

# HERITAGE NETWORK

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## **BUILDING 420 Imperial War Museum, Duxford, Cambs.**

HN1084

## ***ARCHAEOLOGICAL MONITORING REPORT***



# *THE HERITAGE NETWORK LTD*

*Registered with the Institute of Field Archaeologists as an Archaeological Organisation*

Archaeological Director: David Hillelson, BA MIFA

## BUILDING 420, IMPERIAL WAR MUSEUM Duxford, Cambridgeshire.

Project Ref.: HN1084  
SDC Planning ref.: S/0892/13/FL  
Event number: ECB4019

### *Archaeological Monitoring Report*

*Prepared on behalf of Imperial War Museums*

*By*

Helen Ashworth, BA (HONS), AIFA

Report no. 832

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## Contents

	Summary.....	Page i
Section 1	Introduction.....	Page 1
Section 2	Fieldwork .....	Page 2
Section 3	Discussion .....	Page 4
Section 4	Schedule of site visits .....	Page 6
Section 5	Bibliography.....	Page 6
Section 5	Illustrations .....	following Page 8
Appendix	OASIS Data Entry.....	Page 9

*The cover photograph shows Building 420 under construction, looking NW*

## Acknowledgements

The fieldwork for this project was carried out by Paul Palmer and Greg Jones. The report text and illustrations were prepared by Helen Ashworth, and edited by David Hillelson.

The Heritage Network would like to express its thanks to Stephen Rogers & Alison Inglis, IWM, and Kasia Gdaniec, Historic Environment Team (HET) of Cambridgeshire County Council for their co-operation and assistance in the execution of this project.

## Summary

<b>Site name and address:</b>	Building 420, Imperial War Museum, Duxford		
<b>County:</b>	Cambridgeshire	<b>District:</b>	South Cambridgeshire
<b>Village/town:</b>	Duxford	<b>Parish:</b>	Duxford
<b>Planning reference:</b>	S/0892/13/FL	<b>NGR:</b>	TL 46669 46290
<b>Client name and address:</b>	Imperial War Museums, Lambeth Road, London, SE1 6HZ		
<b>Nature of work:</b>	Relocation of building	<b>Former land use:</b>	Open ground
<b>Site status:</b>	n/a	<b>Reason for investigation:</b>	Direction of LPA
<b>Position in planning process:</b>	Post-determination	<b>Project brief originator:</b>	Local Authority
<b>Size of affected area:</b>	c. 1359m <sup>2</sup>	<b>Size of area investigated:</b>	1359 m <sup>2</sup>
<b>Site Code:</b>	HN1084	<b>Event no.:</b>	ECB4019
<b>Organisation:</b>	Heritage Network	<b>Site Director:</b>	David Hillelson
<b>Project type, methods etc.:</b>	Monitoring	<b>Archive recipient:</b>	Cambridgeshire Archaeology Store
<b>Start of work</b>	18/09/2013	<b>Finish of work</b>	21/11/2013
<b>Related HER Nos:</b>	CHER 11843	<b>Periods represented:</b>	Modern
<b>Oasis UID</b>	heritage1-156695	<b>Significant finds:</b>	None
<b>Monument types:</b>	none		
<b>Physical archive:</b>	n/a		
<b>Previous summaries/reports:</b>	n/a		

**Synopsis:**

In response to a condition on the planning consent for the relocation of Building 420 at the Imperial War Museum, Duxford, Cambridgeshire, the Heritage Network was commissioned to undertake a programme of archaeological monitoring of the development groundworks.

It was considered that the present project could provide the opportunity to investigate the origins and development of settlement at Duxford from the later prehistoric period onwards, and the development of the airfield from the First World War to the present.

Modern land drains and a single modern pit were revealed. None of these could be definitely associated with the airfield. No other features, deposits or finds of archaeological significance were encountered on the site.

# 1. Introduction

**1.1** This report has been prepared at the request of the Imperial War Museums, as part of a programme of archaeological work carried out as part of the proposed relocation of Building 420, Imperial War Museum, Duxford, Cambridgeshire.

