

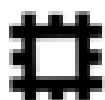
# **MONUMENTS OF WAR**

*The evaluation, recording and management  
of twentieth-century military sites*

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of twentieth-century military sites*

1998



ENGLISH HERITAGE

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Published 1998 by  
English Heritage 23 Savile Row,  
London W1X 1AB

Editor John Schofield

Production editor Pamela V Irving

Design and layout by Mind's Eye Design, Lewes

Printed by: Sterling Press Ltd, Wellingborough

This publication is printed on recycled coated paper and contains  
a minimum of 75% genuine post consumer fibre

## Preface

English Heritage's Monuments Protection Programme (MPP) is carrying out a thorough review of all aspects of England's archaeological resource with the object of providing a sound basis for considering its future management. Initially the Programme saw a concentration of effort on the better known monument classes, archaeological sites in the more conventional sense. More recently, and since the publication of *Planning Policy Guidance 16: Archaeology and Planning* (PPG-16) in November 1990, interest has extended to a range of other monument classes as well as embracing related issues such as the historic character of the whole landscape. Subjects of this type dealt with to date include most types of industrial remains, the relationships between medieval and pre-medieval settlements and their field systems, surface artefact scatters, crop-marks and the recent military heritage. Our approach to these subjects has been to commission research and evaluation work from specialists, consult with professional colleagues and, where there is an interest, to disseminate the results widely.

Our study of twentieth century military remains has been particularly rewarding, both for its success in developing a methodology for dealing efficiently with a complicated subject through the use of archives, aerial photographs and field work, as well as for the interest the work has generated. It has also brought MPP and

English Heritage to the very frontiers of the expanding territory that is now claimed as its subject matter by archaeology. It also brings us face to face with new, and potentially difficult, issues of interpretation for remains that are hard to assess dispassionately by virtue of both their recent date and their original purpose.

The professional response to the MPP survey has been encouraging, with many of the locations now recorded on SMRs, while public interest is increasing as the results become more widely available. Part of making the results of our work available to the wider archaeological community involved organising a day seminar in April 1997, of which this is the published version. These papers, which will be issued free of charge to over 4500 individuals and organisations, are only a start however, and we hope to publish a series of books in due course to satisfy demand still further.

What this document provides is a progress report, describing not only the work of English Heritage in understanding and assessing the resource, but also how the profession is taking responsibility for its evaluation, recording, and management. It is not a straightforward subject for many reasons: its emotional associations; the scale of its architecture; safety and secrecy, and will need to be treated in a pragmatic yet sympathetic way. The debate over how that balance might be struck is still to be held, but current work, and documents such as this, will be a significant contribution in taking it forward.

Graham Fairclough  
Head of Monuments Protection Programme  
English Heritage  
October 1998

## Acknowledgements

Editing and compilation of this publication was undertaken by John Schofield, who also organised the seminar from which it derives. He is grateful to the following who contributed to the seminar, but are not otherwise represented here: John Keegan of the Daily Telegraph; Nigel Clubb of RCHME; and Paul Drury, then of English Heritage. He is also indebted to the Society of Antiquaries for providing facilities and assistance, and Katy MacDermott, Reider Payne,

Helen Morecroft and Clare Dickson for their assistance with preparations and organisation. Jeremy Lake acknowledges the contribution made by Colin Dobinson to the section on airfields. The credits for illustrations appear in the captions.

The views expressed in these contributions are those of the individual authors and not necessarily those of English Heritage or of the organisations the authors represent.

## List of contributors

Dr Colleen M. Beck  
Desert Research Institute,  
1055 E. Tropicana, Suite 450,  
Las Vegas, Nevada 89119, USA

Dr Colin Dobinson  
Council for British Archaeology,  
Bowes Morrell House,  
111 Walmgate,  
York YO1 2UA

Paul Francis  
9 Milton Road,  
Ware,  
Herts. SG12 0QA

Dr William Gray Johnson  
Desert Research Institute,  
1055 E. Tropicana, Suite 450,  
Las Vegas, Nevada 89119, USA

Jeremy Lake  
Listing Team,  
English Heritage,  
23 Savile Row,  
London W1X 1AB

Andrew Saunders  
30 The Plantation,  
Blackheath,  
London SE3 0AB

Dr John Schofield  
Monuments Protection Programme,  
English Heritage,  
23 Savile Row,  
London W1X 1AB

Roger Thomas  
RCHME,  
Shelley House,  
Acomb Road,  
York YO2 4HB

Dr David Uzzell  
Department of Psychology,  
University of Surrey,  
Guildford, GU2 5XH

Angus Wainwright  
National Trust,  
Dairy House,  
Ickworth,  
Bury St Edmunds,  
Suffolk IP29 5QE

Tony Whitehead  
MoD Defence Works Services,  
Rectory Road,  
Sutton Coldfield B75 7GB

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## Abbreviations

CBA	Council for British Archaeology	RCAHMS	Royal Commission on the Ancient and Historical Monuments of Scotland
DoE	Department of the Environment	RCAHMS	Royal Commission on the Ancient Historical Monuments of Wales
FSG	Fortress Study Group	RCHME	Royal Commission on the Historical Monuments of England
GHQ	General headquarters	SMR	Sites and Monuments Record
MoD	Ministry of Defence	USAF	United States Air Force
MPP	Monuments Protection Programme	WWI	First World War
PPG-15	<i>Planning Policy Guidance Note 15: planning and the historic environment</i> (DoE, 1994)	WWII	Second World War
PPG-16	<i>Planning Policy Guidance Note 16: archaeology and planning</i> (DoE, 1990)		

# 1 Introduction

*John Schofield*

In April 1997, English Heritage hosted a seminar entitled 'Monuments of War' at the Society of Antiquaries of London. It attracted a wide audience and covered a diversity of topics and themes relating to the management of the many structures, earthworks and other remains representing the increasingly global conflict which has characterised the twentieth century. The main object of the seminar was to present the methodology and initial results of the survey of archival sources undertaken by Dr Colin Dobinson for English Heritage's Monuments Protection Programme (MPP), a review of England's archaeological resource, one result of which will be a larger and more representative Schedule (i.e. the official list of sites afforded statutory protection through scheduling). It also sought to place that work in its wider context, with contributions covering other aspects of management and presentation both in England and elsewhere.

The following points were among those considered at the seminar and which are further addressed here:

- xAre these remains too recent for an objective and detached view to be taken of their significance?
- xCan the conservation of certain inherently unstable structures, built to last only 'for the duration', be withstood in the present climate of selective conservation and sustainability?
- xShould we in fact put our efforts into recording and then *removing* these remnants of a painful past, one best forgotten, some argue?
- xWill these remains, everyday reminders of war as we travel the length and breadth of the country, prevent us from looking positively to the new millennium?
- xShould we consider them as much a part of our heritage as Roman camps and prehistoric hillforts and devise a management strategy which reflects that?

- Indeed does their recency give them greater relevance to present communities given that for many of us, they are a part of our lives, whether through personal experience, or that of parents and grandparents?

The document divides into three sections:

The contributions of Dobinson, Saunders, and Thomas review current attempts to better appreciate the nature and surviving extent of our military heritage. In a section dealing specifically with management, Lake and Francis outline how sound understanding is required to underpin management decisions, in this case relating to airfield structures. A particularly controversial topic is how the heritage of recent conflict can be presented in a way that tells the story and emotionally engages the visitor. David Uzzell, in the third section, offers some thoughts on this, focusing specifically on Cold War sites.

Throughout the document are a series of shorter contributions, one outlining the diversity of our defence heritage, another describing briefly an aerial photographic study of surviving sites being undertaken by RCHME as a follow-up to Colin Dobinson's archive-led work. A further three contributions act as case studies into how well-known military sites, or groups of sites, have been appraised and managed. These are offered as examples of good practice under very different circumstances.

This document therefore contains the principal contributions to the earlier seminar, rewritten and updated where necessary. It stands as a statement of progress, as well as documenting some of the conservation dilemmas the subject presents to the profession and to the wider public. It is a controversial topic, both for its recency, and in terms of how we should remember conflict, military and civil, and its inevitable human cost. We hope the document makes a helpful contribution to what is becoming an increasingly significant and timely debate as we approach the millenium.



## 2 Twentieth-century fortifications in England: the MPP approach

Colin Dobinson

*One of the principal aims of a sustainable approach to environmental management is ensuring decisions are made on the basis of the best available information* (English Heritage 1997,10)

Towards the end of 1994, as Britain approached the 50th anniversary of the end of WWII, the MPP began work to identify a sample of modern defence sites for statutory protection. In doing so, it recognised an increasing sense of the historical importance of the country's defence heritage, and at the same time responded to growing public concern at the vulnerability of wartime remains, often temporary in fabric, potent in their associations, and today widely neglected.

As a first stage in its national evaluation the MPP commissioned a large-scale survey of documentary records of the modern defence heritage. Sources consulted in this work are the papers of the armed forces and their parent ministries. The particular emphasis is upon WWII but extends back to WWI and before for selected categories of site, and forward into the Cold War (to 1969) for others. The work is entirely new. Many WWII papers were released for inspection at the Public Record Office in the early 1970s, whilst those of the early Cold War era are now emerging from closure under the ThirtyYear Rule; but sources bearing upon fortifications have not previously been subject to large-scale, targeted study, partly because of a misconception that losses among them have been severe. In reality, surviving records for most site types are thorough and precise: sufficient to tell us what was built, when, and why. Here this survey is introduced and, through a case study of England's anti-invasion defences of WWII, some of its results are presented.

