

# THE ARCHAEOLOGY OF CONFLICT

## Introduction by Richard Morris

*There is more to war than weapons and fighting. The growth of interest in 20th-century military remains is part of a wider span of social archaeology*

There can hardly be an English field that does not contain some martial debris – an earthwork, a splinter of shrapnel, a Tommy's button. A substantial part of our archaeological inheritance has to do with war or defence – hillforts, Roman marching camps, castles, coastal forts, martello towers, fortified houses – and it is not just sites evoking ancient conflict for which nations now care. The 20th century's two great wars, and the tense Cold War that followed, have become archaeological projects. Amid a spate of publication, heritage agencies seek military installations of all kinds for protection and display.

Why do we study such remains? Indeed, should we study them? We should ask, for there are some who have qualms. I have heard it said that an interest in military remains reflects a devotion (implicitly male) to militarism, while others are nervous lest nostalgia for wartime structures should fan Eurosceptic insularity. I have never heard the contrary argument, that the demolition of wartime fabric would cause jingoism to abate, perhaps because its silliness when put that way round becomes all too evident. Even so, we are

still left with a question: why have the prosaic traces of structures which were often stereotyped and mass-produced become so interesting?

Part of the answer, I think, is that there is more to war than weapons and fighting. One reason for the growth of interest in 20th-century military remains is that it is not a stand-alone movement but part of the wider span of social archaeology. It encompasses the everyday lives of ordinary people and families, and hence themes which archaeology has hitherto not been accustomed to approach, such as housing, bereavement, mourning, expectations. This wider span has extended archaeology's range from the nationally important and monumental to the routine and evanescent. Increasingly, this includes the meaning of spaces as well as the significance of structures, and the study of military camps both as settlements and sites.

The new romance with the commonplace is sometimes contrasted with the values of monumentality. Arguably, however, what is really happening is not the rejection of an earlier

*Wall painting of a stag in the midst of a German forest, by an unknown prisoner of war at Harperley PoW Camp, County Durham (see Nieke, 22–6)*



© David Spiero



aesthetic theory but the assimilation of the mundane to it. This poses new technical and philosophical problems. Concepts we take for granted, such as minimum repair or the display of exemplars for public explanation, are not always easy to apply to transient structures of planking, corrugated iron or temporary brick. When William Morris and his friends wrote their manifesto for the care of old buildings in 1877, saying it was for buildings ‘of all times and styles’, they did not have before them the curved asbestos hut or the phony clock on the dummy station at Treblinka, where the painted hands always stood at three o’clock.<sup>1</sup> What should the curators do with rusting tin sheds or the forest scene painted on the wall of a hut by a homesick German prisoner of war? Should they be conserved or left to decay? How much should be left undisturbed for future archaeologists to interrogate? Collapse and the triumph of time make a dignified pall but do not easily translate

into public understanding. Should they be rebuilt in facsimile? Unless the reasons for that decision are carefully explained, the facsimile may elicit the holocaust denier’s jeer that Natzweiler’s gas chamber is a fake, or a Morrisite allegation of lifelessness.

These are important questions. War’s embers are worth sifting ‘to discover the relations between those done to death and those alive then, and the relations of both to us.’<sup>2</sup> This issue of *Conservation Bulletin* explores these questions, and more. □

**Richard Morris**  
English Heritage Commissioner

*The Monument Protection Programme’s assessment of recent coastal batteries has demonstrated the degree to which sites are lost, the causes of loss and the speed at which it can occur. Here on the East Yorkshire coast, a coastal battery now lies fragmented on the beach, having been some distance back from the cliff top when built*

1 George Steiner 1969 *Language and Silence*. London: Pelican, 192

2 Steiner, 193

# MILITARY ARCHAEOLOGY

## Past practice – future directions

Military archaeology, especially of the modern period, is a comparatively new dimension of the cultural heritage. That is partly true by definition, yet other challenges presented by this archaeology of the modern era are new too: methodology and terminology, for example, and the interpretation of sites of conflict and discord. Here are presented some challenges and achievements of recent years

Teachers from Kent learn about military archaeology at Dover Castle, part of an English Heritage initiative to promote the use of this subject in the national curriculum. A free booklet for teachers on using World War II sites in Kent has been sent to every school in the county to support this work

Military archaeology is a diverse subject, in terms of site typology as well as materials and styles of construction. Often built of materials designed not to last, and typically functional in form and appearance, these buildings and sites are rarely attractive, and sometimes deeply unattractive to visitors. They often represent a significant stage in a longer scientific process, connected with research programmes or the manufacture of matériel. So, factory buildings and experimental sites are as much monuments of war as those in the front line, such as the Heavy Anti-aircraft sites and coastal batteries of World War II.

There is a new vocabulary for researchers and curators to use. In the past, different terms were used to describe the same objects or monument types, leading, for instance, to a confusion over the typology of pillboxes. Now, with the completion of several studies based on archive sources, this new vocabulary is available for all to use consistently.

This recent past is also a challenge for the curators and site managers who study, present and interpret it for visitors. What, for example, are the relative merits of archaeological evidence, documentary sources, official histories and oral testimony, and how can these various sources be used to develop a critical archaeology of 20th-century warfare? How should the Cold War history of Greenham Common be told? Which of the many voices of Greenham (the military,

the protestors, the media, the local community) should be heard, or should they all be heard, challenging visitors to reach their own conclusions? At Dover Castle, the realistic re-creation of a wartime hospital in the underground tunnels has proved popular among visitors. Other re-creations of the past have been successfully used around the world at sites where conflict and suffering has occurred.

Finally, there is a challenge to be faced in drawing military archaeology more formally into the wider context of the recent past – developing links with industrial and maritime archaeology, landscape studies, and issues concerning the urban and rural environment. The creation of English Heritage's strategy groups in these areas has enabled a joint strategic approach to be taken on initiatives set out in *Power of Place* (2000) and *A Force for our Future* (2001).

### Recording

The subject of amateur investigations over many years, culminating in Henry Wills' *Pillboxes* (1985), modern military archaeology started to attract serious professional interest in the early 1990s. Though some work had been completed before then and some sites in England had statutory protection, no systematic survey had been made of what had been built or what survived. This lack of knowledge was redressed with the launch of two related but separate projects in 1994–5: English Heritage's Twentieth Century Fortifications in England project, later extended to the other home countries, that used archival sources to produce detailed typologies and site locations for several major monument classes, and the Defence of Britain Project, that focused on anti-invasion defences. Both projects are now complete and some of the findings are reported elsewhere in this issue.

A significant consequence of these related projects has been the degree to which modern military sites are now included in archaeological record systems, notably the locally-based Sites and Monuments Records and the National Monument Record. The Defence of Britain data is now also available online from the Archaeology Data Service: [http://ads/ahds/ac.uk/catalogue/specColl/dob/ai\\_q.cfm](http://ads/ahds/ac.uk/catalogue/specColl/dob/ai_q.cfm)



© English Heritage/Roger C Thomas

The inclusion of defence sites in archaeological record systems has led to an increasing knowledge and interest in the subject. First, this information on the NMR and SMRs records not only all surviving sites but also, in counties such as Hampshire and Essex, all documented sites, whether there is any modern surface trace or not. Second, some county archaeological staff have sought to promote this subject (Somerset County Council's 1998 leaflet and Lincolnshire County Council's airfields trail and to undertake further research. Notably, Fred Nash has undertaken a comprehensive field-based visiting programme in Essex, based on English Heritage's archive-based work and local sources; Kent County Council has recently completed a comprehensive survey of the county's defence heritage, including assessments of significance as well as cultural and tourism benefits. Third, many county archaeological officers are now acknowledged experts in this field.

