New Data Hall, RAF Molesworth
Cambridgeshire
ECB 3948

Archaeological Monitoring Report

SCCAS Report No. 2013/044

Client: Mansell construction Services Ltd

on behalf of Defence Infrastructure Organisation

Author: Andrew Vaughan Beverton

04/2013

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Author: Andrew Vaughan Beverton

Illustrator: Crane Begg

Editor: Richenda Goffin

Report Date: 04/2013

HER Information

CHER:	**ECB 3948**
Site Name:	**New Data Hall, RAF Molesworth**
Report Number	**2013/044**
Planning Application No:	**1101483FUL**
Date of Fieldwork:	**15/02/13 – 13/03/13**
Grid Reference:	**TL 073 776**
Oasis Reference:	**suffolkc1-147266**
Curatorial Officer:	**Daniel McConnell CAPCA**
Project Officer:	**Andy Beverton**
Client:	**Mansell Construction Services Ltd on behalf of Defence Infrastructure Organisation**

Digital report submitted to Archaeological Data Service:
http://ads.ahds.ac.uk/catalogue/library/greylit

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: Andrew Vaughan Beverton
Date: April 2013

Approved By: Jo Caruth Senior Project Officer
Date:
Signed:

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Summary

The mechanical excavation of 344m of cable trenching was monitored at RAF Molesworth, Cambridgeshire. The monitoring was carried out over four visits to the site between the 15th of February and 13th of March 2013 and was conducted as a condition for planning application 1101483FUL.

The monitoring identified a severe degree of truncation across the whole development area that is likely to have resulted from the airbase's original construction. A number of cables and residual concrete footings were recorded, demonstrating the impact of the previous groundworks.

A single ditch (0005) was recorded towards the south-eastern extent of the development area. This feature is likely to have been excavated for drainage and was cut into a thick layer of silt that also contained occasional modern brick fragments and charcoal flecks.

Drawing Conventions

Plans

Limit of Excavation

Features

Break of Slope

Features - Conjectured

Natural Features

Sondages/Machine Strip

Intrusion/Truncation

Illustrated Section S.14

Cut Number 0008

Archaeological Features

Sections

Limit of Excavation

Cut

Modern Cut

Cut - Conjectured

Deposit Horizon

Deposit Horizon - Conjectured

Intrusion/Truncation

Top of Natural

Top Surface

Break in Section

Cut Number 0008

Deposit Number 0007

Ordnance Datum 18.45m OD

1. Introduction

Groundworks relating to the construction of a New Data Hall at RAF Molesworth, Cambridgeshire (Fig. 1), were monitored for the presence of archaeological horizons. The monitoring was carried out between the 15th February and 30th April 2013 and was staffed by Assistant Project Officer Andy Beverton (SCCAS, Field Team). The work was carried out as part of a Brief supplied by Daniel McConnell (CAPCA) for planning application 1101483FUL. The work was funded by Mansell Construction Services Ltd on behalf of the Defence Infrastructure Organisation.

2. Location, geology and topography

RAF Molesworth is located 1km north of Molesworth village towards the western extent of Cambridgeshire. The development area itself is situated towards the western end of the base against the southern edge of a large area of concrete hardstand.

The development area has a fairly level topography at a height of 73.5m AOD with maximum and minimum elevations at ±0.58m. The local geology consists of Oxford clay formations overlain by glacially deposited till.

3. Archaeology and historical background

Inside a 1km radius (Fig. 2) of the development area the Cambridge Historic Environment Record (CHER) lists only the airbase (MCB 15143) and two previous evaluations (ECB 3321 and ECB 3533) carried out within the bounds of the airbase (Fig. 1). Both projects identified a severe degree of modern truncation and an absence of surviving archaeological horizons.

The CHER lists several cropmarks at a distance of 1km to 1.5km from the development area:

An extensive system of undated enclosure ditches and trackways are recorded as MCB 11901 approximately 1.4km west of the development area.

Three small rectangular enclosures (MCB 473) were identified 1km south-west of the development area through aerial survey in 1970. The uniform and angular nature of the enclosures suggests they are resultant from WW2 activity related to the base itself.

A concentration of cropmarks (MCB 439) consisting of ditches, rectangular enclosures and possible ring ditches were recorded to the north of the development area through aerial photography. The cropmarks are undated although the morphology suggests a possible core of prehistoric activity.