### Aims and methods

The survey's chief aims are threefold:

To quantify original site populations, including drawing these together in distribution maps and gazetteers. Locations in the sources generally appear as references on the War Office Cassini grid used by the wartime armed forces (usually to six figures, giving an accuracy of 100m): these are converted to modern National Grid References by a simple manual or photographic (map overlay) process.

To assess the structural character of sites as built, embracing those components which could potentially survive (the brick, concrete and metal) and the more ephemeral features which will leave little or no trace. The sources allow systematic definition of the range of fabric in use. Most military structures were built to standard type-designs issued as registered drawings from the services' works departments, or were local adaptations of them. These drawings identify structural types (pillboxes, decoy control shelters, anti-aircraft gun emplacements and many others) by serial numbers which provide a ready-made typology and vocabulary for examples located in the field, as well as key aids to dating.

To set the sites in their historical context. This is necessary in part because twentieth-century fortifications represent a new body of fabric to many archaeologists; partly, too, because it is the context of the site or structure on which the rationale for protection is built.

The survey also quantifies those sites which have been entered into county Sites and Monuments Records nationally. As might be expected, we find that SMRs significantly under-represent those already known to survive; but in comparing original

#### SCOPE OF THE TWENTIETH-CENTURY FORTIFICATIONS IN ENGLAND PROJECT

##### Phase I

Subject	Dates	Target distributional information
Anti-aircraft artillery	1914-46	Complete
Anti-invasion defences	1939-45	Representative
Bombing decoys	1939-45	Complete
Operation <i>Diver</i> sites	1944-45	Complete
Operation <i>Overlord</i> embarkation sites	1942-45	Complete

##### Phase II

Subject	Dates	Target distributional information
Coast artillery	1900-56	Complete
Civil defence	1939-45	Representative
Airfield ground defences	1939-45	Complete
Radar (with acoustic detection)	1937-45	Complete
Cold War sites	1947-69	Complete in selected categories

populations with those currently recorded, we can assess how representative the records are. More importantly, mapping original site positions enables the fieldwork, on which English Heritage's recommendations for protection must rest, to be carried through economically and in targeted fashion.

## Scope

Five categories of site were defined in the original project design (Phase I) expanded to eleven in Phase II, which began in the summer of 1996 (*see table* – where two of these categories, radar and acoustic detection, are conflated). Reports on the Phase I sites were circulated to SMRs in December 1996, and those of Phase II will be available in 1999. Beyond these MPP reports, the project has also completed a study of military airfields for English Heritage's Listing Team, complementing work on historic dockyards and army barracks undertaken by others, in conjunction with the MoD (*see section 5 Thematic reviews below*). In the summer of 1997 the English MPP model was extended by a further project covering the remainder of the United Kingdom. Undertaken by Neil Redfern and sponsored by RCAHMS, Cadw and DoE Northern Ireland, this 'UK extension' has produced comparable data to those garnered for England. It is intended that the MPP work will ultimately be published.

For those subject areas where complete distributional information has been provided, follow-up work includes checking rates of survival, either through aerial photographs and map-based work using the Aerial Survey branch of RCHME (for decoys and anti-aircraft sites, radar and coast artillery *see p6*), or using existing knowledge (for airfield defences for example). This information, set against the typological and distributional framework provided by the archives, will be used as a basis for making management (including scheduling) recommendations. For the other subject areas, as well as those not being covered by the project, we will look to field recording undertaken as part of the Defence of Britain Project (*see section 3 below*) to provide information on surviving examples.

## Anti-invasion defences of WWII

The project's results can be illustrated by a brief look at the most populous of the site categories studied so far, the anti-invasion defences of WWII. Here the locations of the defensive stop-lines have been accurately located and plotted (*see map*), but the sheer numbers of sites has meant that their locations could only be presented at a representative level. Fabric from this episode in England's defence history is widely familiar: scattered remains of pillboxes, roadblocks, anti-tank obstacles and a host of other works are all about us. Their purpose was singular. Faced with an imminent German invasion, in the early summer of 1940 the army's Home Forces commands set about fashioning a vast strategic system to delay, engage,

and repel landings by air or sea. Built wholly from scratch, the basics of this layout were in place before autumn 1940, although, as will be demonstrated, the chronology of its building, and its geographical extent, reached far wider than is often supposed.

The character of Britain's anti-invasion defences of 1940, and something of the atmosphere in which they were built, are vividly expressed in one of Winston Churchill's widely-known speeches of the early war period:

We shall defend our island, said Churchill, whatever the cost may be; we shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender.

To most modern readers these words might first suggest qualities (tenacity, community, solidarity, defiance) with which Britain won the war. Yet Churchill's peroration also implies places; an island of beaches, fields, streets and hills, the theatre of a great battle for survival. Beyond their emotional appeal, Churchill's words also reflect the layout of the defence fabric spreading around his audience as they listened on 4 June 1940. In the following months these works transformed Britain's landscape into a vast fortress.



*Map of defensive stop-lines in England in late 1940, taken from archival sources. This adds much detail to the maps previously published (drawn by Colin Dobinson)*

These defences were marked by diversity, breadth, intensity of effort, and massive investment in labour and materials. Vulnerable beaches were hardened with concrete and steel anti-tank obstacles, minefields, barbed wire, flame weapons and infantry and artillery fieldworks, and pillboxes. Churchill's 'landing grounds', areas suitable for German troop-carrying aircraft, were systematically obstructed with improvised obstacles, poles, wire, and trenches; many were also defended by infantry positions. Through the fields and hills, extensive linear systems of defence, termed stop-lines, were created from natural and artificial obstacles to tanks. The streets of many towns and villages were protected by their designation as anti-tank islands, fortified settlements at major road intersections. By late summer 1940, as the Battle of Britain raged overhead, the defences were everywhere growing, their construction in the hands of a workforce numbering some hundreds of thousands. This was the most intensive building programme ever undertaken by the army's Home Forces commands.

It was also a highly extensive campaign, reaching more widely in time and space than some subsequent commentaries imply. Britain's anti-invasion defences are today identified chiefly with the period from June to October 1940, when soldier and civilian turned builder to fashion the vast strategic system planned by General Sir Edmund Ironside, briefly Commander-in-Chief, Home Forces. Geographically, the invasion threat, and Britain's preparations against it, are often assumed to have flowed outwards from a cross-Channel axis between northern France and south-eastern England. As a result, their surviving traces are often seen as representing an archaeological horizon so brief, around sixteen weeks, as to be treated for most purposes as a synchronic event.

When we look closely, however, the programme emerges as longer, more complex, and more regionally varied than this simple model allows. The first defences were put in place during May 1940, under Ironside's predecessor, at ports, on landing grounds, and in London. Late June saw the start of building for some major systems, but construction of many did not begin until late July or August, and some were not established until the end of the year. For the first three months of the programme the eastern area of the country, from the Wash down to Newhaven, saw the most intensive work, far outstripping the southern heartland and the north. Yet the imbalance was corrected with time, and when seen in the round there is no part of the United Kingdom which was not defended. Over much of the country the works were numerous and highly visible. The opposite impression perhaps began to harden after publication of the official history of this episode of the war. Appearing in 1957, this said little about works in general, and less about those in the north and west.

These points emerge clearly from the near-complete mapping of the inland defensive systems established in England between the summer of 1940 and early 1941.

Returning to the primary documents created by Home Forces' units (orders, reports of construction, war diaries, and a host of others) we find the routes of the vast majority of these systems, and the locations of many of their individual components, to be recorded using references on the War Office Cassini grid.

Converting these to National Grid References and plotting the inland fortified stop-lines and other linear systems onto modern maps (see map p3) shows the extent and complexity of the national layout. In particular it reveals the strength of linear fortification in the west and north, a pattern which the UK-wide extension has recently established exists throughout Wales and Scotland. Northern Ireland, too, has linear defences approaching this density. Although the official history was silent on the point, the strength of the western defences, never before mapped, was largely the product of fears of the Germans mounting an invasion via a captured Republic of Ireland, or with dissident collusion from Ulster.

What do these systems consist of on the ground? The answer varies according to geography and chronology. Major stop-lines constructed in the south and east (across East Anglia, from Kent to Somerset, and around London) are the earliest, and generally the most heavily fortified. In common with all the other linear systems these lines exploited existing natural or artificial barriers (railway embankments, rivers and canals) to block the advance of tanks, supplemented where necessary by vast artificial anti-tank ditches. Overbridges were prepared for destruction by mined charges, such that a landing which had penetrated the equally heavy beach defences in any area would be halted by a single impassable barrier. Either side of this barrier, and especially at its weak points, were weapon positions (pillboxes, anti-tank guns, and earthwork weapon pits for infantry) from which fire would be brought to bear on the halted army. In the first instance these systems acted to contain the advance, giving time for reinforcements to rush to the battle and beat the invader back to the sea. But failure of any one system would result in the next being activated, obliging the Germans to fight several such battles before reaching the final 'GHQ Reserve' position: the last line of defence (see fig p22). Many of the lines in the north, the west Midlands, and Wales differ in lacking the solidly built infantry positions (notably pillboxes) common in the south and east, but the principle on which they would operate was exactly the same.