**1.2** The planning permission for the development (ref: S/0892/13/FL) was granted by South Cambridgeshire District Council (SCDC), subject to an archaeological condition issued in line with the Department of Communities and Local Government's *National Planning Policy Statement Framework* (NPPF).

**1.3** The scope of the work was defined in defined in correspondence with the Historic Environment Team (HET) of Cambridgeshire County Council acting as archaeological adviser to SCDC. A full specification for the work is contained in the Heritage Network's approved Project Design, dated August 2013 (Ashworth 2013).

**1.4** The study area is located on the north-eastern edge of the airfield, close to the slip road for Junction 10 of the M11 motorway. The site, which is centred at NGR 546669 246290, is bounded to the north-east by the airfield boundary, to the north-west by concrete hardstanding, to the south-west by Building 418 and to the south-east by open land (Figure 1).

**1.5** The site, which lies within a known archaeological landscape, forms part of Duxford airfield which was built at the end of World War I. There is a Scheduled Roman settlement to the north-west (SM 1006794) and evidence for prehistoric activity has been recorded in the immediate vicinity.

**1.6** The development proposed moving an aircraft hangar, Building 420, from the northern side of an area of concrete hardstanding to the southern side.

## 2. Fieldwork

### **SITE TOPOGRAPHY AND GEOLOGY**

**2.1** The site lies to the north-west of the village of Duxford, on the north-eastern edge of the airfield. It is located on relatively level ground at a height of approximately 30m AOD and centred at NGR TL 46669 46290.

**2.2** Locally the soils belong to the Swaffham Prior Association (5141e), described as *Well drained calcareous coarse and fine loamy soils over chalk rubble. Some similar shallow soils. Deep non-calcareous loamy soils in places. Striped and polygonal soil patterns locally. Slight risk of water erosion.* (SSEW 1983). The underlying geology consists of chalk of the Holywell Nodular Chalk Formation ([www.bgs.ac.uk/opengeoscience](http://www.bgs.ac.uk/opengeoscience)). The overlying drift deposit is not recorded.

### **METHODOLOGY**

**2.3** Fieldwork comprised a series of visits to record the excavation of foundation and drainage trenches for the relocated building (Figure 2).

**2.4** The trenches were excavated using a tracked 360<sup>0</sup> excavator, fitted with either a toothed or ditching bucket, 0.50m in width, as appropriate.

**2.5** All recording work was carried out in accordance with the approved Project Design, current health and safety legislation, and to both IfA and ALGAO standards.

### **MONITORING AND RECORDING**

**2.6** The groundworks for the present project were divided between service trenches, including drainage trenches, which fed into soakaway trenches to the south, and the footings trenches for the new building.

#### **Drainage trenches**

**2.7** Drainage trenches were excavated on the eastern and western sides of the new site for Building 420 (Figure 3). These measured approximately 30m in length, 0.50m in width and were excavated to depths of between 0.30m and 0.80m (Plate 1). They ran south to meet soakaway trenches located to the south of Building 420. Small spurs extended northwards to the site of the new building.

**2.8** The stratigraphy in the trenches consisted of a layer of compacted hardcore, 0.30m in depth, above dark greyish brown (7.5 YR 4/2) sandy silt, with frequent chalk nodules and flecks and moderate flints (Plate 2). The natural chalk was revealed at between 0.50m and 0.60m below the present surface.

**2.9** No archaeological features, deposits or finds were encountered in these trenches.

#### **Soakaway trenches**

**2.10** Two soakaway trenches were excavated across the front of Buildings 418 and 420 (Figure 3). These measured 1.20m in width and were excavated to between 0.30m and 0.50m in depth (Plate 3). The exposed trench sections revealed a layer of dark greyish brown (7.5 YR



4/2) sandy silt, with frequent chalk nodules and flecks and moderate flints, 0.25 - 0.30m in depth (Plate 4).

**2.11** Soakaway 1 ran approximately east – west for 20m across the front of Buildings 418 and 420. Soakaway 2 was located 15m to the east of S1 and ran approximately east – west for 12m, before turning to run south for 8.5m.

**2.12** No archaeological features or deposits were encountered in these trenches. A number of modern artefacts were noted in the topsoil, including iron cable, metal reinforcing wire and field drain fragments, but these were not collected.

