMR. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

Specification by: Judith Plouviez

Suffolk County Council
Archaeological Service Conservation Team
Environment and Transport Department
Shire Hall
Bury St Edmunds
Suffolk IP33 2AR

Date: 20 January 2006

Reference: /RAFLaken-SDBStorage01

This brief and specification remains valid for 12 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.