If May 1940 saw the beginning of this work, we now know that the German advance on the USSR in June 1941, Operation *Barbarossa*, marked the end of the invasion threat. At the time, however, the Soviet war was recognised only as an easing of pressure for the British: a respite during which the labours of the previous year could be consolidated and gaps in the defences closed. New emergency works continued to be built and existing ones maintained throughout 1941, and it was September 1942 before the system

reached its limit of expansion. The fifteen months separating *Barbarossa* and the cessation of new building was a period of adaptation, in which the system planned in the summer of 1940 was much modified. Pillboxes, for example, were most popular in June 1940 when the weight of construction was in the south and east. But in time, military planners condemned them as too static and inflexible to meet German tactics, which experience on the continent had shown to be fast and highly mobile. So pillboxes fell from favour, and were abandoned completely in February 1942. By this time, linear defence itself was also under question. In 1941 the major shift in Britain's anti-invasion preparations was away from stop-lines and towards nodal points in the communication network. Similar adaptations were spurred by new weapons, both friendly and hostile. The 29mm spigot mortar, for example, was not issued until the very end of 1941, and most of its humble concrete pedestal mountings (one of the commonest survivals today) were not set up until 1942. There is a complex chronology here, whose evolution was ultimately shaped by events in Continental Europe. In this respect the true context of these works is neither English, nor British: more than any other category of WWII fortification, it is European.

We also know a good deal about how and why these defences were cleared. By 1943 the Allies were looking ahead to the invasion of occupied Europe, and to the

operation which would become *Overlord* in June of the following year. Although invasion of Britain in 1943–4 was more or less ruled out by intelligence experts, a significant proportion of defence works continued to be maintained, particularly against small-scale raiding. Yet many were dismantled. A key factor in the fate of the defence infrastructure in the run-up to *Overlord* was the Allies' increasing demand for steel to supply industries manufacturing invasion material (landing craft, weapons, ammunition) the vast stock of equipment needed to seize Europe from the Germans. Roadblocks in particular, were dismantled in huge numbers during 1943–4, supplying thousands of tons of steel scrap. Many other works were cleared from early 1944, as defence planners conceded to alternative claims on land and government began to examine post-war priorities. Aircraft obstructions, tubular anti-tank scaffolding on beaches and some concrete works were decommissioned at this stage, although the vast scale of the original programme meant that some would remain for many years, in some cases, as we know, to this day. This protracted retention of anti-invasion measures was, of course, the fruit of policy: it was autumn 1944 before the Chiefs of Staff irrevocably discounted the possibility of a German invasion of Britain. No-one knew that the Germans had reached the same conclusion three and a half years earlier.

## Survival

Although there are impressive levels of survival up and down the country, by the autumn of 1996 anti-invasion defences had created only 2545 records, most of them pillboxes, on the 40 English SMRs available to the survey. Those around us now are but a small fraction of the original total. Throughout Britain at least 20,000 pillboxes were built during this programme, more than half of them in the first sixteen weeks, together with hundreds of miles of concrete obstacles and artificial anti-tank ditch. Hundreds of towns and villages were prepared for all-round defence, and many thousands of acres of farmland obstructed against aircraft.

Despite the sterling work of field recorders over the last twenty years or so, similar under-representation is

found among all the site categories studied. Original populations for many of these are huge. For example during WWII 2270 Heavy Anti-aircraft batteries of various kinds are documented in England, excluding positions established from the summer of 1944 to meet attacks from the flying bomb; we have grid references for 1190 of those. Some 602 sites were occupied by bombing decoys of different designs. When we add radar stations, coast artillery batteries, civil defence sites, and fabric of the Cold War, the figure multiplies further; for the UK as a whole this survey has now plotted more than 10,000 individual grid references. As a result, SMR enhancement is now proceeding. And armed with these near-comprehensive gazetteers, strategies for identifying and protecting a sample of what survives can proceed from a secure base.

## Aerial photography in MPP site evaluations

*John Schofield*

Since Colin Dobinson's first set of reports became available in 1996, the MPP have been exploring ways of rapidly checking which sites survive, and to what degree of completeness. Given the timescale of MPP (due for completion around 2010), and the speed with which sites are being lost, some urgency was called for. A variety of approaches have *now* been adopted.

For those monument classes where site distributions resulting from Colin Dobinson's work are representative (see table p3), we are awaiting the conclusion of the Defence of Britain Project, and will use its information on survival to determine which sites merit some form of protection, whether statutory or otherwise. Where there are classes of monument for which expert knowledge already exists, for example on the subject of airfield defences, we can commission desk-top studies which provide the information we need. For those sites where distributional information is complete, and which are potentially visible from the air, a rapid aerial photographic and map-based survey is being undertaken. Following a short pilot study (by Susan John at RCHME Aerial Survey) to determine the effectiveness of this approach, this project has now been extended to full national coverage. This work continues to be based at RCHME Aerial Survey, but undertaken by Mike Anderton.

The project involves checking the National Grid *References* listed in Colin Dobinson's reports for anti-aircraft artillery, Operation *Diver* sites, bombing decoys,

radar, and coast artillery of WWII. It includes assessing in broad terms what of the original site survives, and entering the results onto a database. For all three classes the most recent Ordnance Survey *map* cover is consulted *first*. It is generally a simple matter to establish from the maps whether sites will have been removed (for example post-war housing developments on the sites of bombing decoys), whether they are still present (Heavy Anti-aircraft sites tend to have a distinctive array of built structures which can be seen even at 1:50,000 *scale*), or whether further checks using the RCHME's collection of aerial photographs are worthwhile.

Initial results of this work suggest that some 20% of Heavy Anti-aircraft sites survive in *some* form, though near-complete examples are rare. Light Anti-aircraft sites and decoys however are rarely visible to any degree of completeness. Regional variations in survival appear quite pronounced. For instance, in the Leeds Gun Defended Area 32% of its Heavy Anti-aircraft sites survive in some form, while the figures for Solent, London, and Humber are 36%, 20%, and 52% respectively. The same is true of bombing decoys: none appear to survive around London, while two have surviving remains in both the Leeds and Humber Gun Defended Areas, and eight in the Solent area.

From this study we have established that the approach is successful and will provide the information required to generate and support recommendations for protection in these selected classes.

### 3 The Defence of Britain Project

*Andrew Saunders*

Complementing Colin Dobinson's research into various categories of defence sites, the Defence of Britain Project is primarily an archaeological survey, recording and evaluating what still survives and in what condition. The combination of archival research and aerial photography will identify surviving examples in some categories of site but for others such as anti-invasion defences, on which the project is currently focussing, there is no satisfactory alternative to fieldwork. For most site types the project aims to provide a basis for informed conservation policies, but it goes further in enabling greater understanding of how the surviving sites and associated technologies relate to other categories of defence works, whether of the twentieth century or of earlier periods, and in their broader relationships to landscape archaeology.

#### Origins and organisation

The Defence of Britain Project was publicly launched by Viscount Astor at the Imperial War Museum in April 1995. Its subtitle sums up the project's purpose: a national field survey of twentieth-century military sites and structures. The project had been conceived long before by members of the Fortress Study Group who identified the need for a survey of twentieth-century defence structures in the face of rapid disappearance of sites through coastal erosion and demolition. From the

outset it was recognised that wide public involvement was needed, both to identify and record surviving remains, to draw on the memories of those who built or manned those defences, or who simply remembered where they were. The test bed for the FSG's recording process was the Holderness Survey commissioned by RCHME in 1992. A concentrated long weekend of fieldwork simultaneously recognised 134 new sites over and above the 113 already identified from desktop study and without aiming to be comprehensive.

The project is UK wide. It received initial support and funding from the Department of National Heritage Challenge Fund which, with matching grants from charitable trusts, enabled a core staff of two to be employed. The project is administered by the Council for British Archaeology and overseen by a panel, chaired by the author, representing the local and national organisations which have a direct interest in the results: Association of Local Government Archaeological Officers, Cadw, Council for Scottish Archaeology, English Heritage, DoE Northern Ireland, FSG, Historic Scotland, Imperial War Museum, Public Record Office, and RCHME, RCAHMS, and RCAHMW. All these organisations are involved in one way or another. The project has its headquarters and archive at the Imperial War Museum, Duxford and Duxford is very much the shop window and public point of contact.



*Eroding coastal battery at Ringborough, East Yorkshire. (photo: RCHME, Crown copyright, ref NMR 12482/11)*

## Operation and objectives

The project is based on voluntary effort. There are eight area co-ordinators, and the active field workers across Britain number about 170 with several hundred more occasional contributors. Area co-ordinators also play an educational role in the wider community as well as pursuing common recording standards and providing help with identification. Many of those closely involved in the project have particular specialisms. For example, over many years John Guy has examined every WWII emergency coastal battery. Others have surveyed particular stop-lines in all their complexity. Some individuals and groups are involved in conservation efforts and the restoration of particular sites.

The project's objective is to collate all these observations and records within a dedicated database. This will offer both site identification and condition reports and will be fed into SMRs and national records. For certain types of site it will determine the extent of survival by category as well as geographically, and for these classes it will provide a planning tool enabling

policies for selective conservation to be devised at local and national level. It is intended that the contents of the database will be available for public consultation. The project also has a broader archaeological purpose. These are monuments which have impinged on the historic landscape, have embodied natural features as well as creating lasting change. Individual categories of site frequently interact with each other and coalesce to form complex groupings. The scale and variety is huge. Many sites are also vulnerable. The structures themselves were built in a state of emergency with no thought of permanence. Many are therefore prone to decay and the information they contain will be lost unless speedily recorded. Many documents and photographs which were in private hands have already been lost. The project is helping to integrate such material with the site records and is collaborating with the Public Record Office and the Imperial War Museum for their future archiving. It has to be acknowledged that memories of those who took part in the building and manning of these defensive installations are fading and eyewitness evidence will soon be rare.

## Our twentieth-century military heritage

*Andrew Saunders*

WWI and the years immediately before it saw the introduction of the balloon and the aeroplane. This led to the creation of airfields, primarily for defence, and the first fixed anti-aircraft measures. While the prevailing vision of WWI is the human attrition on a huge scale in the static trench warfare of Flanders, the possibility of a German invasion in south-east England was also a factor in the minds of military planners. The bombardment of Yorkshire towns by the German fleet was an early event in the war. This led to the enhancement of coast batteries. Defensive stop-lines of trenches supported by concrete pillboxes were constructed in the south-east and East Anglia and naval harbours were ringed with defences.