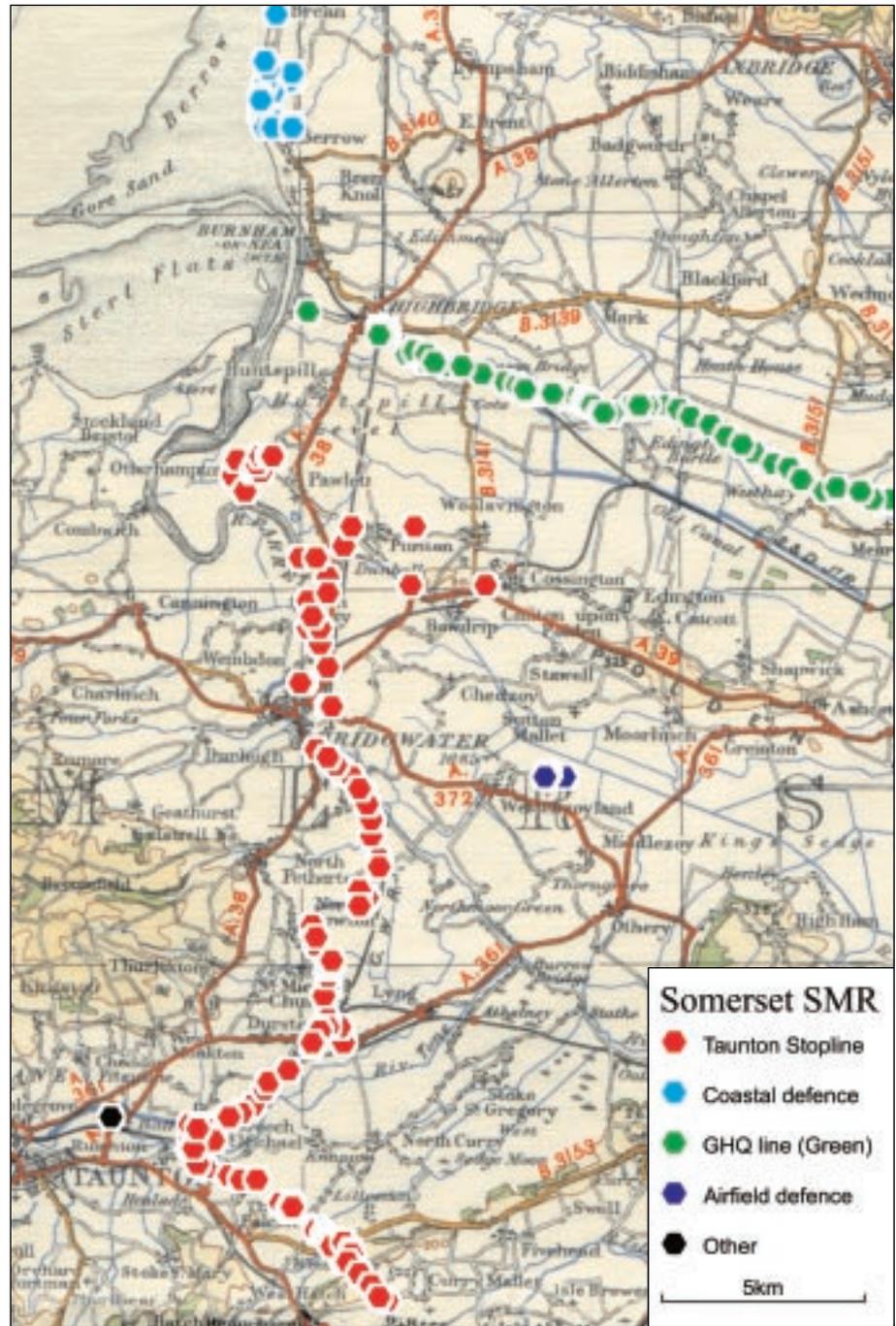
Together with the national framework for surviving sites in England, provided by English Heritage's work and the Defence of Britain Project, these developments provide a solid basis for the growth of this comparatively new dimension of the cultural heritage.

## Organisation and management

Military heritage involves a broad and active community of enthusiasts and specialists, with an established series of groups and committees. The Fortress Study Group has been successful over the years in promoting this subject and publishing much about it; other groups focus on specific topics or themes. Subterranea Britannica, for example, includes those with an interest in underground military sites, while its Research Study Group focuses on the Cold War, above and below ground. There is also a group of former rocket scientists whose membership



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© Somerset County Council; background reproduced from the 1945 Ordnance Survey map

contains a wealth of testimony about Britain's Cold War rocket-testing programmes.

The Defence of Britain Project provided a national focus for this community through its management panel and steering group. With the closure of the project, however, the collective expertise and UK-wide perspective needs a new national focus to pool its resources.

Within English Heritage, the Military and Naval Strategy Group, which meets three times a year, is developing strategic initiatives within and beyond the organisation, including research frameworks and the provision of training and development opportunities throughout England.

It is important, moreover, to ensure a UK-wide development of the subject. In 2001, members of

*Modern military sites on the Somerset Sites and Monuments Record. This data is now being used by a researcher studying pillbox placement along the Taunton stopline*

*Roger J C Thomas from English Heritage describes management options at the ROC HQ at Acomb, York, to staff from other heritage agencies, October 2001 (see Thomas, 45–6)*



© English Heritage/John Panment-Salvatore

*The commemorative value of modern military sites. Here the Normandy veterans and the local community participate in a Remembrance ceremony at the Torquay D-Day slipways*

staff from virtually all the UK heritage agencies (English Heritage, Historic Scotland, Cadw, DoE Northern Ireland, Manx Heritage and Jersey) met in the north of England to visit some challenging sites and discuss commonality of approach and future directions. It is hoped that this conference will become an annual event.

English Heritage is also promoting a more unified approach to designation and management, as described for Hayle, Cornwall, in *Conservation Bulletin* 41 (Guthrie and Hooley, 26–7). This approach – combining scheduling, listing and management agreements – informs our work on the challenging and extensive Cold War monuments. The production of management guidelines for aviation sites (Holborow, this issue, 32–3) is also a significant development, pursued with the full co-operation of Defence Estates, the owner of many of these sites.

## Research

Following a year of consultation with staff from English Heritage and elsewhere, a research framework has been produced to cover current knowledge and future research priorities over the next five years or so. Among the research priorities is the need for a rapid characterisation and assessment of military training areas, of Territorial Army drill halls and military camps of all kinds. Much work remains in understanding

*This Heavy anti-aircraft site on Malta is a scheduled monument under Maltese legislation and there are plans to provide public access and interpretation. This was one of many sites on Malta built and manned by British troops during World War II. A dialogue now exists to address the problems and challenges common to such sites in England and Malta*



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the scale of operations in the build-up for D-Day and their archaeological manifestations. There is also a need for further training of professional staff and for developing a method of evaluating and recording military sites. Will photographic recording normally be sufficient in advance of a site's removal, for example, or can archaeological excavation provide a new dimension to the nature of the site's wartime occupation?