### ***Footings trenches***

**2.1** The footings trenches for the relocated Building 420 measured approximately 28m in length, 0.50m in width and between 0.50m and 0.80m in depth (Plate 5). The stratigraphy in the trenches was similar to that observed in the drainage trenches (Plate 6). The natural chalk was revealed at between 0.50m and 0.60m below the present surface

**2.2** A number of field drains were observed cutting the natural chalk in the southern trench and a modern pit (Plate 7). These ran on a north-west to south-east alignment and a jumble of cable was noted in the eastern trench. Building rubble and concrete pad and large concrete lumps, was encountered in the centre of the southern trench.

**2.3** No other features, deposits or finds of archaeological significance were encountered in the footings trenches.

### 3. Discussion

#### *Archaeological Background*

**3.1** The county Historic Environment Record (CHER) was consulted for a list of all heritage assets within 1km of the site. The list comprises 44 records, with sites and finds dating from the earlier prehistoric period to the 20<sup>th</sup> century, and has been used to create an overview of the archaeological and historical context of the proposed development site:

- The earliest remains found in the vicinity of the site consist of the chance find of a Mesolithic core (CHER 04086) from an undefined location on the airfield.
- Evidence of later prehistoric activity has also been recorded from the immediate vicinity of the site, including Neolithic and Bronze Age industrial and domestic activity, revealed during archaeological investigations at the Heathfields Estate (CHER ECB428/ECB1085), approximately 600m to the west. A multi-period site (CHER 10483), with evidence of early Neolithic flint extraction and a Bronze Age ditch system, has also been investigated at Hunts Road, approximately 700m to the north-east.
- A fieldwalking survey (CHER MCB 19266) was carried out in the fields to the west of the village by the pupils of Duxford Primary School. They recovered a collection of worked flints of prehistoric date, as well as modern pottery and clay pipe fragments. A Bronze Age spearhead (CHER 04093) was found in fields to the south of Chuck-a-Bush Farm, approximately 900m to the north-east.
- The Icknield Way, a major long distance route linking East Anglia and Wessex from the later prehistoric period onwards, runs approximately 4km to the south of the site.
- Significant evidence for Roman activity has been recorded in the vicinity of the study area, including a Roman field system and possible settlement (CHER 09741) to the south of Chuck-a-Bush Farm, approximately 1km to the north-east, and a scheduled Roman settlement (CHER DCB 210) to the south of Chronicle Hills, approximately 1km to the north-west.
- A large ditch, of Roman or Saxon date, was revealed during archaeological excavations at Hunts Road (CHER ECB1085).
- Duxford Airfield (CHER 11843) was built at the end of World War I, opening in 1919 as a Flying Training School. During World War II it was used as a fighter squadron base by the RAF and the USAAF. It closed as a military airfield in 1961 and since 1970 the airfield has formed part of the Imperial War Museum.
- Many of the buildings on the site have been listed, including a large number which date to World War I. Others were erected in the mid 1930s, when the airfield went through a period of expansion.

***Research aims***

**3.2** The aim of the investigation has been to identify any archaeological remains that might be exposed in the course of the development, to ensure the preservation in situ of such remains where practically possible, their preservation by record where not, and to provide a local and regional, archaeological and historical context for them, in accordance with the current published regional research agenda (Glazebrook 1997, Brown and Glazebrook 2000, Medlycott 2011).

**3.3** On the basis of the known heritage assets in the immediate vicinity, the site was thought to have a high potential to preserve remains of medieval and post-medieval date, which, in turn, had the potential to contribute to a number of research topics highlighted in the published local research agenda.

***Conclusions***

**3.4** The present project was considered to have the potential to contribute to a number of regional research topics, including the origins and development of settlement at Duxford, the distribution and morphology of prehistoric and Roman settlement, the distribution and development of prehistoric and Roman field systems and the development of the airfield from the First World War to the present.

**3.5** Apart from modern field drains and a modern pit, no archaeological features or deposits were revealed during the course of the present project. These could not definitely be associated with the development of the airfield. The only artefacts encountered during the present project were of modern date, and included building rubble, reinforcing wire and lengths of cable.