### **Selected site types**

- Airfields
- Sea forts
- Coast batteries
- Early warning (sound mirrors)
- Pillboxes
- Defence lines (entrenchments)

WWII brought with it a highly mechanised form of warfare co-ordinated with air power which demanded measures to thwart the mobility of the tank and the development of more sophisticated early warning systems of air attack. The reality of total war involved the whole civilian population, whether serving in industry or by attack from the air.

### **Selected site types**

- Anti-aircraft defences
- Airborne landing precautions
- Airfields
- Airfield defences
- Beach batteries
- Coast batteries and forts
- Civil defence (air raid shelters)
- Bombing decoys
- Radar sites
- Experimental establishments
- Factories
- Observation posts
- Anti-invasion defences  
(including pillboxes, road blocks)
- Resistance cells

The Cold War phase brought with it our attempt to come to terms with nuclear warfare and the desperate measures to obtain early warning of attack.

### **Selected site types**

- Airfields
- Missile launch sites
- Radar and communications
- Bomb shelters
- Peace camps
- Underground monitoring posts



## Progress and achievement

At the time of writing, some 6000 report forms have been lodged at Duxford, and this does not include Henry Wills' pillbox gazetteer which rests with the National Monuments Record, and the many sites, mostly pillboxes, that are included on county SMRs. It also excludes thousands of sites held in individual databases as well as those potentially surviving sites now known through Colin Dobinson's archival research, and follow-up work by RCHME. How much duplication is involved we will not know until everything is logged on the project's database. There is therefore a crucial step to take in getting the material ordered and survey priorities more closely defined. It is important to note that each report has a notional cash value which can be used to match Lottery Funding, which the project has successfully attracted.

Importantly, the Defence of Britain Project provides a link between the amateur sector and the national bodies already listed. It has an educational role both for its own fieldworkers and the interested public and here we have tangible success. The project has produced its own handbook *Twentieth-century defences: an introductory guide*, an aid to identification which was written mainly by members of the FSG and published by the CBA. This has sold over 2000 copies and has gone to a second edition. There is a quarterly newsletter *Defence Lines* with a readership of some 3000. In collaboration with the publishers Brassey's, a series of regional surveys is in production written by participants in the project and covering their own areas. Finally a publicity video is in production and a dedicated exhibition within the museum at Duxford has been prepared.

The degree of involvement with the public has been logged and this totals in excess of 2000 enquiries. Media coverage has been good and public collaboration is sought through day-schools as well as publications. BBC 1's *Blue Peter*, with the participation of the CBA's Young Archaeologists Club, produced a small stampede of nine and ten-year-olds anxious to help.

## Fieldwork

Fieldwork does, or should, go beyond simple 'stamp collecting' and compiling of totals. As was mentioned earlier, English Heritage used staff at Aerial Survey (RCHME) to check the references in Colin Dobinson's gazetteers for surviving Heavy Anti-aircraft sites and bombing decoys, radar and coast artillery sites, while the Defence of Britain Project is looking at anti-invasion measures amongst other things. But also important is the extent of associated remains; trenches, weapon pits, and what have traditionally been referred to as anti-glider ditches, which were subsequently quickly backfilled but remain as buried features. Perhaps the best preserved examples of anti-glider ditches are those contained within the boundaries of the famous Sutton Hoo barrow cemetery. Also there are composite sites which include several different categories of monument, such as the radar establishment at Dunkirk near Canterbury. Some sites present difficulties in identification, or their surrounding traces may be ephemeral. Decoy sites for example are generally identifiable only from their associated control structures. There can be confusion between WWII sites and earlier sites visible on aerial photographs: what was thought to be a small ringwork may turn out to be the setting of a WWII searchlight. The evidence for roadblocks can now be very slight: mining chambers below the road surface, concrete blocks, steel rails, and flame fougasse.

The Defence of Britain Project unites several disparate interests, amateur and professional, individual and corporate. The purpose is common, the archaeological interpretation and recording of features which are disappearing and not wholly understood. It is especially rewarding that this work complements the documentary research of Colin Dobinson. As we all know, archaeological evidence and the written record may sometimes in isolation offer different and conflicting interpretations, but can be co-ordinated to good effect.



## 4 RCHME recording programmes: monuments of the Cold War

*Roger Thomas*

### Background

The RCHME have recently started recording modern military architecture in response to a gradual shift in public and official attitudes during the last decade. There is now considerable interest in recent military structures, and an increasing demand to make a record of those threatened by neglect and destruction.

Until now, field recording by both the archaeological and architectural divisions of the RCHME has been reactive, undertaken in response to requests from private individuals, councils and military authorities. Such work was carried out at a number of levels, ranging from a basic photographic record to a full ground survey, and aerial photography. A wide variety of sites was encompassed by this work: the Royal Dockyard, Sheerness; Bowaters Farm Heavy Anti-aircraft Battery, East Tilbury; Brean Down Fort, Weston-super-Mare; the Royal Marines Barracks, Deal. In addition to the work of the field recording sections, the RCHME has also been making a record of the MoD land disposals. To date 129 disposal notifications have been received from the Defence Estates Organisation. These sites have included everything from mid-eighteenth-century fortifications at Priddy's Hard, Gosport, through to the massive hardened aircraft shelters at RAF Alconbury, specifically designed for American TRI intelligence-gathering aircraft.

The variety of building types and the sheer number of structures encountered to date has been immense, as has been the physical extent of many of the sites. Also, while this work was underway it became apparent that due to the idiosyncratic nature of the types of site thrown up by the MoD disposals, it would be impossible to produce a coherent understanding of the range of building types and technologies encountered. In view of all these considerations, the RCHME has reappraised its approach and a decision has been taken to undertake a more focused project, recording the monuments of the Cold War.

### The Cold War Project

Unlike any of the previous recording exercises of the RCHME, the Cold War Project has had to take into account a number of factors that inhibit the creation of a complete record, the most obvious of these being official secrecy. A substantial volume of records does exist, but the Thirty Year Rule and other constraints mean that many will remain closed for some considerable time. The use of existing Ordnance Survey maps is also of limited value, as many sites are not shown.

One major difference between the Cold War Project and previous surveys conducted by the RCHME has been the difficulty of establishing the original function of individual structures, or complexes on active

military sites. Although a site may have been in continuous use throughout the period of interest, the rapid turnover of personnel and technologies used often results in the current staff being unable to assign a building's original function.

The ephemeral nature of many of the structures and their associated equipment can also pose a problem. Once disused, the structures are usually removed leaving very little evidence of their existence. More often than not, the only remaining evidence is a concrete hardstanding with projecting holdfast bolts. This problem can be further exacerbated by the fact that many structures are portable, such as the pre-cast concrete Yarnold Sangars, which are used as defence and sentry posts. Notwithstanding these problems, the recording methods adopted are not dissimilar to those for any other class of building:

- x preparation of an overall site list based upon historical, functional and technological merit
- x examination of primary and secondary documentary sources, assisted by Colin Dobinson's archival research
- x inspection of available maps
- x assessment and interpretation of aerial photographs held on the National Monuments Record
- x viewing of existing site photographs
- x selection of sites for field visits
- x field survey of individual sites, using a variety of techniques
- x assimilation of information, production of site reports and survey drawings
- x curation of records

For various reasons it has not always been possible to conform rigorously to this sequence. Ideally, documentary research will precede fieldwork. However, this is not always possible. Disused military structures can be dismantled for reuse elsewhere, or can pose a security risk. As a consequence, the window of opportunity for field recording can be remarkably narrow. For example at the NATO Forward Scatter Station at RAF Stenigot, Lincs, there was an urgent need to record the site before demolition, and archive material on the 'Ace High' tropospheric communication system was unavailable. The field recording of a nuclear weapons store at RAF Finningley was driven by the need to make a record before health and safety work

# Orford Ness

Angus Wainwright

The ten mile shingle spit known as Orford Ness is one of the wildest and most isolated spots in eastern England, making it ideal for military experiments. An airfield and bombing range had been established here in 1915, and work on the site continued into the 1970s, culminating in the development of the UK's atomic bomb. This long history of experimentation has left an array of buildings and structures, most in an advanced state of dereliction when the National Trust took over the site in 1993.

The Trust's initial work at Orford Ness concentrated on assessing the historic importance of individual structures, which was determined under the headings: rarity, association with a historic event, and demonstration of a process. However, as understanding of the site developed, the special aesthetic and symbolic importance of the structures also became clear. Natural processes such as decay and colonisation contributed to biological diversity, while the sight of dereliction and decay in this wild landscape has much to tell us about our relationship with the natural world in the twentieth century. The atomic bomb laboratories, the 'pagodas', are a good illustration of the symbolic power of such structures: their colossal sculptural forms are impressive enough without knowing their purpose, but once this purpose is understood they take on added significance. Only buildings as imposing as these can represent the enormity of the Cold War's cultural impact.

The level of understanding developed at Orford Ness has affected all aspects of its management. Where possible, no tidying up or vegetation control was undertaken; in some areas no intervention at all will take place, and buildings will be allowed to decay, their original form recorded, but their impact on the landscape allowed to take its course. Management of a site like this can only progress successfully if all aspects of its significance are understood. Only then can the conflicts that inevitably arise between historic, aesthetic, and natural ecological values be resolved.

*Orford Ness, May 1993, soon after its acquisition by the National Trust, here showing the tidal mudflats at Stony Ditch with saltings on each side, and the so-called 'pagodas' in the background (photo: National Trust Photographic Library/Joe Cornish)*

changed the appearance of the structures. This work entailed infilling with earth all of the entrances to various buildings to prevent the risk of trespassers falling between the concrete retaining walls.