Another undated rectangular enclosure (MCB 688) is also present 1.5km north of the site.

The deserted medieval village of Old Weston (MCB 475) is located 2.5km east of the site. The village was originally focused around the Church of St. Swithin, a 13th century building with substantial additions and alterations made during the 14th and 15th century. The church is noted in the Domesday Book (1086) but no physical evidence of that date has been recorded. Following an outbreak of the plague the village was burnt and reinstated further east at its current position.

There is a strong likelihood that further cropmarks present within the bounds of the airbase have been removed through the severe landscaping undertaken for the construction of airfields.

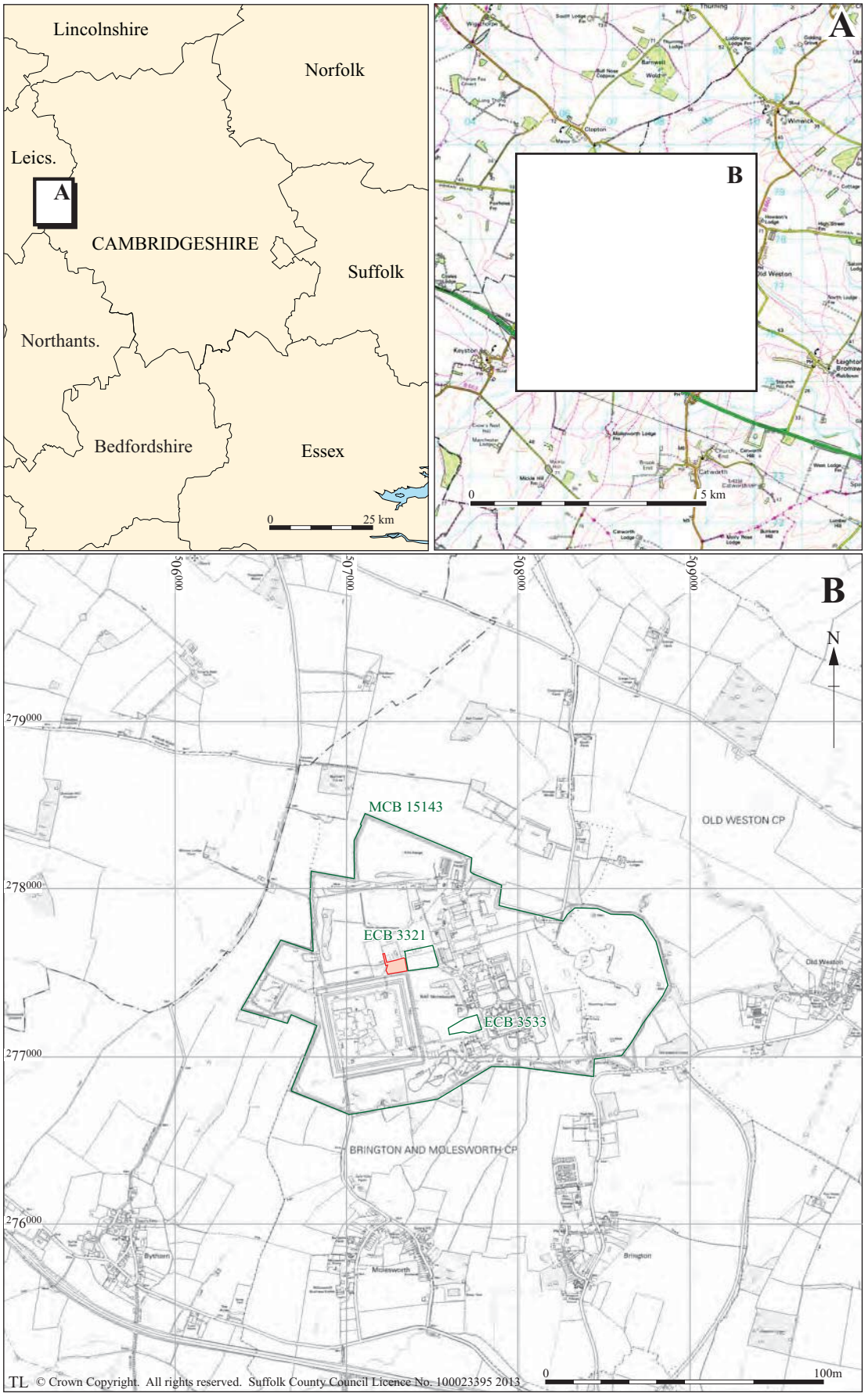

Figure 1. Site location (red) with HER entries mentioned in the text (green)