***Confidence Rating***

**3.6** Conditions on site were generally acceptable for the identification and recording of any potential archaeological remains, and as such there are no circumstances which would lead to a confidence rating for the work which was less than *High*.

## 4. Schedule of site visits

Date	Staff	Hours	Comments
18/09/2013	PP	4	Monitoring excavation of soakaway trenches
25/09/2013	PP	7	Monitoring of excavation of footings trenches
26/09/2013	GAJ	6	Monitoring of excavation of footings trenches
19/11/2013	GAJ	8	Monitoring of excavation of drainage trenches
20/11/2013	GAJ	8	Delayed start, then monitoring excavation of drainage
21/11/2013	GAJ	4	Monitoring of excavation of drainage trenches

## 5. Bibliography

Archaeology Data Service: <http://www.ads.ahds.ac.uk/catalogue>

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Medlycott, M. (ed.) 2011 *Research and Archaeology Revisited: A Revised Framework for the East of England*. East Anglian Archaeology Occasional Paper no.24

Morris, J. (ed.) 1977 *Domesday Book: Bedfordshire*. Chichester: Phillimore

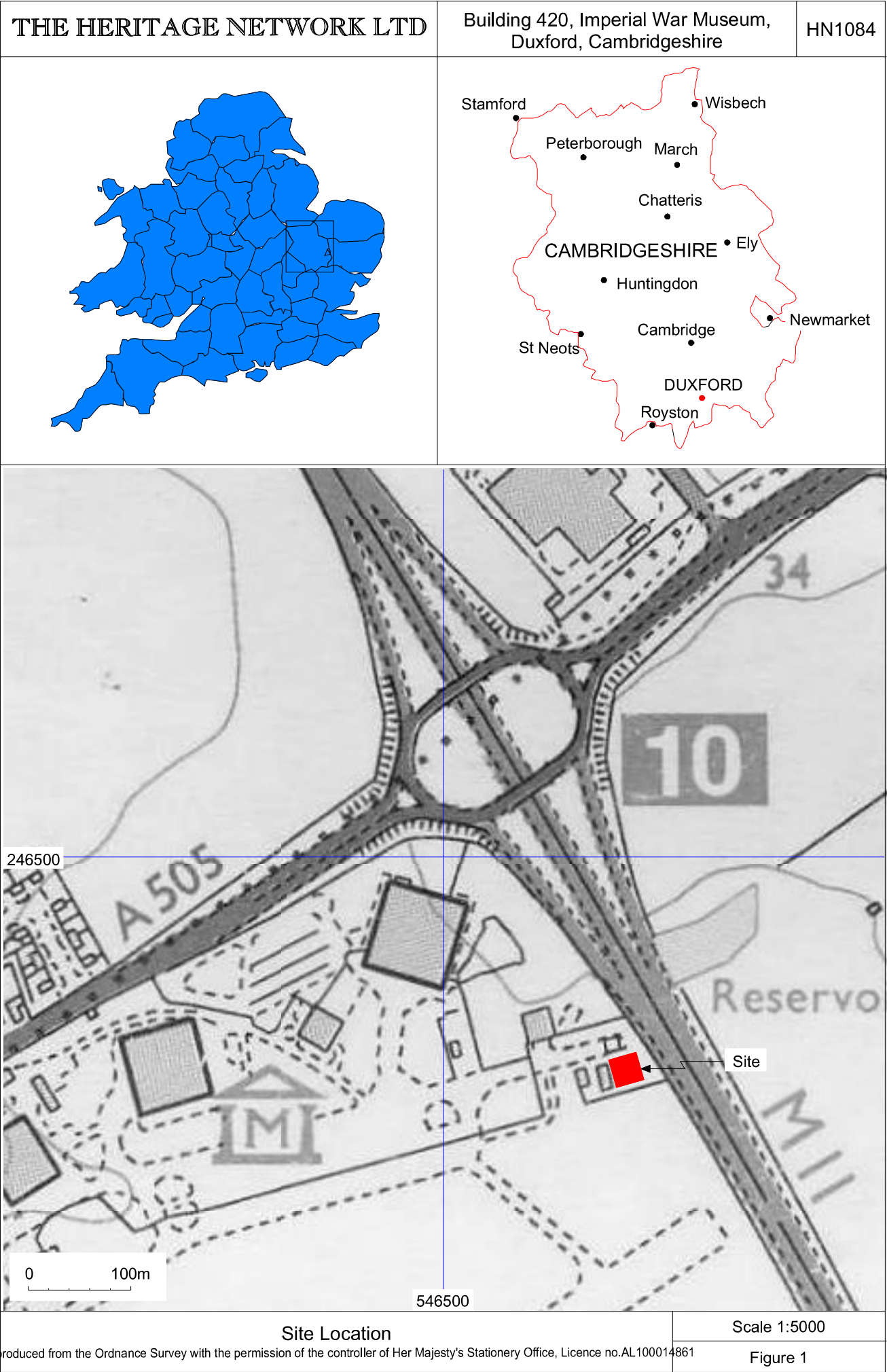
Soil Survey of England and Wales (SSEW) 1984 *Soil Map 1:25000 scale, Sheet 4, Eastern England*. SSEW: Rothamsted, Harpenden