## Site types

The sites selected for survey fall into one or more of eight functional classifications that provide a basic framework for the project:

- Air Defence
- Nuclear Deterrent
- USAF Air Bases and Depots
- Ballistic Missile Early Warning
- RAF Bases and Depots
- Royal Observer Corps and the UK War Monitoring Organisation
- Communications, Research, and Development
- Civil Defence

Due to the close interrelationships between these classifications, it is not always possible to use them in a definitive manner, and a certain degree of flexibility is essential.

The largest single class is Air Defence, which embraces a variety of building types and defence systems established to provide: early warning of air attack, ground control of fighter aircraft, visual observation, anti-aircraft artillery, surface-to-air guided weapons, and fighter airfields. The class can be further subdivided into control and reporting, and the defensive response. The control and reporting classification includes the development of radar from the Rotor Plan (a plan issued in 1950 for the restoration of Britain's air defence control and reporting network) through to the recent UK Air Defence Ground Environment (UKADGE); while the response aspect includes the development of fighter facilities at airfields, and structures that illustrate the change from 'point-defence' (anti-aircraft gun sites protecting cities and industrial centres) through to surface-to-air guided weapons defending the nuclear bases. A similar subdivision of building types and function exists in all of the other classifications.

One further aspect of the Cold War has been the presence of the US armed forces in the British Isles. In general, the Americans occupied former British bases; however, the fact that they built uniquely American-designed buildings on those bases tends to be overlooked.

These include both operational and non-operational structures, such as the ground-launched cruise missile shelters and the shopping mall at Greenham Common.

## Technology

Whether it was built to test new equipment, or was designed to operate in a nuclear, bacteriological and chemical environment, or was built to resist the effects of blast, the design of Cold War architecture has invariably been driven by technology. Indeed the rate of technological change has resulted in a very rapid redundancy of buildings and equipment used. Some structures have been abandoned, while others have been adapted for new roles. The former Regional Government HQ at Hack Green, Cheshire for example was originally a radar station.

During the early years of the Cold War, the majority of new structures were built on a massive scale to resist

nuclear blast. Underground operations blocks, part of the RAF's Rotor scheme, all had ten feet thick reinforced concrete walls. The cost of these underground structures was immense and as a consequence a number of the later phase sites were built on the surface. Even these surface operations blocks were designed to be capable of resisting a 1 kiloton bomb at 300 m, or a one megaton bomb at 2.6 km. Equally remarkable was the fact that, over a period of 1½ hours, the temperature of the inner surface of the exterior walls would rise by only 15°C, when the exterior temperature was 300°C.

The range and complexity of Cold War architecture encountered, and the rapid loss of structures and equipment, emphasise the urgent need for the current analytical survey by the RCHME. On completion of this work it is intended to produce a publication, using both line drawings and photographs, to elucidate how the buildings functioned.

## 5 Thematic reviews: military aviation sites and structures

*Jeremy Lake and Paul Francis*

*By understanding the historic environment and our perceptions of its value, the essential first step, we can begin to decide which bits of it we wish to conserve and in what form, which bits may be less important, and which parts we may wish actively to change and enhance (English Heritage 1997, 7)*

The principle underlying English Heritage's thematic listing programme is that thorough research and survey work provide the only safe basis for definitive assessments and designations. The thematic study of military aviation is the third, after barracks and naval dockyards up to 1914, in a series which has been undertaken in consultation with the MoD and other owners. The timing of these surveys has been prompted by the MoD's reassessment of its estate and the historic buildings in its ownership and care. As military airfields are threatened by disposal and redevelopment, there is now a pressing need to identify the most significant sites and structures. The challenges posed to a sustainable and coherent policy for protecting the best and most strongly representative sites and structures are presented.

### Historical context

Air power was initially conceived as an adjunct of the army and navy, and the first military airfields were built for the army around Salisbury Plain and for the Royal Naval Air Service around the coast. During the course of WWI, its potential as an independent arm of the armed forces became increasingly clear: the first German fixed-wing bomber raids on coastal towns in Kent and then London in 1917 had a considerable effect on the morale of the civilian population, and this new danger was met by the establishment of sixteen squadrons of fighter aircraft, 480 anti-aircraft guns and 706 searchlights with a centralised control system. It had become apparent that the distribution of airfields, away from the coastal concentration of artillery forts and batteries and forming a defensive arc around the capital, represented a significant shift in the conduct and logistics of warfare.

When the RAF was formed as an independent force in April 1918, Lord Trenchard founded it upon the concept of offensive deterrence, a principle which guided the siting and layout of stations until WWII. Trenchard's expansion of the air force, from 1923, was centred upon the building of offensive bomber bases in East Anglia and Oxfordshire, behind an 'aircraft fighting zone' some fifteen miles deep and extending round London from Duxford in Cambridgeshire, to Salisbury Plain. All of these stations were planned in accordance with Trenchard's requirements that fabric must be dispersed against attack. In all cases, the technical site, comprising hangars and workshops, with the guardroom and station headquarters placed at

the site entrance, was separated from the domestic site with its barracks, institute and mess.

Political and financial factors had prevented the completion of Trenchard's scheme, but the collapse of the Geneva disarmament talks, in 1933, prompted the government to embark on its largest inter-war expansion of the air force. The siting of new airfields anticipated the logistical challenges of another war, with training and storage bases placed behind an eastern front facing Germany. The distinct improvement in the aesthetic quality and design of these stations, and especially those completed under the first scheme of building, can best be understood in the context of the government's awareness of strong public resistance to rearmament and the growing strength of the conservation lobby. The newly-formed Royal Fine Art Commission provided advice to the Air Ministry over the planning and design of new sites. The impact of new airfields had concerned the (then) Council for the Preservation of Rural England, and the Air Ministry's use, for example, of local limestone facing for the Flying Training School at Hullavington near Chippenham shows that they took account of public sensitivity. The buildings erected for much of the Expansion Period were based upon a range of type designs, characterised by a homogeneity of materials and careful control of proportions: a clear distinction was made between neo-Georgian domestic and more stridently modern technical styles. Stations of the later Expansion Period contain different building types, including the use of concrete to speed up the building process, and flat roofs to counter the effects of incendiary bombs.

### The resource

Military airfields have had a considerable impact upon the landscape, and were built in great numbers: 301 air bases at the end of 1918, most of which were subsequently abandoned; more than 100 built in permanent fabric between 1923 and 1939; and the country's total of 150 expanded to 740, mostly in temporary materials and on dispersed sites, during WWII. Airfields had many different functions including the training of technical and flying personnel, flying boat bases, Advanced Landing Grounds, Aircraft Repair Depots and Aircraft Storage Units. Airfield sites break down into the separate functional areas of flying field, domestic and technical sites, with provision for close defence in the form of pillboxes and battle headquarters, particularly in the early years of WWII. Airfield building types can be broken down into many different groups, such as barracks, hangars, control towers and synthetic training buildings: all of these can vary in their planning and other features, according to their date and function.

## The Ministry of Defence Estate

*Tony Whitehead*

The MoD has the largest number and proportion of historic buildings in the government estate: roughly 700 items; 40% of the total. This total includes an above average number of 'outstanding' buildings, and a degree of interest and variety which includes conventional buildings as well as specialised military structures.

The MoD's prime objective in managing its historic resource is to strive for a viable and beneficial use for the historic buildings and structures in its ownership. Whilst this aim can be relatively straightforward for traditional buildings, it presents a significantly greater challenge for the specialised military structures which can invariably no longer be used for their original purpose. Moreover, these survivors of the nation's defensive history possess a historic character strikingly different from the conventional picture in the public's mind, and it is therefore essential to also win 'hearts and minds' to guarantee public support for their future preservation.

As a society we have to judge how we select non-viable structures for preservation as monuments for the benefit of future generations. New criteria have to be considered when we examine twentieth-century military structures. Unlike masonry and earthen monuments, modern materials such as concrete and steel have a tendency to decay in an unpredictable and hazardous manner. These are not 'lumps and bumps' in the landscape that can be responsibly abandoned and left to a graceful decline.

Success stories such as Waltham Abbey Royal Gunpowder Mills, Essex, have occurred because statutory protection formed a component of a working partnership dedicated to achieving benefit for future generations. There are other examples of nationally important sites where similar preliminary co-operation

can assess the chances for future viability. Inevitably this process tends to favour larger sites with a relatively complete record of historical development, whose status will also attract the special funding essential in meeting overall management costs.

How will specialised military sites be managed in future? One way is to explore with others the most appropriate management options. This may involve: 'bespoke' trusts, such as at Waltham Abbey; responsible transfer to new owners (in accordance with Treasury guidelines); or, where operationally justified or unavoidable, retention within the military estate. The overriding consideration will continue to be one of selectivity, ensuring through research and comparison across the length and breadth of England, the considered preservation for posterity of the most outstanding examples.