This Research Framework is available both as a published document and a website file [www.english-heritage.org.uk](http://www.english-heritage.org.uk)

## Training and development

Since 1997–8, English Heritage has organised or been involved with training courses, seminars and conferences to raise awareness of modern military archaeology and to provide training for those increasingly coming into contact with it. A dayschool on Modern Military Matters, held at Oxford University's Department of Continuing Education in November 2000, was over-subscribed. Sessions at conferences have the advantage of taking the subject to an audience with diverse interests. Lectures, classes and dayschools are increasingly being arranged for specific groups of staff, such as those working on the National Mapping Programme, whose work in areas such as East Anglia has brought them increasingly into contact with military remains.

Bournemouth University now offers a course to promote oral testimony to improve understanding of the sites themselves. There is a need for training courses in the management of surviving wartime sites, including the treatment and repair of wartime materials and the presentation of monuments of war.

Finally, modern military archaeology plays an increasing part in school and university teaching. Following the publication of English Heritage's *A Teachers' Guide to Battlefields, Defence, Conflict and Warfare* (1995), English Heritage staff have been asked to train teachers in the contribution military sites can make to the national curriculum. At university level, courses on historical archaeology can include the methodological and theoretical issues surrounding the use of testimonial, documentary and archaeological source material; the number of undergraduate dissertations on the subject is growing. Postgraduate courses and research would be a logical next stage.

## European and global contexts

The monuments of World War I, World War II and the Cold War have a global context. Although frameworks for assessment are usually based on national criteria and often have considerable local interest and support, their European or global context is often acknowledged in the wider statements of significance that accompany them. English Heritage's thematic survey of aviation (Lake, 28–31), for example, is based on the 'L'Europe de l'air' Raphael project on aviation architecture. Wider geographical contexts are also relevant in promoting tourism, as demonstrated in the joint Interreg II-funded project involving Kent County Council, the Syndicat Mixte de la Cote d'Opale and the Province of West Flanders.

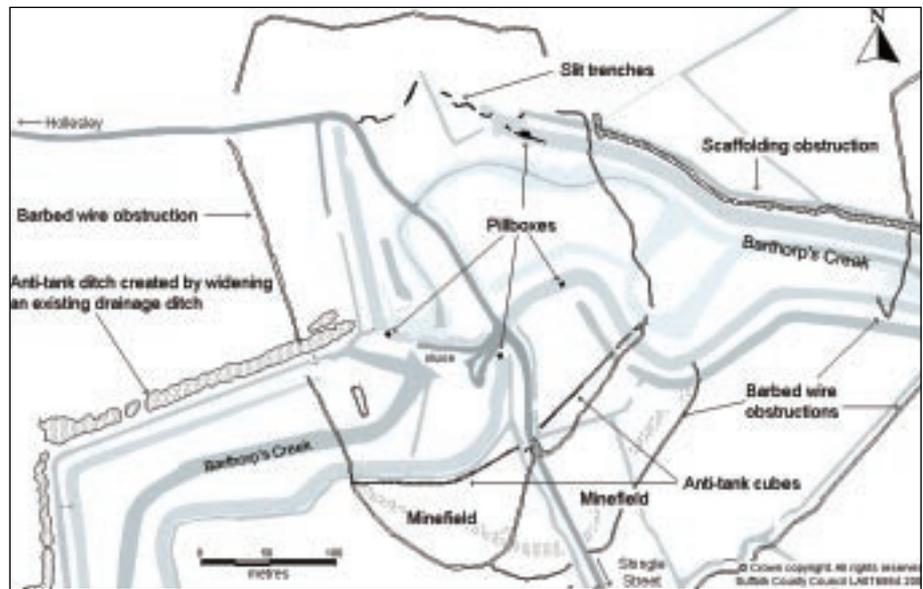
A number of publications present military archaeology within a global context, and close links are being forged with heritage agencies overseas – with Malta, for example, where World War II and Cold War military sites were built for the use of British military personnel.

English Heritage, in partnership with Anglia Polytechnic University and Bournemouth University, is developing proposals for a European-funded Cold War legacies project both to explore the material record throughout Europe, significantly on both sides of the Cold War political divide, and to examine this cultural legacy in its widest sense: the archaeology and architecture of former bases, and the artistic and cultural achievements which they inspired.

## Community archaeology

Above all, this is a subject with huge and enthusiastic support. From the valuable early amateur work to the Defence of Britain Project, the subject has been further driven by the

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initiatives of heritage agencies, local authorities and local communities. Harnessing this enthusiasm, reflected in the number of websites and the plethora of new and often locally-funded publications, is the challenge that faces us next. □

**John Schofield**

**Head of Military and Naval Evaluation Programmes**

Modern military sites are now identified routinely in such projects as the National Mapping Programme. This example shows defences identified at Hollesley, Suffolk

### Bibliography

Schofield, J, Johnson, W G and Beck, C M (eds) 2002 *Matériel Culture: the archaeology of twentieth century conflict*. London: Routledge

English Heritage continues to take responsibility for maintaining and enhancing the Battlefields Register. Managing battlefields remains a challenge for English Heritage, not least because of unsupervised metal detecting. If done properly, however, metal detecting can improve our understanding. At Naseby, for example, an amateur metal detecting group working with professional help has discovered a significant number of musket balls on a knoll to the rear of the battlefield, apparently the site of a fighting stand during the royalist retreat. This discovery should lead to a revision of standard accounts of this major Civil War engagement.

© English Heritage/Paul Stammer



The knoll at Naseby, in the middle distance: a focus of activity during a major Civil War engagement, and one now better understood through the proper use of metal detectors

## Defended areas of World War II

*The Defence of Britain Project, completed in 2002, recorded many sites and identified landscapes where defences survive fairly intact in their physical context. Their future management is now under discussion*

The Defence of Britain Project, co-ordinated by the Council for British Archaeology, ran from 1995 to 2002 and, in particular, harnessed the enthusiasm of volunteers, amateur archaeologists and military historians to record Britain's World War II anti-invasion defences. During the final years, the project became closely aligned with the work undertaken by English Heritage on other significant areas of 20th-century fortifications.

As well as promoting this subject to a wide and increasingly diverse audience, and attracting much media attention, the Defence of Britain Project built up an impressive database of the World War II anti-invasion defences, the great majority of which were erected in the few weeks from June to September 1940 against the imminent threat of a German ground attack. The database records 12,464 sites in England, of which some 9,000 survive, including 5,500 of various forms of the ubiquitous pillbox (or