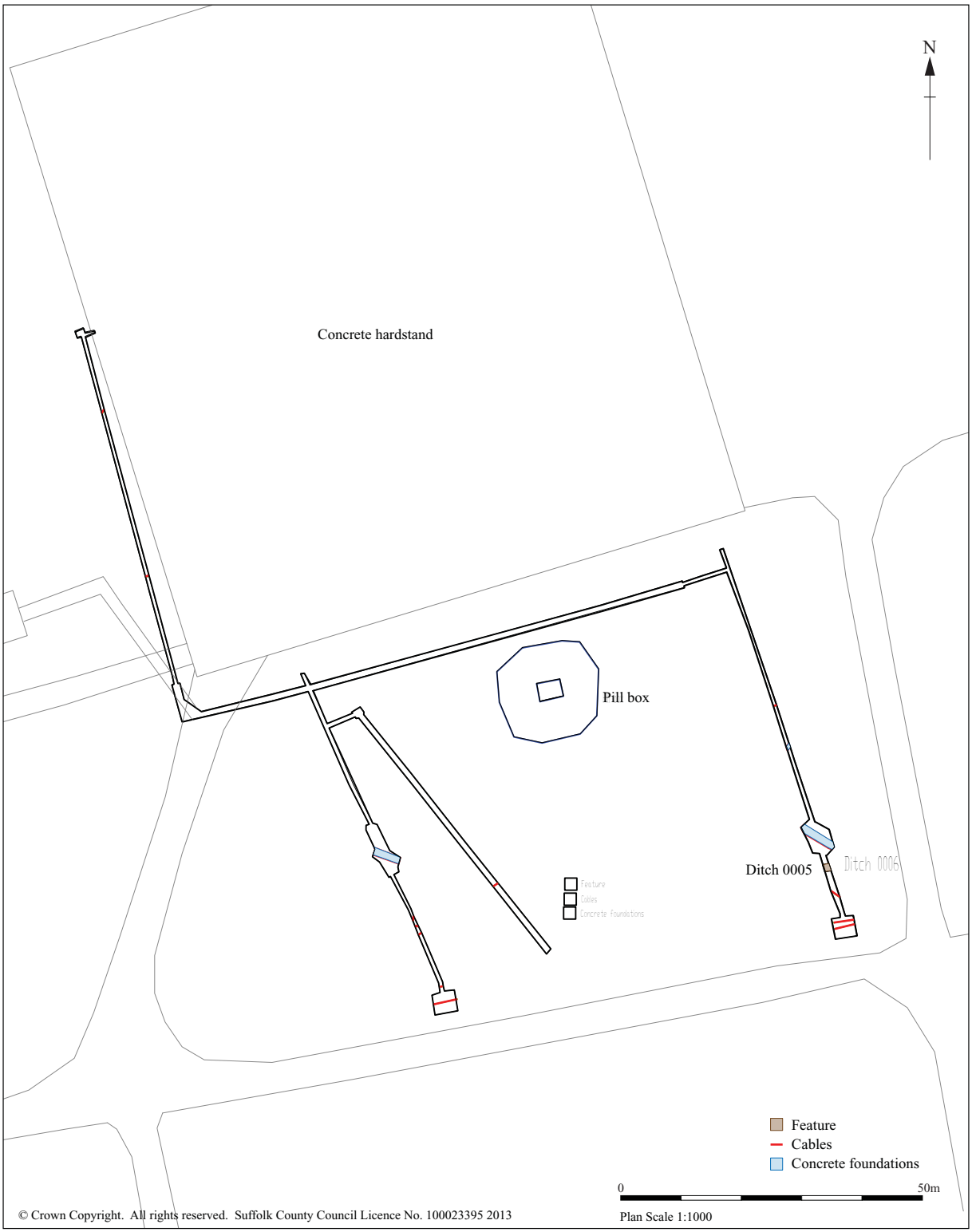

Figure 2. Monitored areas

4. Methodology

In total 344m of pipe trench was excavated to a depth of between 1.2m and 1.4m across the development area. The southern and northern portions of trenching were excavated by a mini-digger fitted with a 600m toothed bucket in order to break through layers of rubble whilst the central east-west aligned trench was excavated by a larger 360° machine fitted with a 1.2m wide ditching bucket. Two larger areas each measuring 3.5m² were also opened at the southern end of the development area (Fig. 2).