*A guncotton drying stove of 1935, one of the few inter-war buildings constructed at the Royal Gunpowder Factory, Waltham Abbey, Essex. Its design makes use of the latest thinking in the construction of explosives buildings, including a preformed steel frame infilled with wire mesh and pumice cement (photo: Wayne Cocroft)*

## Method

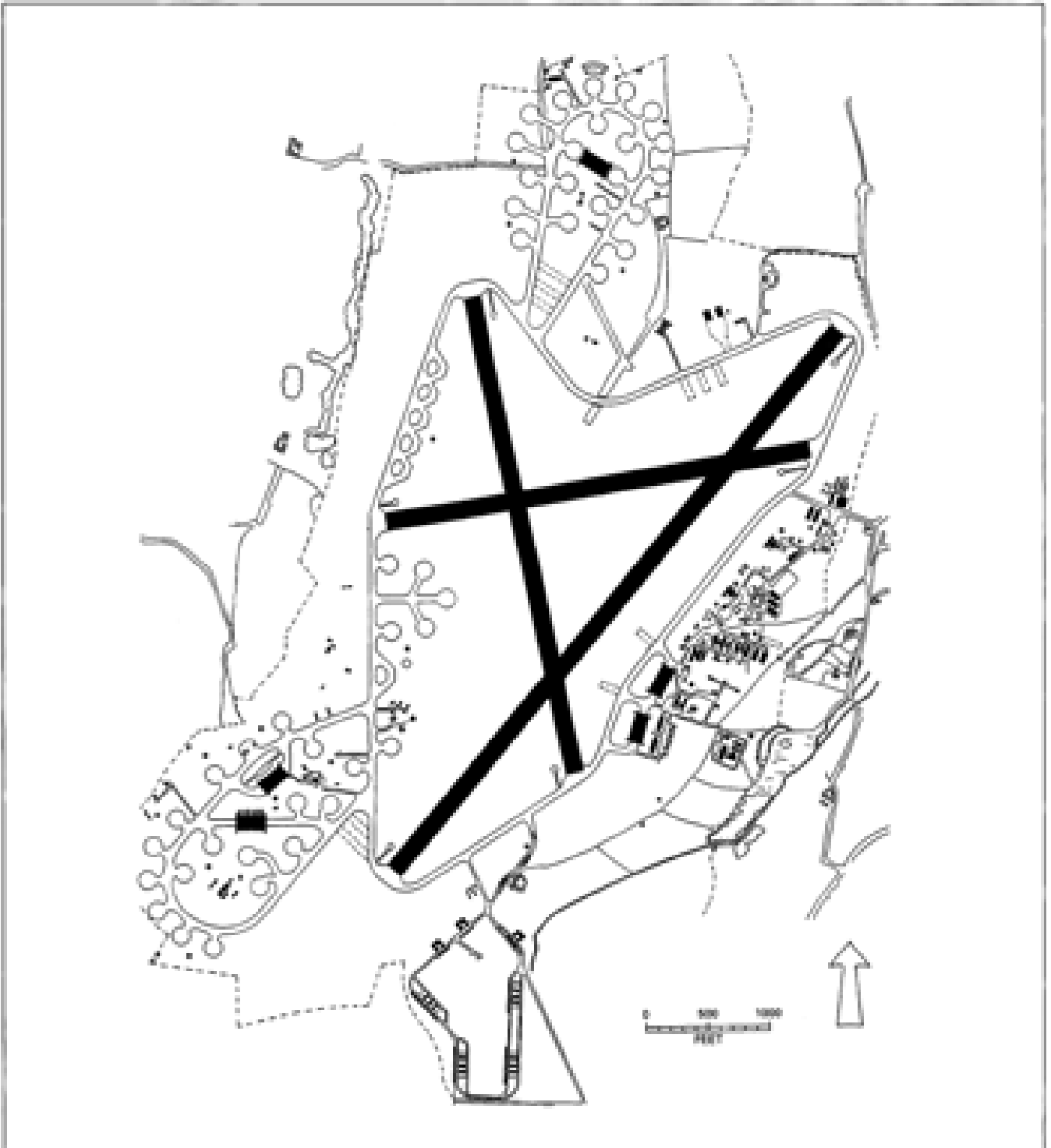
Faced with this level of complexity, English Heritage have taken an approach combining fieldwork and documentary investigation. Paul Francis has compiled a complete inventory of building and site types, enabling our selection to rest upon a thorough statistical analysis of what has survived; he has also made comparisons with original populations and undertaken a critical analysis of importance in a typological and national context. Colin Dobinson has undertaken archival research, exploring themes relating to airfield planning and architecture, particularly from 1923.

The character of airfield sites and structures, and the sheer range of standardised types, present considerable challenges to the formulation of appropriate strategies for statutory protection. Airfield buildings are structures which fall most easily within the framework for listing,

a system of managing change most suitably applied to buildings which are in use or capable of some form of reuse (PPG-15, 3.8). The earthworks and pillboxes, both concrete and hydraulic, associated with airfield defence in WWII are most suitably managed as monuments through scheduling: the MPP have commissioned a national survey on this subject from Colin Dobinson with follow-up work by Paul Francis. Conservation Areas can also have a significant role, alongside the drafting of Local Plans, in maintaining the character of what we consider to be the sites most strongly representative of their type and period. Conservation Area designation has its precedents: Hornchurch was designated in 1989, Hullavington in 1992 and Biggin Hill in 1993. Listing Team will also work with owners and local authorities in the drafting of guidelines for management, which will significantly reduce uncertainty relating to the maintenance and adaptation of buildings.

In determining our policy for selection, there are obvious factors to consider such as completeness, condition, rarity and the weight of supporting documentation. Factors such as standardisation, however, mean that airfield buildings can rarely be judged to be of intrinsic merit: whilst early hangars, which in their use of Belfast trusses are closely related to civil dock warehousing from the 1890s, can be recommended for listing on the grounds of historic

interest and rarity, the same cannot be said of their inter-war successors. In Britain, the most advanced hangar design of this date was based upon Continental prototypes, such as the Junkers Corporation-designed Lamella sheds and the segmental concrete hangars used for Aircraft Storage Units. A case for listing representative examples can be made, however, if they relate functionally to other structures within what are judged to be the most outstanding sites.

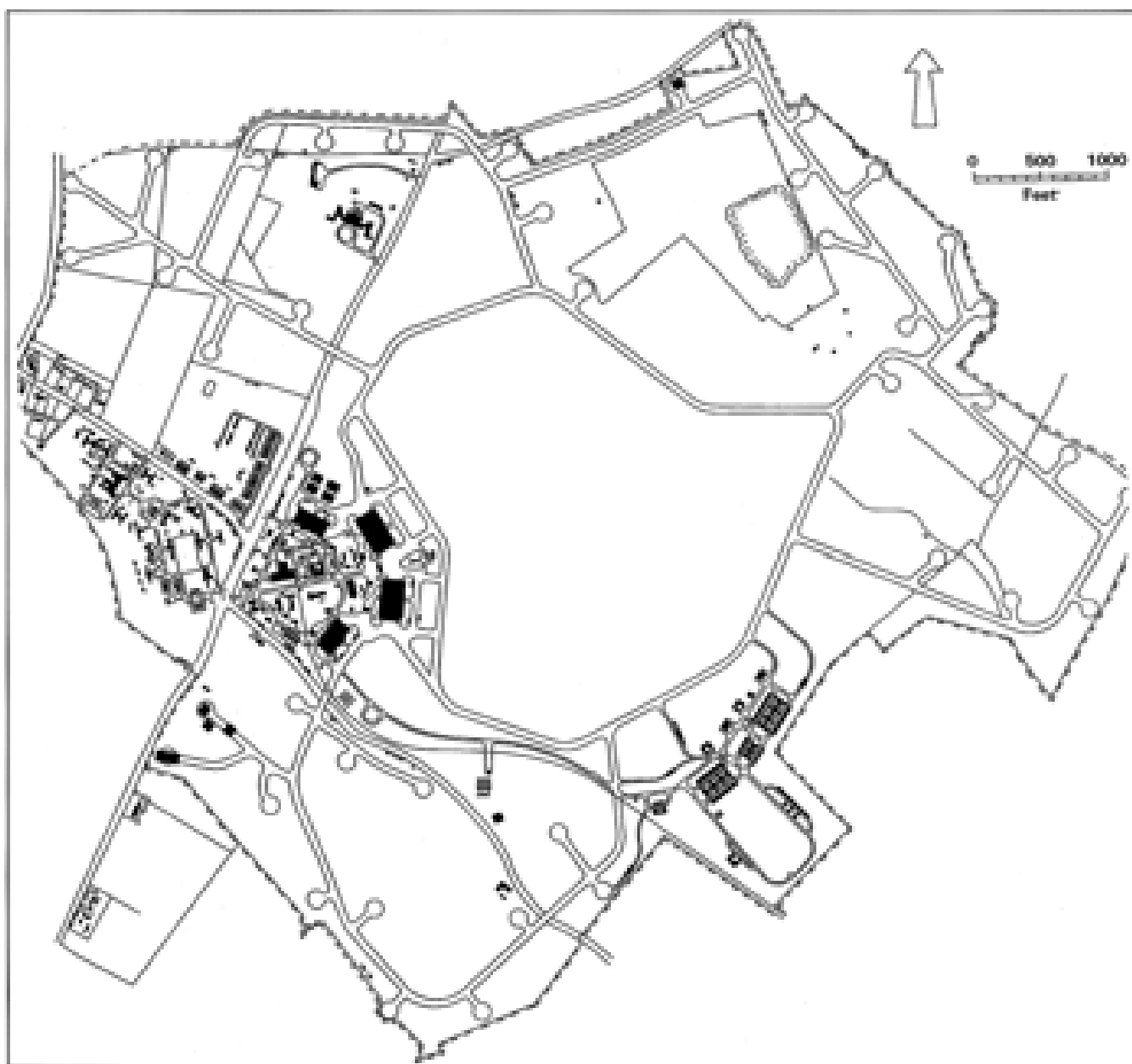


*In contrast to the permanent fabric of inter-war stations, buildings on WWII sites were intended to last only for the duration' and are highly dispersed. Dunkeswell, in Devon, was built to tackle the threat posed by the build-up of German U-boats. A total of fifty dispersed hard standings were eventually built here (drawn by Paul Francis)*

## Outcomes

The identification of the most important sites will be the most effective method of protecting building types which are otherwise well-represented in other, more altered or less significant, contexts. These are remarkably few in number. Of all the airfields built up to 1918, only three have retained suites of buildings which allow a reasonable appreciation of the site's function and importance. At Calshot, a former Royal Naval Air Service base which looks out over Southampton Water and stands adjacent to one of Henry VIII's coastal forts, the exceptional survival of a group of three hangars, dating from between 1914 and 1918, has been recognised by their listing at grade II\*. Most buildings erected in this period were of

temporary materials and were either cleared after 1918 or have since decayed. Moreover, it was the pre-war permanent bases which were retained after 1945, and formed the backbone of the air force during the Cold War period. Upper Heyford, for example, which was the test bed for the planning of Trenchard's Home Defence Scheme stations, became a key USAF site. Less intensive use, at present for administration, storage and glider training, of another one of Trenchard's Oxfordshire bomber bases, has ensured that Bicester is the most complete airfield to have survived from the pre-1934 period, with its complement of grass strip, technical and domestic sites. A case can, therefore, be made for the selection of sites where the original building stock and layout have been fossilised in a close approximation of their original state.