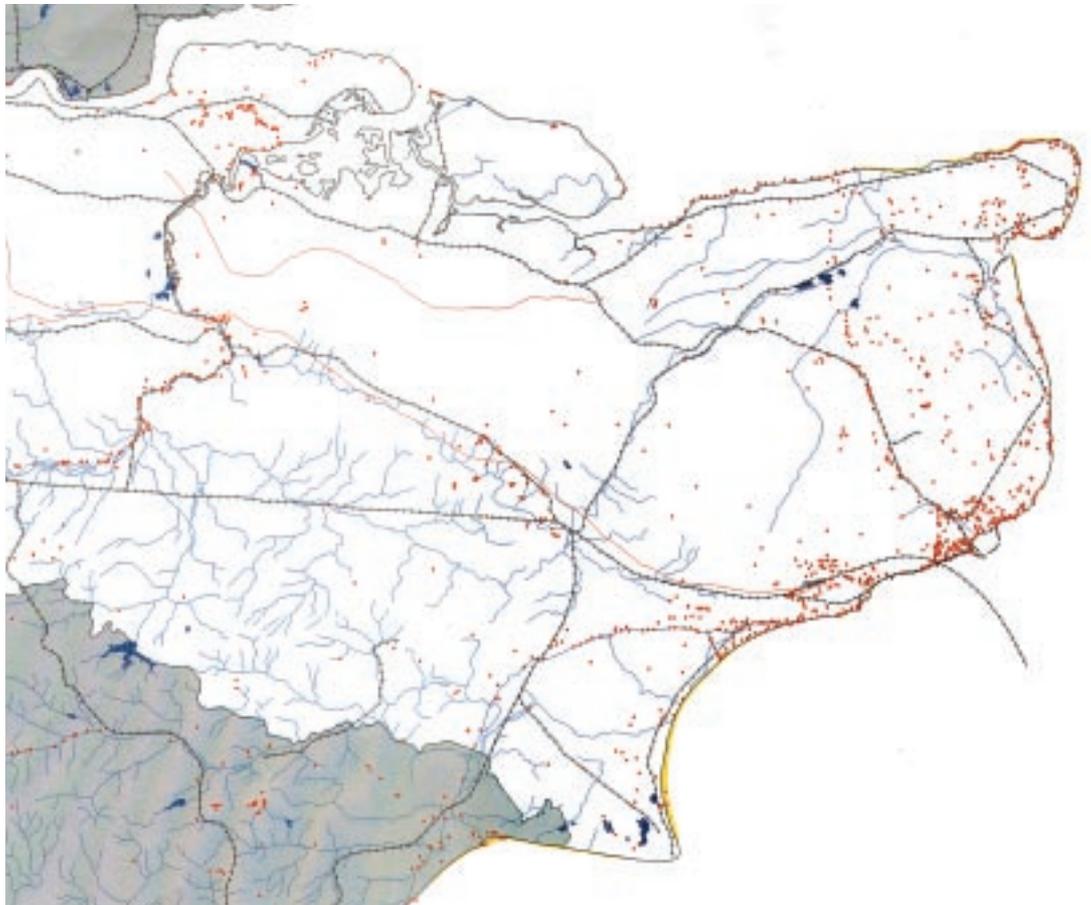
'hardened defence work'), perhaps 20% of the numbers built. For further information and details of surviving structures, and the facility to search by country, area, monument class, or condition, search the database online on the Archaeology Data Service website: [http://ads/ahds/ac.uk/catalogue/specColl/dob/ai\\_q.cfm](http://ads/ahds/ac.uk/catalogue/specColl/dob/ai_q.cfm)

A new two-year project, known as the Defence Areas Project, commissioned and funded by English Heritage's Monuments Protection Programme (MPP), now seeks to draw upon the Defence of Britain work, and to add substantially to it, so that a selection of structures may be proposed for preservation, either individually or in relation to others in discrete areas of defence.

### Defence structures

The first, and more straightforward, work of the new project has been the preparation of lists of structures arranged by 'anti-invasion monument

*The structure of surviving anti-invasion defences in South-East England: this would have been the key area of German attack. Each red dot represents a single anti-invasion defence structure recorded by the Defence of Britain Project*



types', further categorised by their surviving condition and stability as recorded by the volunteers. Seventy-three monument types have been identified, ranging from the different forms of pillboxes (for instance, types FW3/24 – the most common – and FW3/27) to spigot mortar emplacements (a Home Guard weapon, the firing positions of which can still be found), anti-tank ditches (the largest system of defensive earthworks ever built in England, now almost entirely infilled, but still visible in places as crop and soil marks), army headquarters buildings, flame warfare installations, anti-tank blocks, observation posts, loopholed walls, Home Guard stores and so on. The list is lengthy, with many variations on a standard form. Some ten thousand structures have been listed and categorised, the lists presented to English Heritage in rank order by type.

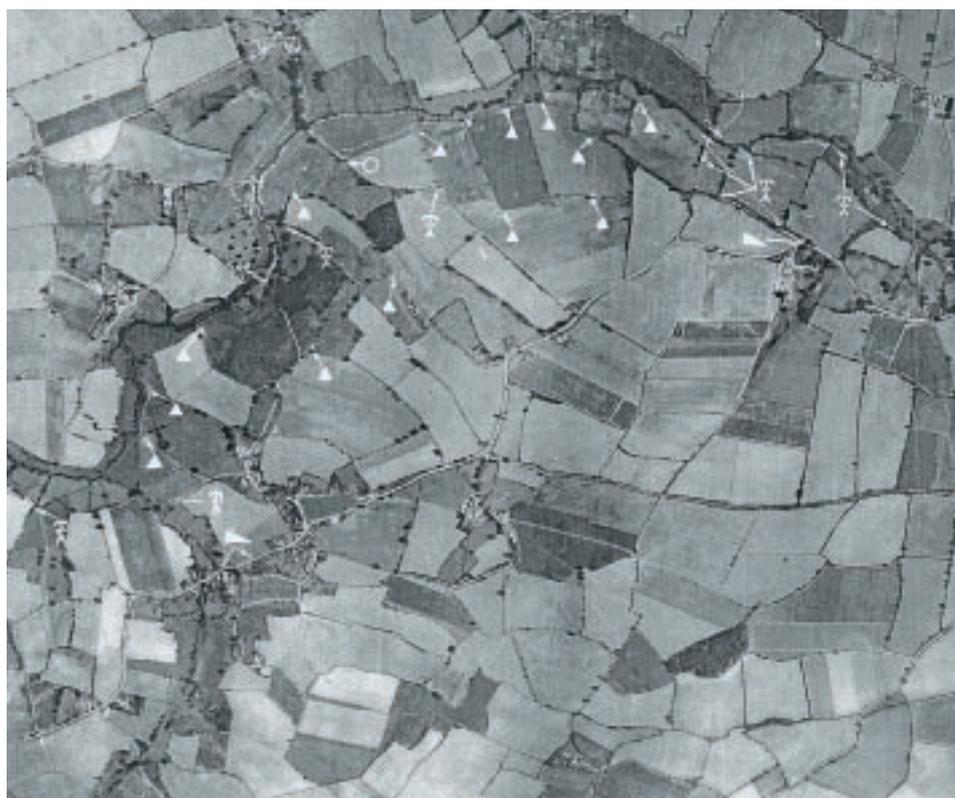
These sites will be assessed by English Heritage, using the Secretary of State's non-statutory criteria, and a combination of the best and most typical surviving examples of each type will be considered for protection, by scheduling (where a future use is envisaged) or listing. Most pillboxes that meet the criteria and are demonstrably of national importance are likely to be recommended for scheduling, even though some have been adapted for new uses: a planning application was recently submitted to convert a standard pillbox to a small café; others have been converted to public conveniences.

## Defence areas

Since July 2002, some sixty discrete areas have been identified where components of anti-invasion defences survive well in landscapes substantially unaltered from those of 1940. All meet the criteria agreed with English Heritage for identifying significant surviving defence areas: differing but inter-related monument types, good survival in a clear visual envelope and a physical environment largely unaltered from the time the defences were established, ideally with public access. In addition, these areas have been selected to reflect different national defence strategies, such as coastal, stop line (linear anti-tank barriers) and area (the defence of towns and villages); examples fall within each of English Heritage's nine regions.