Initially the mechanical excavation was continuously monitored by an SCC archaeologist. Once it became clear that severe truncation of the natural soils was present across the area the investigation was changed, with consent from Dan McConnell (CAPCA), to semi-continuous monitoring.

Where the trench depth was below 1.2m sample sections were cleaned by hand, digitally photographed and inspected for the presence of archaeological deposits and modern truncation. At depths greater than 1.2m the trench wall was analysed from outside the trench.

Sample sections and identified features were digitally photographed (selected plates are attached as Appendix 1) and where safe they were recorded by hand at a scale of 1:20. Unique context numbers were assigned to all deposits and cut events according to the guidelines laid out in 'Standards of Field Archaeology for the East of England' (Gurney 2003).

The trench plan and elevation were recorded using an RTK Leica System 1200 GPS set with a maximum error tolerance of 0.05m.

5. Results

5.1 Introduction

In total the project investigated 344m of pipe trench across the development area. The local geology displayed a severe degree of truncation down to a maximum depth of 0.8m below the existing ground level. The truncation had removed any archaeological deposits that may have been present whilst a single modern ditch was identified towards the south-east corner of the site.

All finds evidence was identified on site as modern in date and was discarded after being noted on the respective context sheet.

5.2 Trench results

The soil profile across the whole trench consisted of natural Oxford clay formations that were sealed by a mid orangey-brown silty-clay (0006) containing rare inclusions of modern brick and charcoal flecks (Pl. 1). Layer 0006 had a maximum recorded depth of 0.56m and was identified stratigraphically below mixed deposits consisting of re-deposited clay (0002) towards the southern end of the trenches and mixed rubble layers of gravel and concrete fragments at the northern end of the development area. These layers were sealed by the modern topsoil (0001).

Seven cables/pipes and two sections of concrete footings were recorded within the trench (Fig. 2) and are good examples of the heavy truncation and disturbance present across the area (Pl. 3).

5.3 Feature results

A single linear feature (0005) was identified towards the south-east corner of the development area (Fig. 2, Pl. 2). The feature, most likely a drainage ditch, was cut through the thick deposit of silty-clay (0006) and contained two fills. Basal fill 0004 was mid brownish-grey silty clay with moderate inclusions of charcoal and occasional fragments of modern brick material whilst the second fill (0003) was an orangey-brown silty clay that was very similar to layer 0006 although slightly more friable. As a result of this similarity the cut is very diffuse between 0003 and 0006.

6. Conclusion

The monitoring identified a severe degree of truncation continuing across the development area that extended to, and likely exceeded, the top of the natural geology. The earliest surviving strata (0006) is determined to be modern through the presence of brick and rubble inclusions throughout the context.

The truncation is doubtless a result of site's function as an airbase (1917-1973) and a Royal Air Force station (post 1973- present). Many of the cables identified within the trench can be attributed to buildings currently surrounding the development area whilst the concrete footings are presumably residual elements of structures present during the base's history as an active airfield.

The single cut feature (0005) identified during the monitoring contained modern finds evidence within the basal fill (0004) and is likely to be a drainage ditch. The ditch's second fill (0004) appears to derive from the erosion of silty layer 0006, into which the ditch is cut, suggesting the ditch was open for an extended period of time.

7. Archive deposition

Paper and photographic archive: Cambridge HER

Digital archive: SCCAS R:\Environmental Protection\Conservation\Archaeology\Archive\Cambridgeshire\ECB 3948

Digital photographic archive: SCCAS R:\Environmental Protection\Conservation\Archaeology\Catalogues\Photos

8. Acknowledgements

The fieldwork was directed and carried out by Andy Beverton. Project management was undertaken by Jo Caruth who also provided advice during the production of the report.

The report illustrations were created by Crane Begg and the report was edited by Richenda Goffin.

9. Bibliography

Gurney, D., 2003, *Standards of Field Archaeology for the East of England*. EAA occasional paper 14. ALGAO

Caruth, J., 2012, *New Data Hall, RAF Molesworth*. SCCAS Written Scheme of Investigation.