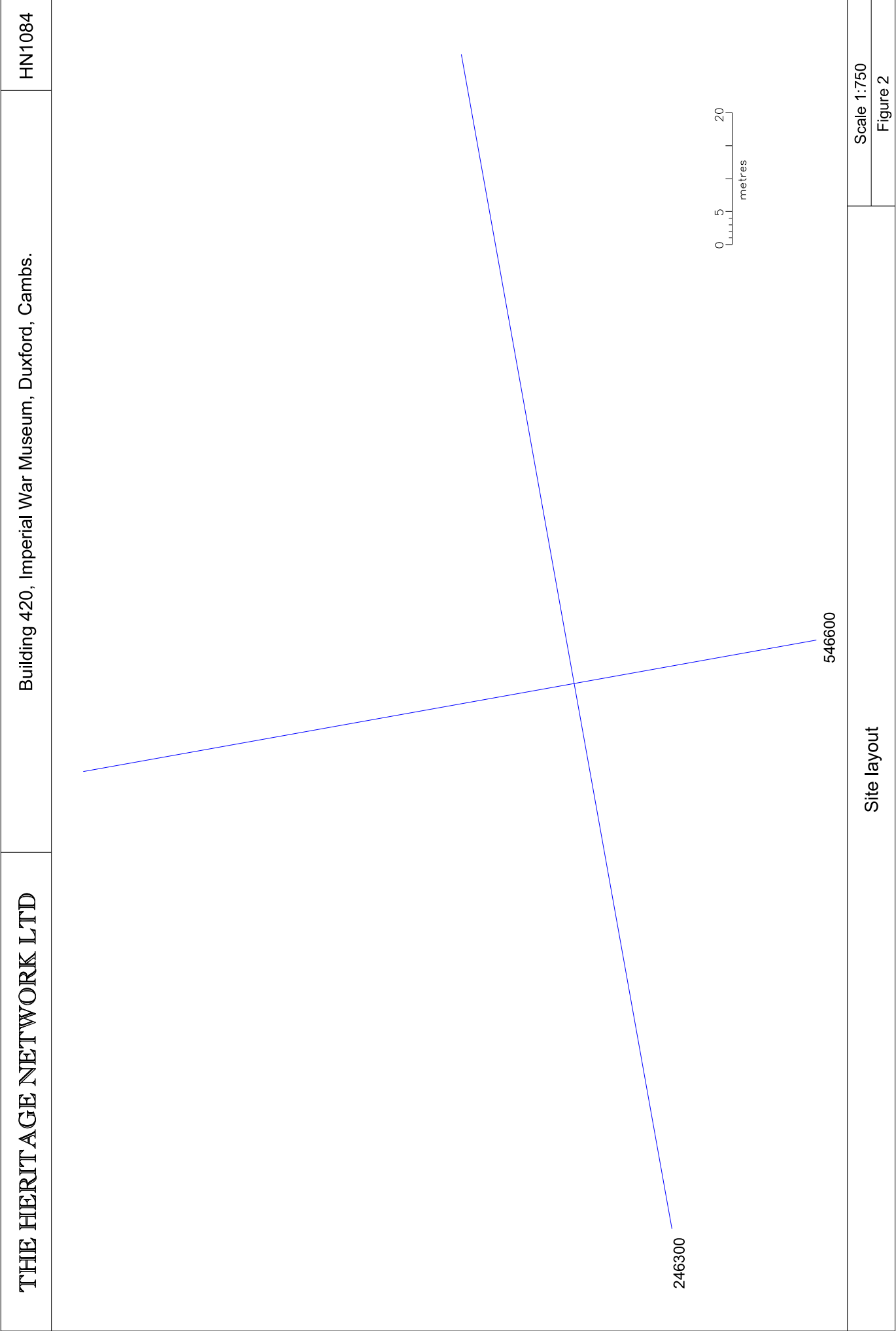
## 6. Illustrations

Figure 1 .....	Site Location
Figure 2 .....	Site Layout
Figure 3 .....	Location of monitored trenches

Plate 1 .....	Eastern drainage trench, looking NW
Plate 2 .....	Drainage trench, indicative section
Plate 3 .....	Soakaway trenches, looking W
Plate 4 .....	Soakaway trench, indicative section