Following a 2001 pilot project examining three landscapes, the methodology is now used for the full national study. Each area will be assessed through both documentary sources and

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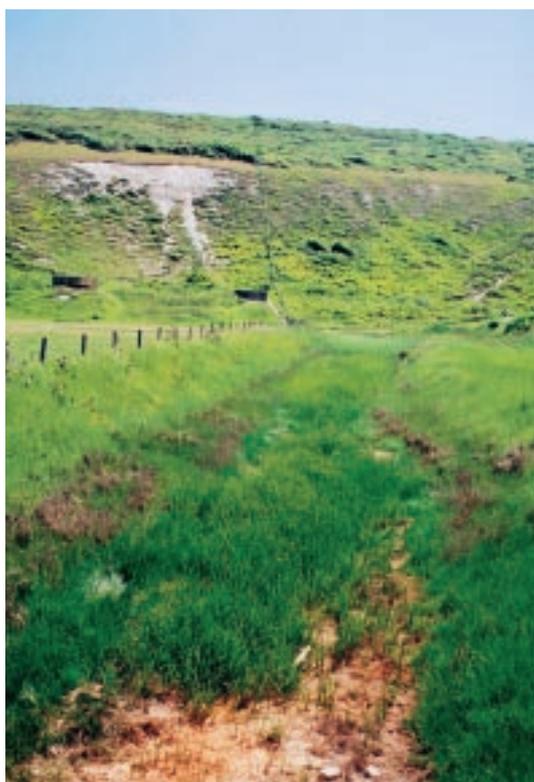


fieldwork, and the results published in a report including detailed maps of each defence component within its physical context.

## New documentary sources

This is exciting work, for the subject matter is new and the documentary resources largely unexplored, although significant work on anti-invasion defences of this period was undertaken for MPP by Colin Dobinson in 1995 and 1996. Aerial photographs at the National Monuments Record are being used to establish the totality of defence in each area before the post-war clearance of many sites, as well as to evaluate landscape change. Further work will be carried out on documents at county record offices and the Public Record Office. Although many have been destroyed – for example, the tens of thousands of files of the War Office's Lands Branch which took the land for the building of the defence works under the Defence Regulations – many survive and have yet to be fully evaluated. The designated military areas and districts of Britain, as well as Army Commands and units, from Corps and Divisions down to Battalions and Companies, drew up detailed defence schemes. Many survive at the Public Record Office among Home Forces War Diaries and include comprehensive lists of the defence works built, complete with six- or eight-figure

*German reconnaissance photograph showing defence works following the line of the River Chelmer in Essex. Almost all these sites survive today*



Section of unfilled anti-tank ditch, with pillboxes behind, at Cuckmere Haven, East Sussex

military grid references that can be converted to those of the National Grid. There is, however, no easy index to the location of the defence schemes, and a trawl has to be made through each unit to build up a picture of what they were defending and when. Though this process can be speculative and lengthy, the rewards are often spectacular as the whole strategy of defence for key areas can be obtained; the details of what was built can be compared with modern survival.

Pillbox disguised as part of the Manor House in Acle, Norfolk



© William Foot

These documents will be cited in the final reports to aid further research.

Another source of information, only recently identified, is the Luftwaffe's reconnaissance in 1940–1 of defence works that were hurriedly being built to keep the German Army at bay. The aerial photographs and maps were captured by Allied forces at the end of the war, and the bulk of this material is now at the United States National Archives, awaiting assessment. Enough also survives at the Imperial War Museum and the British Library Map Library to show its value, and relevant material will be used by the Defence Areas Project. The pilot project has shown it to be accurate, often filling gaps in surviving British documentation.

### Future management

Only recently have World War II defence works been accepted as part of the country's long history of fortification.

Sites, however, are still being removed at an alarming rate, ahead of construction and transport links, and through erosion and decay. Coastal erosion, in particular on the east coast of England, is a major threat to structures strategically sited on cliffs and beaches (Thomas, 12–14). By ensuring that they are recorded on Sites and Monuments Records (SMRs) and the National Monument Record, however, they can be managed through the local planning process, either by preserving *in situ* or recording prior to removal. Recording sites on SMRs also provides

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# COASTAL DEFENCE

## Monitoring military sites on the Yorkshire coast

*The character of the Yorkshire coastline varies dramatically along its length, the geomorphology ranging from towering chalk cliffs at Bempton to the low slumping glacial clays of Holderness. Indeed it is the rapid coastal erosion of these clays that poses the greatest threat to the area's heritage, resulting in an urgent need to record and identify the military defence works before their inevitable destruction*

*Coastal battery behind a Heavy Anti-aircraft site at Ringborough, taken in April 1945. The HAA site is long gone and now the coastal battery is largely in pieces on the beach*

Two major erosion processes are at work on the Holderness coast – rotational slumping and under-mining by the sea – and in some places the two combine to further increase the rate of loss. Rotational slumping can result in a large crescent-shaped section of ground (up to 6m in depth) slowly sliding down the cliff face, taking any structures with it, as can be seen clearly at Ringborough Battery and Cowden Sands. Where undermining occurs, any structures above simply collapse such as at Godwin Battery, Kilnsea, where two massive 9.2-inch coast artillery emplacements now lie on the beach.

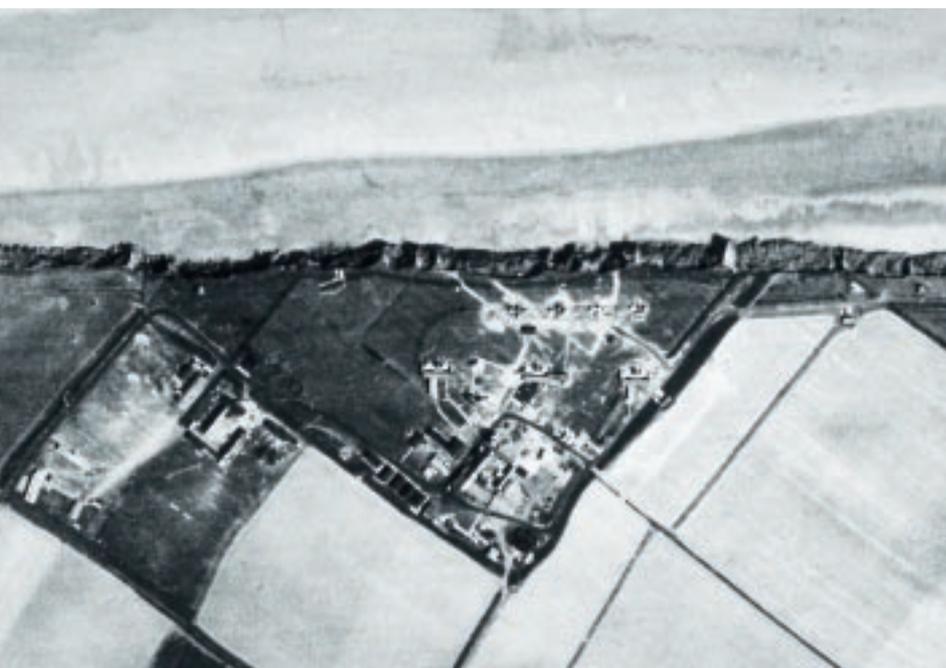
### Previous work

The vulnerability of military structures in this area was recognised some eleven years ago by the Fortress Study Group (FSG), who then undertook a desktop and ground-based survey of the Borough of Holderness on behalf of the Royal Commission on the Historical Monuments of England. The Holderness Study set out to test a standardised methodology and proforma that could be used to undertake similar work throughout the British Isles. This study led ultimately to the establishment of the Defence of Britain Project under the auspices of the Council for British Archaeology.

The FSG's fieldwork, undertaken during April 1992, initially produced some 270 sites, subsequently increased to 540 by further interpretation of stereo aerial photographs. The northern limit of the area surveyed by the FSG terminated at Low Skirlington and did not continue up the coast beyond the boundary of the former Borough of Holderness. Consequently, no fieldwork-based information has previously been available on the identity or condition of World War I and II features north of that point.