Appendix 1. Plates

Plate 1. Common soil profile identified across development area, 1m scale (facing south)

Plate 2. Ditch 0006 at south-east corner of development area, 1m scale (facing west).

Plate 3. Modern truncation and footings present across development area, 2m scale (facing north).

Appendix 2.

BRIEF FOR ARCHAEOLOGICAL MONITORING & RECORDING
Cambridgeshire Archaeology Planning & Countryside Advice

Site: RAF Molesworth Data Hall

Planning application no: 1101483FUL

Client:

Location: NGR 0726 7760

This design brief is only valid for six months after the date of issue. After this period the Cambridgeshire Archaeology Planning & Countryside Advice office (CAPCA) should be contacted. Any specifications resulting from this brief will only be considered for the same period. Please note that this document is written for archaeological project managers to facilitate the production of an archaeological specification of work; the term project manager is used to denote the archaeological project manager only.

The project manager is strongly advised to visit the site before completing their specification, as there may be implications for accurately costing the project. The project manager must consult the Cambridgeshire Historic Environment Record (CHER) as part of the investigation. Any response to this brief should follow IfA Standard and Guidance for Archaeological Watching Briefs 2008.

NO FIELDWORK MAY COMMENCE UNTIL WRITTEN APPROVAL OF A SPECIFICATION HAS BEEN ISSUED BY THE CAMBRIDGESHIRE ARCHAEOLOGY PLANNING & COUNTRYSIDE ADVICE OFFICE (CAPCA).

1.0 Site Description

1.1 The site is located directly to the north of the villages of Brington and Molesworth. Situated on Till deposits overlaying Oxford Clay formations, the site rests at an average of 74.0m aOD.

1.2 The site rests within a varied archaeological landscape, consisting of undated crop mark enclosures (such as Historic Environment Numbers MCB11901, MCB11901 and MCB421 for example), and known medieval development of the area (such as Old Weston a deserted medieval village (HER No. MCB475, and Spring Hill Farm Manor; HER No MCB420). Little is known of archaeological impacts within the bounds of the present airfield due to the nature of the site, but it is thought that similar remains may be encountered in the proposed area of development. An evaluation carried out to the west of the current application area in 2009(ASC Ltd; '*Archaeological Evaluation: RAF Molesworth'*; ASC: 1243/MWH/2) revealed severe truncation of the airfield within this applications bounds, however this may not be the case within the bounds of the current application.

2.0 The nature of the development and archaeological requirements

2.1 The proposed development includes the construction of single storey building for use as data hall, UPS room and switch room.

2.2 Archaeological monitoring of the initial stages of construction, to include all ground works, is required to fulfil an archaeological condition placed on planning consent. The following sets out the basic requirements of the monitoring.

2.3 The archaeological project manager is asked to provide a written specification setting out a scheme of works to be undertaken immediately prior to, and during ground disturbance connected with the development. This scheme should be worked out with the client and conform to the objectives detailed below. The project manager should consider the following:

1. Soil stripping under archaeological supervision.

2. Inspection of subsoil for archaeological features.

3. Recording of archaeological features in plan.

4. Investigation of features present.

5. Subsoil stripping under archaeological supervision.

6. Inspection of natural substrate for archaeological features, their investigation and recording.

3.0 Objectives

3.1 To ensure that any archaeological features exposed during ground works are recorded and interpreted to an acceptable standard.

3.2 To ensure that any significant discoveries of artefact evidence are recorded and analysed to an acceptable standard.

3.3 Where significant archaeological remains have been found during the monitoring scheme, this should be communicated to CAPCA and to the Client as soon as possible in case there is a need to review and agree the methods and resources for analysis and reporting.

4.0 Requirements

4.1 The monitoring & recording scheme must be undertaken by an archaeological team of recognised competence, fully experienced in work of this character and formally acknowledged by the CAPCA officers, advisors to the Local Planning Authority (LPA). Inclusion in The Institute for Archaeologists' Register of Organisations is recommended.

4.2 CAPCA is responsible for monitoring all archaeological work within Cambridgeshire and will normally inspect site works and review the progress of reports and archive preparation. The project manager must inform CAPCA **in writing** detailing proposed start dates for the project.