Plate 5 .....	Site of Building 420, looking SW
Plate 6 .....	Footings trench, indicative section
Plate 7 .....	Land drains in S footings trench, looking E
Plate 8 .....	Building 420 under construction, looking SE

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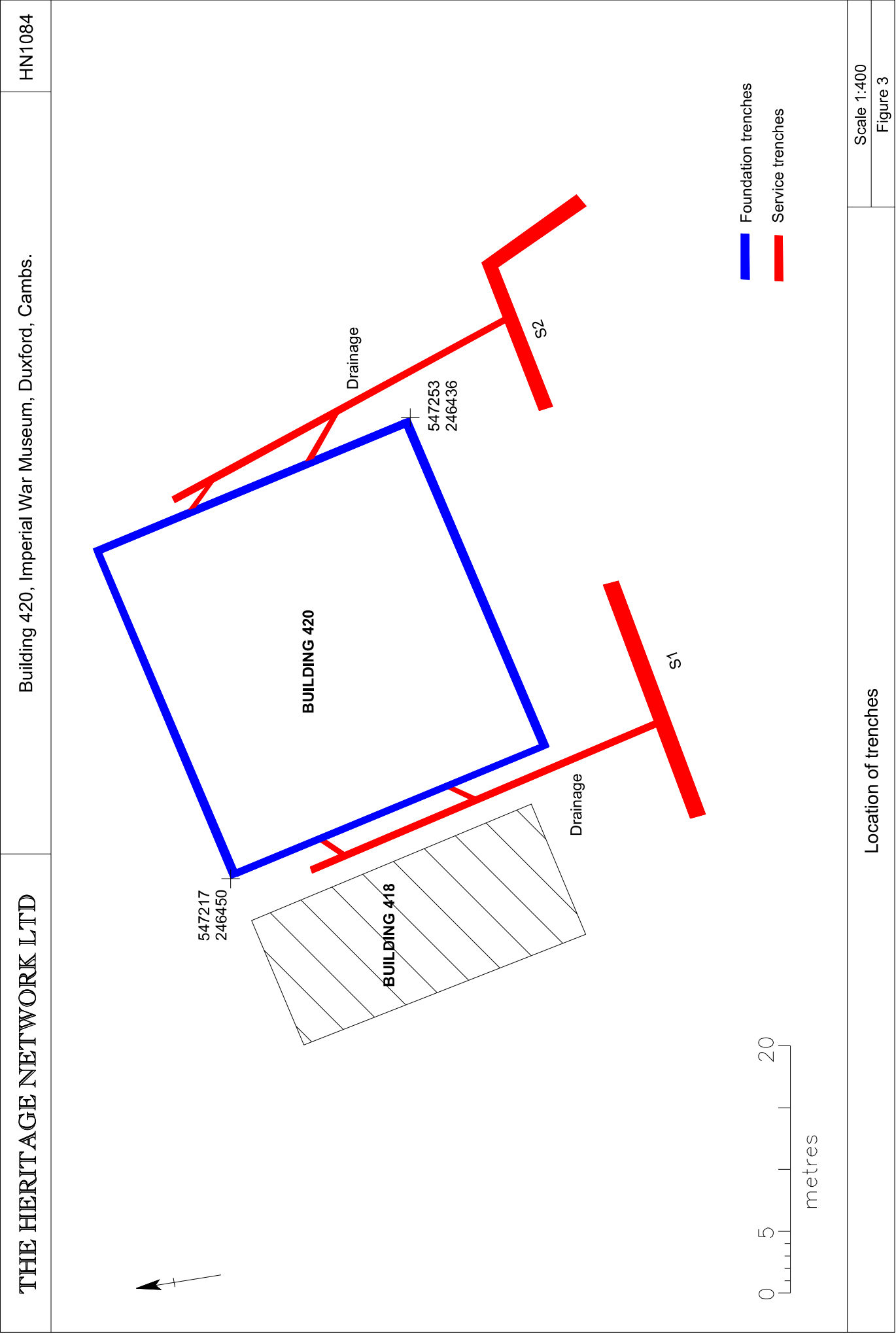