### New survey

Given that 11 years have passed since the FSG survey, and coastal erosion continues to take its toll, there is a growing need to supplement existing knowledge. A decision was therefore taken by English Heritage's Yorkshire and Humberside Team to set up an identification and monitoring scheme along the 65km coastline from Bridlington to Spurn Point. The objective is to locate and identify all remaining 20th-century military features and structures, whether fully extant or fragmentary, to enable future management policies to be developed in conjunction with landowners and local authorities.



© English Heritage (NMR) RAF photography

Rapid survey techniques have been adopted to carry out the fieldwork. Each feature or structure has been inspected, identified and recorded photographically. The location of each feature has also been plotted using a hand-held GPS unit producing a grid reference to 5m accuracy. The priority has been to identify features and structures within the inter-tidal zone, or those clearly threatened by imminent coastal erosion. Two sections of coast – Easington to Kilnsea Warren and Cowden Sands – were not surveyed by the FSG and have been included as a part of the present survey. To date, the entire coast has been examined apart from a 5km stretch between Barmston and Skipsea. Further fieldwork remains to be carried out between Bridlington and Skipsea along the coastal margin (up to 2km inland), to identify surviving earthworks and the inner belt of defences associated with the coastal crust.



Beach Defence Light  
Emplacement, at Fraisthorpe near  
Bridlington, now on the beach

## Surviving remains

Over this length of coastline, a considerable diversity of structures and earthworks has been encountered, the majority of which were built to resist invasion during 1940–1. The most common structures include pillboxes, beach defence light emplacements, 6-pdr anti-tank gun emplacements, trenches, scaffolding obstacles, barbed wire entanglements, anti-tank walls and cubes. During World War II, the design of such permanent defence works was the responsibility of the War Office's Directorate of Fortifications and Works (DFW). Each design was issued with a type number, the Type-22 and 24 hexagonal pillboxes being the most common varieties. These designs were issued to the various Commander Royal Engineers (CRE) in the regional Commands, who would supervise their construction, whether by soldiers or civilian contractors. Unusually, however, none of the standard pillbox designs have been found in the survey area; designs that do occur do not conform to any known DFW drawings.

The two most common varieties of pillbox to survive in the study area, the so-called 'lozenge' and the 'eared' types, are both bullet-proof and were cast *in situ* in reinforced concrete designs. The 'lozenge' pillbox was designed for infantry armed with rifles and/or sub-machine guns. They can be found in the coastal crust beach defences, on the perimeter of the anti-tank island at Hornsea, covering road blocks and protecting the coast artillery batteries of Spurn Point. The design is not unique to the East Yorkshire Coast; it can also be found in Northumberland and the modern county of Cleveland. The examples in

the survey area do, however, exhibit differences in detail: a slot has been cast internally below the sill of the gun loops to allow for the use of 20-round box magazine for the Thompson sub-machine gun. Where the pillbox straddled a ditch or a hedgeline, some have low gun loops covering that approach.

The more substantial 'eared' pillbox was designed to house two Vickers medium machine guns in the sustained fire role, and unlike the 'lozenge' type, it does not have a 360° field of fire. The design of the 'eared' pillboxes is unusual in having two wide-splay embrasures, one in each flanking wall; the wall bulges out beneath the embrasure sill to allow for water cooling cans for the guns, and they are entered by two forward-facing doorways. These pillboxes were only used as part of the coastal crust defences and are only found on or overlooking beaches. Due to the nature of the glacial tills, the foundation rafts for these pillboxes were often built to massive proportions, an example of which can be seen at Auburn Sands where coast erosion has left the structure marooned on the beach.

Probably the most significant survivals are to be found between Wilsthorpe, Auburn and Fraisthorpe. Here the beach consists of gently shelving sands backed by low boulder-clay cliffs. The length of the beach has been subdivided into areas by transverse rows of anti-tank cubes that extend out beyond the low tide mark. The cubes are roughly 1.2m square in plan and vary in height. The 'eared' pillboxes are generally set at the rear of the beach, permitting enfilade (flanking) fire in support of the 'lozenge'

**Coastal defence** pillboxes, trenches and beach defence lights nearby. The base of the coastal slope was obstructed by a variety of means, possibly indicating alterations and additions over time; these include concrete anti-tank walls, corroded stubs of scaffolding obstacles and linear rows of anti-tank cubes, some of which have initials and dates (1941) inscribed into them. The inscription on one cube sums up the attitude of the time: *'They shall not pass!'*

### World War I defences

In addition to the 'lozenge' and 'eared' pillboxes, a square design occurs commonly between Wilsthorpe and Barmston. Initially it was thought that this dated from World War II, but it is now thought to be earlier on the basis of field evidence. The construction method differs from adjacent World War II features: the walls are thinner, of a different concrete mix and have been weathered more severely. However, it is their siting that indicates a greater age, one example having its fields of fire totally obscured by a later 'lozenge' pillbox. Clearly, archival work will be necessary to confirm the conclusions that have been drawn, but if correct, this discovery will be of great significance. Although there is a scattering of square, circular and hexagonal examples in Norfolk, Suffolk and Kent, it would appear that these Yorkshire pillboxes may represent the only cohesive World War I anti-

invasion beach defence scheme surviving in England. Furthermore, these form part of a concentration of extant defence works in north-east England, built before and during World War I and indicating the shift in threat from France to Germany. These defences include Bull and Haile Sand Forts at the mouth of the Humber, the Spurn Point fortifications, Sunk Island gun battery, various anti-Zeppelin acoustic dishes, the Tyne Turret at Hartley, and Fort Coulson, Blyth.

### Future directions

The present phase of recording and assessment work has drawn to a close, and a survey report will be produced for the guidance of the Regional Team, to inform further discussions with landowners and the local planning authorities, and to enable the future management of these military features. Preliminary fieldwork has already contributed to the East Riding Integrated Coastal Zone Management Plan, which recognises the importance of the 20th-century military structures as a part of the historic environment. Further recording work and archive study will be undertaken to broaden the knowledge base and to ensure that the transition of military features from a terrestrial to a marine environment is closely monitored. □

**Roger J C Thomas**  
**Military Support Officer**

*Interpreting a pillbox at  
How Hill, Spurn*



# LANDGUARD FORT AND BATTERIES

## Conservation and management

When Henry VIII ordered the construction of a bulwark, the place was called Langer Point. By the 18th century, it had become commonly known as Landguard. In the summer of 1667, the second fort came under attack by sea and land from De Ruyters' battlefleet and marines. The defences here complimented others on the Harwich side at Beacon Hill, and batteries at the confluence of the rivers Orwell and Deben at Shotley were designed not just to prevent a landing, but to keep allied vessels and infrastructure in the Haven a safe distance from the enemy's seaborne ordnance.

Today the spit is dominated by the Landguard Terminal of the Port of Felixstowe. Multi-coloured shipping containers, stacked ten high, overshadow the remains of the defences. Despite these incursions, there remains standing the third fort built in 1717 and then modified dramatically in 1750 and 1870.

The fort is a pentagonal structure with angle bastions and a dry ditch, its terreplein now surmounted by a monumental granite and iron-armoured casemated battery. It is surrounded by coast artillery batteries of the 1880s and 1890s whose form, despite being only a decade newer than the armoured fort, reflects the speed of technological development of the late-19th century: wrought iron armour has given way to steel, making guns lighter and stronger, and reducing manual handling problems; the magazine rifle and machine gun have removed the need for complex outworks for defence in depth; brick and stone have given way to mass concrete which lends itself to the organic forms of the new defences.