4.3 The site archive specification should conform to the guidelines in MAP 2 (Appendix 3) and be deposited within the County store on completion of site analysis and publication.

4.4 A full report of the results in line with CAO 979/2 should be prepared and presented to the CAPCA within two weeks of the completion of site works.

4.5 All aspects of the archaeological programme shall be conducted in accordance with the Institute for Archaeologist's *Code of Conduct*, the *Standard and Guidance for Archaeological Field Evaluations* (2008), and *Standards for Field Archaeology in the East of England* (EAA Occasional Paper 14). Reference should also be made to *Research and Archaeology: A Framework for the Eastern Counties 1. Resource Assessment and 2 Research Agenda and Strategy* documents (EAA Occasional Papers 3 and 8).

4.6 Care must be taken in dealing with human remains and the appropriate Department for Constitutional Affairs (DCA) and environmental health regulations followed. CAPCA and the local Coroner must be informed immediately upon discovery of human remains. If found during an evaluation, the human remains must be left *in situ*, covered and protected when discovered. No further investigation should normally be permitted beyond that necessary to establish the date, condition and character of the burial. If removal is essential an exhumation licence should be requested from the DCA. Arrangements for the analysis & reporting, storage and/or reburial of human remains must be made as soon as possible after their discovery.

4.6 Before commencing work the project manager must carry out a risk assessment and liase with the site owner, client and CAPCA in ensuring that all potential risks are minimised. A copy of this must be given to CAPCA before the commencement of works.

4.7 Project Managers are reminded of the need to comply with the requirements of the Treasure Act 1996 (with subsequent amendments). Advice and guidance on compliance with Treasure Act issues can be obtained from the Cambridgeshire Historic Environment Record (CHER) office, and project managers are recommended to report any finds that could be considered treasure under the terms of the Act made during the process of fieldwork to CHER within 14 days of discovery.

4.8 To assist with the curation of the project's archive, the Project Manager must contact the CHER office to obtain an **event number**. CHER will use this number as a unique identifier linking all physical and digital components of the archive. The unique event number must be clearly indicated on any specification received for this project and on any ensuing reports.

4.9 Arrangements for the long term storage and deposition of all artefacts must be agreed with the landowner and CHER before the commencement of fieldwork. The Project Manager should consult document ref HER 2004/1 (available from our website[1]) regarding the requirements for the deposition of the archive, which must be deposited in the County Store on completion of post-excavation analysis and publication.

4.10 Cambridgeshire Archaeology supports the national programme: Online Access to the Index of Archaeological Investigations (OASIS III) project and requires archaeological contractors working in Cambridgeshire to support this initiative. In order that a record is made of all archaeological events within the county occurring through the planning system, the archaeological contractor is required to input details of this project online at the ADS internet site[2]: The OASIS reference ID and summary form should be cleared presented in the relevant report, **any report that does not contain this information will be returned**.

4.11 An unbound copy of the report, clearly marked **DRAFT**, should be prepared and presented to CAPCA within four weeks of the completion of site works (unless there are reasonable grounds for more time). This report must conform to the format contained within the document CAPCA Mon&Rec rev 06 dealing with the production of archaeological evaluation reports. Copies can be obtained from the address below.

4.12 Following acceptance, **one copy** of the approved report of the results should be submitted to CAPCA, **one hard and digital copy** to the CHER. The approved report should also be uploaded to the OASIS database.

4.13 CAPCA officers are responsible for monitoring all archaeological work within Cambridgeshire and will normally inspect site works and review the progress of excavation reports and archive preparation. The project manager must inform CAPCA in writing **at least one week in advance** detailing proposed start dates for the project.

4.14 Any changes to the specifications that the project manager may wish to make after approval by this office should be communicated directly to CAPCA for approval.

4.15 CAPCA should be kept regularly informed about developments both during the site works and subsequent post-excavation work.

4.16 The involvement of CAPCA should be acknowledged in any report or publication generated by this project.

[1] http://www.cambridgeshire.gov.uk/leisure/archaeology/historic/archives/herstore.htm
[2] http://ads.ahds.ac.uk/project/oasis

As part of our desire to provide a quality service to all our clients we would welcome any comments you may have on the content or presentation of this design brief. Please address them to the author at the address below.