Plate 1: Eastern drainage trench, looking north-west



Plate 2: Drainage trench, indicative section





Plate 3: Soakaway trenches, looking west



Plate 4: Soakaway 1, indicative section





Plate 5: Site of Building 420, looking south-west



Plate 6: Indicative section, E footings trench





Plate 7: Land drains in the southern footings trench, looking east



Plate 8: Building 420 under construction, looking south-east

## Appendix

<b>OASIS ID: heritage1-156695</b>	
<b>Project details</b>	
Project name	Duxford, Imperial War Museum, Building 420
Short description of the project	In response to a condition on the planning consent for the relocation of Building 420 at the Imperial War Museum, Duxford, Cambridgeshire, the Heritage Network was commissioned by the IWM to undertake a programme of archaeological monitoring of the development groundworks. It was considered that the present project could provide the opportunity to investigate the origins and development of settlement at Duxford from the later prehistoric period onwards, and the development of the airfield from the First World War to the present. Modern land drains and a single modern pit were revealed. None of these could be definitely associated with the airfield. No other features, deposits or finds of archaeological significance were encountered on the site.
Project dates	Start: 18-09-2013 End: 21-11-2013
Previous/future work	No / No
Any associated project reference codes	HN1084 - Contracting Unit No.
Any associated project reference codes	ECB4019 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Other 15 - Other
Monument type	NONE None
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	National Planning Policy Framework - NPPF
<b>Project location</b>	
Country	England
Site location	CAMBRIDGESHIRE SOUTH CAMBRIDGESHIRE DUXFORD Imperial War Museum, Building 420
Postcode	CB22 4QG
Study area	1359.00 Square metres
Site coordinates	TL 46669 46290 52 0 52 05 42 N 000 08 28 E Point
<b>Project creators</b>	
Name of Organisation	Heritage Network
Project brief originator	N/A
Project design originator	Helen Ashworth
Project director/manager	David Hillelson
Project supervisor	Greg Jones

Type of sponsor/funding body	Landowner
<b>Project archives</b>	
Physical Archive Exists?	No
Digital Archive recipient	Cambridgeshire County Archaeological Store
Digital Archive ID	ECB4019
Digital Contents	"none"
Digital Media available	"Images raster / digital photography"
Paper Archive recipient	Cambridgeshire County Archaeological Store
Paper Archive ID	ECB4019
Paper Contents	"none"
Paper Media available	"Diary", "Drawing", "Report"
<b>Project bibliography 1</b>	
Publication type	Grey literature (unpublished document/manuscript)
Title	Building 420, Imperial War Museum, Duxford, Cambs: Archaeological monitoring report
Author(s)/Editor(s)	Ashworth, H.
Other bibliographic details	Report no.832
Date	2014
Issuer or publisher	Heritage Network
Place of issue or publication	Letchworth, Herts.
Description	A4 booklet, comb bound, green cover, 10 pages, 3 figures, 8 plates