Left Battery, to the north of the fort, is the most complete survivor of four such batteries built for hydropneumatic disappearing guns, the others being at Dover, Plymouth and Harwich. Right Battery to the south and Darell's Battery, one of the harbourmouth defence batteries, also survive virtually complete. Sandwiched between the fort and the container terminal lie workshops and outbuildings of the late Victorian Submarine Mining Establishment from where the army would assemble and seed electrically controlled mines across the harbour mouth.

© English Heritage Photo Library/Jonathan Bailey/MO10115



Mike Reed of the Landguard Bird Observatory ringing and measuring a migrant bird within the converted battery observation post

### A key monument

These outer defences and the fort are cared for by English Heritage. The remaining defences of the Peninsula – the Tudor bulwark, Jacobean fort, Victorian carbine butts, World War I defence systems and D-Day embarkation hards – are privately owned and managed. All have recently been scheduled.

From 1957, when the last soldier left Landguard, to 1997, the fort and outer defences lay abandoned, accessible only by arrangement with a keyholder. In 1992, the fort was identified by the Department of National Heritage as one of a handful of key monuments in need of backlog consolidation to place the site on a routine maintenance footing. Consolidated in 1997, the fort has been open to the public since 1998, operated by the local Landguard Fort Trust. In the summer of 1999, the project to consolidate the remaining outer defences began.

### Outer defences

The outer defences presented a particular challenge given the site's ecological interest. The area containing military remains is also designated a Site of Special Scientific Interest and a Local Nature Reserve. The short grass provides a foothold for nationally scarce low flowering plants. Rabbit activity encourages the

*The shingle spit at the southernmost tip of Suffolk adjacent to the commodious anchorage of Harwich Haven was, for five hundred years, recognised by successive military strategists as a convenient landing and mustering place for invasion and an attack on London. The fortifications erected there reflect this strategic importance and catalogue half a millennium of technological innovation. A conservation plan is now being prepared to inform the future management of this important site*

## Landguard Fort and batteries

*Battery during consolidation in February 2002 with the Tressiders carriage exposed. Spoil generated by the works was used to recreate features lost to the defences since 1957, such as the massive traverse to the rear of the battery (see opposite below)*



© English Heritage Photo Library/MD10359

growth of a red databook species, the Stinking Goosefoot. Pyramid orchids are common. The stands of tamarisk on Right Battery largely obscure the defences but are a first landfall for many migrant birds; since the mid 1960s, migration has been monitored here by the Landguard Bird Observatory. The battery is traversed by numerous virtually invisible 'mist nets' strategically placed across openings (rides) in the tamarisk to catch birds. The nets are regularly inspected by volunteers who work at the battery day and night during the migration. The birds are taken to the old Battery Observation Post, set up as a bird hide and ringers post, where ring data is loaded onto computer or new migrants are ringed for future recognition before their release. The Landguard Nature Reserve and Site of Special Scientific Interest are managed from Right Battery by the Suffolk Wildlife Trust's resident Ranger.

The workshops of the Submarine Mining Establishment house the Felixstowe Museum of local history. Within is a fascinating collection ranging from Felixstowe's pivotal role in the development of the flying boat to photographs and artefacts relating to the Landguard defences. There is also a growing display of the fort's submarine mining role with some exemplary replica machinery.

## Conservation plan

It was clear from the outset that a balanced approach which responded to the various beneficial uses and significance of the outer defences would be the key to a successful project. Following condition surveys of the buildings and landscape, policies were devised to protect and enhance the archaeological and ecological importance of the site. The resulting conservation plan sought to:

- place the defences on a routine maintenance footing
- make them accessible to guided groups
- promote their beneficial use, and
- promote ecological diversity.

## Left Battery

One significant decision was to re-excavate Left Battery, backfilled in the 1970s for safety reasons. The excavation was undertaken as enabling works in advance of the main conservation contract and allowed for a full condition survey and specification of repairs before the main contract was tendered. The battery was excavated in November 2000 and the two hundred tons of spoil generated was used to recreate a defensive ravelin at the entrance to the

fort, effectively reversing the process undertaken in the 1970s, avoiding landfill tax and more practically, preventing random parking in front of the fort – a situation which was out of hand and detrimental to the setting of the monument.

Below the battery was discovered, buried in a tunnel, a 6m-long steel ammunition carriage and winding mechanism. This ‘Tressiders’ carriage was designed to deliver ready-use cartridges close to the breech of the largest weapon on the battery (a 10in breech loading gun) to reduce the manual handling to an absolute minimum. The carriage was excavated, overhauled and returned to the tunnel for demonstrations to guided tours.

The restoration of Left Battery also provided an opportunity to reconfigure the parking arrangements for the fort, thus reducing the visual impact of parked cars on the monument. Before laying the parking spaces, Suffolk County Council Archaeology, funded by English Heritage’s Archaeological Projects, took the opportunity to excavate part of the north bastion and curtain of the second Landguard Fort (1625). After penetrating the massive Georgian glacial deposits to a depth of about 3m, the excavation uncovered the ditch, fausse braye, covered way and base of the parapet. This excavation – including traces of the frantic assault by Dutch marines in the summer of 1667 – has

augmented our understanding of a period of fortification history poorly represented archaeologically. The works and excavation have been interpreted and widely publicised, and there has been much public interest and media coverage.

The conservation project was completed in 2002. The East of England Regional Team is now engaged in discussions with the licensees of the defences on the future operation of this complex site. There is still work to do to make the defence landscape legible and accessible and to publish the results of the research, but it is an inspiring place with much potential. □

**Richard Linzey**  
**Former Head of Architecture**  
**Major Projects**

© English Heritage Photo Library/M000658



*Landguard Fort with Left Battery in the foreground before excavation, September 2000*

© English Heritage Photo Library/M000718



*The same view after excavation of Left Battery, November 2000*

# POW CAMPS

## What survives and where

*Very little has been written about World War II Prisoner of War (PoW) Camps in the British Isles. Even less work has been done to identify their total number and location. A recent project, however, has recorded and assessed surviving sites in England*

With a few notable exceptions (such as Hellen 1999) very little has been written about World War II Prisoner of War (PoW) Camps in the British Isles. This is surprising given that a large volume of documentary material exists at the Public Records Office. Even less work has been undertaken to identify the total number and location of the camps. Incomplete lists have been published in a number of magazines and on the Internet but often the addresses given are not sufficiently detailed to permit an accurate interpretation. To help inform the future management of known surviving sites such as Harperley (Nieke and Nieke, 22–5), research was needed to discover the number of sites originally built, their location and type, and modern survival.

### Methodology

Given the poor quality of the original address information in wartime documentation, often only the camp number and nearest town or village, the first stage of the assessment was a

map-based search to identify basic locations. For this purpose the mid-1950s Ordnance Survey 1:10 650 scale 6-inch ‘Revision Series’ maps produced the best results, usually showing individual huts and camp boundaries with great accuracy, many of which were identified as ‘work camps’ or ‘agricultural workers’ hostels’. Where the map evidence failed to provide clear results, the location of sites was obtained by the interpretation of aerial photographs held at the National Monuments Record Centre.