*Bicester, Oxfordshire, is the most complete station in Britain dating from before the 1930s. It is one of only three airfields in the country to have retained its grass field without any runway, though this was supplemented by a perimeter track and dispersal areas in WWII (drawn by Paul Francis)*

'Functional diversity' should also be considered: at Hullavington, for example, an Aircraft Storage Unit, with its complement of advanced hangar designs on the airfield perimeter, was grafted on to a well-preserved flying training school.

The survey has also established that the buildings at The Imperial War Museum, Duxford, two of which (the 1918 hangars) were listed in the 1970s, is the pre-eminent example of a multi-period site. Its buildings date from both World Wars and the two inter-war phases of expansion: its most recent addition is Foster and Partners' elegant Heritage Lottery-funded hangar, housing The American Air Museum in Britain. Its distinguished wartime associations, both in the Battle of Britain and the USAF's European campaign, introduces the important criterion of historical association. During WWII Britain's entire layout of military airfields was involved in the war effort, although some can be more readily identified with key events than others. Association with the Battle of Britain has already formed a basis for the Conservation Area designations and listings at Biggin Hill and Hornchurch, and there are additional structures associated with this battle, most notably the control room at Uxbridge, preserved exactly as it was described by Churchill in 1940, which merit protection. In contrast, the strategic bomber offensive of 1942-5 was longer, less focused, and involved a much larger number of bases, mostly 1930s Expansion Period stock, plus many wartime temporary airfields. Arguing for the preservation of single bases solely on the grounds of their association with the campaign is too generalised, but prime among the stations holding associations with famous raids is Scampton. Begun in 1936, this became, in the spring of 1943, the home of the newly-formed

617 Squadron, whose raid on the Ruhr dams in May of that year is, along with Dresden and Hiroshima, one of the most widely-known and historically significant Allied bombing missions of the war.

During WWII, the Air Ministry had been forced to abandon its dislike of temporary hutting, and the materials used during the acute timber shortage were all far below its usual standards. Nissen huts were re-introduced in 1941, and manufacturers of the more successful prefabricated huts looked ahead to the post-war housing shortage. Moreover, and in contrast to the permanent structures and tightly-defined sites characteristic of the inter-war period, the great majority of temporary structures of the stations built during WWII were disposed of after the war. Surviving groups are now mostly in agricultural use, with consequent adaptations, and others are in an advanced state of decay leaving only the remains of runway strips and ruinous control towers. Those currently in good repair are likely to be so only through extensive modification, and little consistency has been found in the post-war treatment of those belonging to any one station: none have retained their full complement of technical and domestic buildings.

The listing of now-isolated control towers or the scheduling of airfield defence structures and fighter pens is now being considered, with a holistic approach to the conservation of representative wartime sites recommended only where it is sustainable. The requirements for monitoring and management which scheduling embodies will not usually be sustainable for monuments now inherently fragile and many years beyond their life expectancy. And in many cases, especially with asbestos, it is questionable whether the management of natural decay is a viable option.



## 6 The hot interpretation of the Cold War

David Uzzell

*Washington's Holocaust Museum heightens empathy by making the horrific legacy intensely personal: each visitor wears the identity tag of a specific victim, a ghostly companion whose persona the visitor adopts and whose fate is disclosed, with haunting impact, at the tour's end.* (Lowenthal 1997, 142)

### The dilemmas of conflict

The Cold War was unlike any previous war. It was, for example, a placeless war. There were, of course, sites such as Fylingdales which were strategically critical and potentially as much in the 'front line' as any trench on the Somme. But it was also everywhere as well as nowhere. While for many people it was real and costly, it was also an attitude of mind as two ideologies clashed in propaganda battles. It was not so overtly situated as previous wars; it extended across continents although it did find visible expression where ideologies met at the border of those countries separated by the Iron Curtain. The Cold War was also as much about threat and potential harm, albeit on a cataclysmic scale, as about conventional death and destruction. Last of all, the Cold War was both a highly public and a highly secret war. All these factors make its interpretation problematic for those often more used to dealing with plaques and audio-visual guides to battlefield sites.

Those responsible for interpreting and managing battlefield sites face a particular dilemma. On the one hand there is a desire to tell the story, to convey not only an accurate technical, logistic and strategic account of the conflict, but also to capture what the conflict meant at a human level so that the story told is as complete and 'truthful' as possible. But the truth can be nasty. In wars people get injured, maimed and killed in the most appalling ways. Children are orphaned and spouses are widowed. This is part of the truth. On the other hand, the owners and managers of battlefield sites are also required to attract visitors and provide them with 'an entertaining day out for all the family'. These two objectives may not be compatible and it is a dilemma which is not easily resolved. Many managers take the line of least resistance and present a sanitised form of truth which will not upset, offend or challenge. If there is an attempt to engage the visitors' emotions it may be restricted to superficial feelings which do not last beyond the visit. More often than not no emotional response is called for or encouraged.

Whenever we are faced with making decisions that effect our lives we try to take a cool and measured assessment of the situation and arrive at a decision that satisfies our needs, wishes and objectives. But however detached and dispassionate we try to be there are many aspects of our lives where it is impossible to avoid

feelings and emotions effecting our judgements, and it is probably right that they do. It is important that we feel happiness, sadness, pity, pride, and all the other emotions which colour our attitudes towards people, places, events, and objects.

Visiting a number of interpretive sites, especially those which ought to generate powerful emotional feelings such as those concerned with war, I have been struck by the lack of an affective dimension to the interpretation. The interpretation of conflicts where thousands have been killed on the battlefield is often given the same emotional charge as the interpretation of an Etruscan pot or the courtship ritual of a bumble bee. The injury and death of men, women, and children in civil and international wars ought to make us sad, angry, upset and all the other emotions which make us human beings. Interpretation that injects an affective component into the interpretation of war and conflict has been termed 'hot interpretation'. Hot interpretation accepts that we are subject to a full repertoire of emotional responses; the palette is very varied, more varied than is typically acknowledged, anticipated or encouraged.

### Time heals

Our feelings and emotional responses to the past are partly a function of time. War loses its emotional sting with the passing of years. Both we as providers of interpretive events and visitors as consumers feel no twinge of conscience or unease at sitting down to watch two warring factions pretend to slaughter each other in an historical re-enactment of a Civil War skirmish. The role of time is critical here. Why should the passing of time make this almost voyeuristic behaviour an acceptable form of entertainment when applied to an English Civil War battle but not acceptable in the context of a re-enactment from the Falklands or the Gulf Wars? We would, I think, feel distinctly uncomfortable watching Serbs and Bosnians re-enact some street fighting from Sarajevo or some 'ethnic cleansing'. Our attitudes towards the recent past and the way it engages our emotions is an interesting issue which needs to be addressed by those responsible for its interpretation.

This is obviously a relevant issue in relation to the interpretation of the Cold War. Cold War sites are different from other war sites in as much as they are often not in themselves scenes of conflict and death. Their importance and value lies in what they represent and what they could have been. War sites visited by the public are invariably either where battles took place or exceptionally from where war was managed, like the Cabinet War Rooms in London. In the case of Cold War sites, while everything about them certainly meant business, they were at the same time about not being used. They are silent and cerebral in contrast to what

most visitors assume and look for from a battlefield site; the noise, the clamour and the tangible.

Another interesting aspect about battlefield sites is that their meaning changes over time. For example,

when people first visited battlefield sites after the two World Wars, it was to pay homage and to remember. As that generation ceases to be with us, so do the motivations to visit change. Places become less to do



*Experiencing the past in the tunnels beneath Dover Castle, the WWII hospital and command headquarters. (photo: English Heritage)*

with remembrance and more to do with a day-trip excursion. Places become less of a memorial and more of a tourist attraction. Places move from being a memory to being an historical record and archaeological site. What do Cold War sites mean to the public? It is questionable whether they can be interpreted to the public in the way one would approach the interpretation of other conflicts.

Until fairly recently most museums saw it as their place to deal with subject matter outside living memory. Some museums and heritage sites have recognised that there is a growing appetite by the public for more information and interpretation about the recent past. David Lowenthal (1985) argues there are three levels of historical analysis: memories, historical records, and

artefacts, which in turn correspond to the three academic disciplines of psychology, history, and archaeology. Therefore any interpretation of the past should draw as much on the analytical tools of the psychologist as the more conventional analytical tools of the historian and archaeologist.