Dan McConnell

Cambridgeshire Archaeology
Cambridgeshire County Council
Planning & Countryside Advice
Box ELH 1108, Castle Court
Castle Hill, Cambridge. CB3 0AP

Appendix 3. Context List

Context Number	Feature Number	Feature Type	Category	Description	Interpretation
0001	--	--	Layer	Topsoil layer across all of the development area. The topsoil is a dark greyish-brown clayey-silt with frequent organic inclsuions.	Modern topsoil layer.
0002	--	--	Layer	Mixed layer of mid/pale brownish-grey clay with large patches of rubble and concrete.	Layers of redeposited natural with patches of modern rubble. This layer thickens of the area of ditch 0005 suggesting the ditch was still open to some degree at the time of 0002's deposition.
0003	0005	Ditch	Fill	Top fill of ditch 0005 is a mid orangey-brown silty-clay off a firm and compact nature. The context contains occasional inclusions of chalk pebbles and flecks.	Top fill of ditch 0006. The fill is very similar to silty layer 0006 although slightly crumbly. The fill possibly derived from erosion of 0006.
0004	0005	Ditch	Fill	The basal fill of ditch 0005 is a mid/dark brownish grey silty-clay with occassional patches of charcoal flecks and fragments of modern brick. The fill has vertical striations of orangey brown silty-clay commonly associated with root action in fluvially derived deposits.	Basal fill of ditch 0005 containing modern material.
0005	0005	Ditch	Cut	A linear planned feature aligned east-west. The ditch had a u-shaped profile with steep sides with a sharp break of base. The ditch contained two fills (0004, 0003).	Probable drainage ditch.
0006	--	--	Layer	A mid orangey-brown silty clay of a firm and compact nature. The layer contained rare inclusions of modern brick and charcoal.	This layer appears to have been deposited directly ontop of the natural geology after an event of severe truncation. The deposit contained modern material throughout.

Appendix 4. OASIS

OASIS ID: suffolkc1-147266

Project details

Project name	RAF Molesworth, Cambridgeshire
Short description of the project	The mechanical excavation of 225m of cable trenching was monitored at RAF Molesworth, Cambridgeshire. The monitoring was carried out over four visits to the site between the 15th of February and 13th of March 2013 and was conducted as a condition for planning application 1101483FUL. The monitoring identified a severe degree of truncation across the whole development area that is likely to have resulted from the airbases original construction. A number of cables and residual concrete footings were recorded, demonstrating the impact of the previous groundworks. A single ditch feature (0005) was recorded towards the south-eastern extent of the development area. The ditch is likely to have been excavated for drainage and was cut into a thick layer of silt that also contained occasional modern brick fragments and charcoal flecks.
Project dates	Start: 15-02-2013 End: 15-04-2013
Previous/future work	No / No
Any associated project reference codes	ECB 3948 - HER event no.
Type of project	Recording project
Monument type	DITCH Modern
Investigation type	'"Watching Brief"'

Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	CAMBRIDGESHIRE HUNTINGDONSHIRE BRINGTON AND MOLESWORTH RAF Molesworth
Postcode	PE28 0QA
Study area	8204.00 Square metres
Site coordinates	TL 073 775 52 0 52 23 04 N 000 25 23 W Point
Height OD / Depth	Min: 74.00m Max: 76.00m

Project creators

Name of Organisation	Suffolk County Council Archaeological Service
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Dan McConnell
Project director/manager	Jo Caruth
Project supervisor	A Beverton
Type of sponsor/funding body	Defence Infrastructure Organisation

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Cambridgeshire HER
Digital Archive ID	ECB 3948

Digital Contents	"Survey"
Digital Media available	"Database","GIS","Images raster / digital photography","Text"
Paper Archive recipient	Cambridgeshire HER
Paper Archive ID	ECB 3948
Paper Contents	"Survey"
Paper Media available	"Drawing","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	New Data Hall, RAF Molesworth
Author(s)/Editor(s)	Beverton, A. V.
Other bibliographic details	Report No. 2013/044
Date	2013
Issuer or publisher	SCCAS
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Description	Ringbound report on white paper following SCCAS report template (2013)
Entered by	Andy Beverton (andy.beverton@hotmail.co.uk)
Entered on	15 April 2013

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Contact:

Rhodri Gardner

Tel: 01473 265879 Fax: 01473 216864

rhodri.gardner@suffolk.gov.uk

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