This presents a particular challenge. For example, the interpretation and presentation of the recent past can be checked against memory. In the case of the Cold War many people lived through it and can remember vividly events like the Cuban Missile Crisis. This of course means that the museum curator and interpreter must get it right. But what does 'get it right' actually mean? There is the actual record of events, but there is also people's recollection of events and what the Cold War meant to them.

## Nevada Test Site

*William Gray Johnson and Colleen Beck*

The Nevada Test Site was established in 1950 as the continental location for the United States' nuclear weapons testing programmes. Today it encompasses 3496 sq km and is managed by the Department of Energy (formerly the Atomic Energy Commission). In the course of researching the Test Site's material remains it became clear that those of the Cold War period were by far the most significant. The archaeology of earlier periods is widely represented elsewhere in the western United States whereas the historic properties associated with the nuclear weapons programmes have a limited distribution.

Archaeological research at the Test Site began in 1991 with an evaluation of the Underground Parking Garage. Typical of the Test Site's civil effects test measures, the Underground Garage was subjected to the force of an atmospheric nuclear weapon blast with the purpose of establishing the ability of a typical urban

structure to protect the civilian population in the event of nuclear attack. In the same year the Bare Reactor Experiment Nevada (BREN) Tower was studied. This is a site associated with a non-explosive nuclear weapons programme (where the US government studied the effects of radiation on survivors of the Hiroshima and Nagasaki bombs). To date, research efforts have yielded five historic contexts related to the Cold War period, a preliminary list of structures requiring management efforts, and extensive studies at more than twenty individual properties, including one stabilisation effort at a BREN related site known as the Japanese Village. Plans for the future include the establishment of three historic districts (ie cultural resources deemed worthy of preservation), conservation efforts at some of the more deteriorating properties, and continued interpretation through publications, presentations, and popular media accounts.

*The Japanese Village at Nevada Test Site, designed to study radiation effects and ultimately to aid the survivors of Hiroshima and Nagasaki. Built of traditional materials, it stands as a memorial to the only combat use of nuclear weapons (photo: William Gray Johnson)*

The information the public were allowed access to between 1950 and 1990 was controlled and partial. The majority of the population were largely reliant on the mass media for their understanding of the conditions, attitudes and politics of the other side of the Iron Curtain. Times have changed. The mass media are still an important source of information, but over the last thirty years we have seen a revolution in tourism and personal mobility. People can now go to Eastern Europe and find out for themselves about these countries and way of life largely because they are more accessible as a consequence of the end of the Cold War. Equally, the information revolution brought about through, for example the Internet, has enabled us to be a mouse-click away from not only learning about the most remote places in the former Soviet Union, which until recently were probably known only to those in the Pentagon, but also to be able to communicate with those who live there.

Past, present and future are often treated in interpretation as disconnected periods and not part of a continuum subject to ongoing processes, causes and consequences (see Wallace 1987). Marc Laenen (1988) argues:

Most museums present the past in isolation from the present, forgetting that the present is a continuation of the past, and that the present is tomorrow's past ... One way to make the past relevant to the public is to trace the links with the present and to point up the strands of cultural continuity.... The challenge lies in devising ways of bridging the gap between past and present.

One can go further than this and argue that all historical moments should be seen as part of larger historical processes which are still in operation, and which often have wider spatial ramifications than are typically represented.

Again, the Cuban Missile Crisis provides an example. This historical event may be interpreted as the focus of a major clash between the United States and Russia. If we set the Cuban Missile Crisis in a larger time frame, say between 1939 and 1989, we can see it as demonstrating how alliances and allegiances between states can change over time so that Russia and the United States can be allies against the fascists in

1945 but in ideological conflict with each other less than twenty years later. If we take a longer term perspective still, we might see the East-West conflict as the most recent manifestation of global geopolitics which extends back to the Greek and Roman Empires and may soon be replaced by a North-South conflict. Changing the temporal framework opens up the possibility of alternative social, economic, political and historical interpretations.

## **Reconstructing the past and constructing the future**

The case was argued at the outset for hot interpretation, interpretation that emotionally engages the visitor. This has the function of not only impressing upon the visitor that war and conflict has very real consequences for people's lives, but also may encourage empathy with the feelings, motivations, actions and reactions of those involved in conflicts. Visitors should be challenged to contemplate their reactions to similar situations, to evaluate the wisdom of particular decisions, and to consider the past, present and future implications of those decisions.

In 1993 the building of an interpretive centre in District 6 in Cape Town was advocated (see Ballantyne and Uzzell 1993). This was to be a community-driven centre aiming to aid reconciliation between all the groups who made up the story of apartheid. It would not be for one group to interpret the past of another, as this form of cultural appropriation has been the source of much conflict in Australia, Europe and the United States. It was argued that if a positive change in attitudes and reconciliation between groups is to occur then those groups must work together to interpret their past histories and alternative futures. This would inevitably be an emotive task. The centre has now been built and does try to fulfil this role. Interpretation, then, can make a significant contribution in facilitating such a mediation process. The hot interpretation of the Cold War raises interesting issues and presents particular problems as well as opportunities, not the least of which is the opportunity it can provide to demonstrate to other areas of heritage interpretation how the reconstruction of the past can play a positive role in constructing the future.



## 7 Concluding remarks

*John Schofield*

'They look black and white, even in colour', a colleague remarked upon a colour photograph of a WWII concrete installation. This comment reflects a view still commonly encountered within the archaeological profession, that military remains of the twentieth century are dull, uninteresting, 'grey'. Yet public interest ('community' support in terms of sustainability theory) is growing fast, and with such pressures as the MoD's current disposal programme, it is necessary that organisations like English Heritage move to ensure some sites at least survive into the new millennium. But is that achievable, and can we sustain it in economic and social terms?

The principles of sustainability include the fact that not everything can or should be preserved *in situ*, and that the best examples, the critical assets, or those most characteristic of an area or subject, which sometimes reflect the local and the commonplace, should be given priority. When English Heritage's MPP started in 1986, a national evaluation of SMR entries provided a clear indication of which of the best known and well-understood monument classes were 'nationally important' (prehistoric barrows and hillforts for example; medieval moated sites). But for other classes of monument the basic information regarding

populations, typology and distribution was not available, and research was required to provide it. This is where Colin Dobinson's research is so significant. This work, and the Defence of Britain Project, are important precursors to the statutory designation of twentieth-century defence structures, and indeed for the successful implementation of PPG-15 and PPG-16 at a local level. An appropriate conservation strategy is achievable given this background, as the example of how a thematic survey of airfields has informed management decisions illustrates. It is also sustainable in economic terms. PPG-16 and PPG-15, properly used, can ensure recent defence structures are accommodated in the development control process, while scheduling and listing can be used for particularly significant and vulnerable components.

Questions will continue to be asked about whether these sites should be preserved at all. Some have expressed the view that to look to the new millennium in a positive way, especially from the perspective of our calamitous century, requires us to remember the fallen, but not be reminded of our part in two World Wars at every turn in the road, and especially not by structures which are so 'unattractive'.



*English Heritage and local authority staff meet with enthusiasts to discuss conservation of a section of the 'OHO Reserve', the last line of defence, here adjacent to the River Thames in Oxfordshire (photo: John Schofield)*



*Pillbox (left) and anti-tank cubes (right) in Somerset. Such structures may not be outstanding examples of their type, or have particular aesthetic qualities, yet their typicality and significance at a local level may be of equal if not greater importance in deciding which sites to preserve (photos: John Schofield)*

English Heritage take the view that a selection of recent military sites should be preserved, not least in order to keep options open for future generations to decide. The RCHME, RCAHMS, RCAHMS, Historic Scotland, DoE Northern Ireland and Cadw, as well as organisations like the National Trust and the MoD also recognise the cultural value of this resource and all have undertaken or commissioned recording and research in recent years. There is much of this historic resource visitors can enjoy, wherever they are in the United Kingdom: museums are commonplace, as are the monuments of war. But how they should be presented, as with the scenes of industrial accident or natural disasters, is a matter of debate, as David Uzzell has outlined here.

As Raphael Samuel (1994) has said, heritage generally serves to update and modernise what constitutes the historical, as well as extending its social base. With the fabric of military activity throughout the twentieth century, that principle appears to have worked in reverse. The subject has been taught in schools for many years, and features large in history text books; yet it is a comparatively new addition to 'the heritage'. This may be due to the fact that an understanding of the fabric is only now being produced: we know where the sites were, when they were there and why; and we know what they looked like and (in some cases) what survives. We also have public support. A firm foundation exists therefore from which to build in the new millennium.

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## Useful addresses

English Heritage 23 Savile Row London W1X 1AB 0171 973 3000 www.english-heritage.org.uk	Council for British Archaeology Bowes Morrell House 111 Walmgate York YO1 2UA 01904 671417	Historic Scotland Longmore House, Salisbury Place Edinburgh EH9 1SH 0131 668 8600
English Heritage produces a wide range of both free and priced publications on all aspects of conservation, available from English Heritage Customer Services on 0171 973 3434, or PO Box 1BB, London, W1A1BB	Defence of Britain Project Imperial War Museum Duxford Airfield Cambridge CB2 4QR 01223 830280	Cadw: Welsh Historic Monuments Crown Building Cathays Park Cardiff CFI 3NQ 01222 500200
Imperial War Museum Lambeth Road London SE1 6HZ 0171 416 5000	The Public Record Office Ruskin Avenue Kew Richmond Surrey TW9 4DU 0181 876 3444	Environment and Heritage Service Dept of the Environment for Northern Ireland 3-33 Hill St, Belfast BT1 2LA 01232 543004
Association of Local Government Archaeological Officers Planning and Environment Department Hertfordshire County Council Hertford SG13 8DN 01992 555244	The National Monuments Record RCHME Kemble Drive Swindon Wiltshire SN 2GL 01793 414600	