There were some problems with interpretation. Most of the camps established during the early war years were within pre-existing country houses, Territorial Army camps, cotton mills, racecourses and so forth, and most of the late wartime sites were located in all manner of buildings, none definable as PoW camps on a map. Only the purpose-built mid-war sites were clearly identifiable. Also, the official numbering sequence included some duplication.

*Aerial view of the former PoW Camp at Easton Grey, Wiltshire, June 2002. The site is now a light industrial estate*



© Bob Bewley

## Typical 'standard' camp

Italian prisoners taken during the 8th Army's North African Campaign built the majority of the so-called 'standard' camps during late 1942 and early 1943, living under canvas until the accommodation huts were built. The most common type of building used was the 18ft 6in-span Ministry of War Production (MoWP) standard hut, although some timber sectional 16ft- and 24ft-span Nissen huts were used at a number of sites.

© Imperial War Museum



Camp 81 (Pingley Camp) at Brigg, Lincolnshire, is a typical example. Built to house 750 prisoners, it consisted of a tented camp, guards' compound, prisoners' compound, prisoners' garden plots, recreation ground and a sewage disposal works. An outer plain wire fence supported by concrete posts and an inner barbed wire fence enclosed the prisoner compound and recreation ground. Within the prisoners' compound a 'sterile' area was established between the inner fence and a further coiled 'Danart' barbed wire entanglement. Contrary to popular belief there were no guard towers at the majority of these camps, as the prisoners held in them were usually considered 'low risk'.

© Anthony Hellen

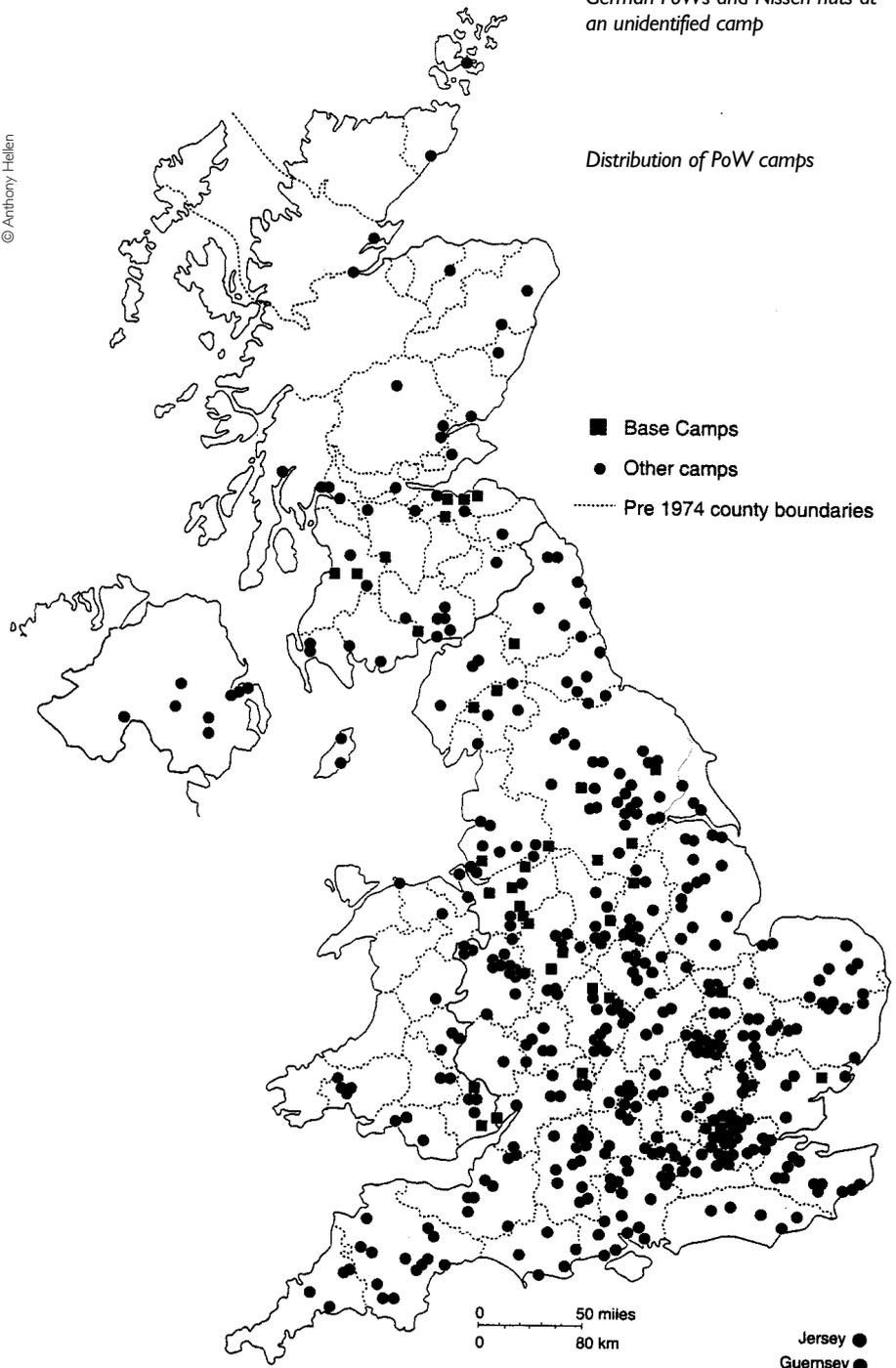
The complex was accessed from a public highway by a single-track spine road. The guards' compound consisted of a group of some 15 huts and a brick water tower occupying a rectangular parcel of land immediately north of the main gate to the prisoners' compound. The prisoners' compound occupied a six-acre square of land and contained 35 huts, including a cookhouse, grocery and produce store, two dining huts, two recreation huts, drying room and showers, two ablution and latrine blocks, a camp reception station (sick quarters), a living and carpenter's hut, and 23 living huts.

The majority of the living huts were ten-bay MoWP standard huts built using pre-cast reinforced concrete frames and wall panels, but eight were Laing composite timber-framed huts clad externally in bitumised corrugated iron and internally in plaster-board. The MoWP huts used for domestic purposes, such as the cookhouse, ablutions and latrines, were built of hollow clay blocks rather than concrete panels.

After 1944 and particularly following the surrender of Germany, many camps were hard pressed to hold the number of prisoners taken; additional accommodation was provided in bell

German PoWs and Nissen huts at an unidentified camp

Distribution of PoW camps



## PoW Camps



One of the standard design buildings surviving at Brigg, Lincolnshire

tents erected within the prisoners' compound. In May 1946, Pingley was responsible for 1,862 prisoners, 984 of whom were housed at the camp and the remainder were either billeted out or lived at one of four hostels (Elsham Hall, Elsham Mount, Elsham Manor and Scawby). At some camps the capacity was substantially increased by the erection of new prisoners' compounds, with accommodation mostly under canvas, but a few sites like Camp 86 (Stanhope Camp) at Ashchurch, Kent, eventually acquired 16ft-span Nissen huts to replace the tents.

*Mickey and Minnie Mouse, painted on the inside wall of a hut at Brigg, Lincolnshire. Contemporary graffiti often survives, giving these sites added social significance*

### Survival and condition

Although much work has already been carried out, a clear understanding of the numbering system mentioned above has not been possible.

A national total of 1026 camps is unlikely, given the large gaps in the numbering sequence, for example, 300–402, 412–553, and 702–1000. In terms of plan form, the majority of sites in the numerical sequence 25–122 conform to a common basic shape, giving a total of about 97 'standard' camps. This total currently represents approximately 1/5 of the known number of 487 PoW camps positively identified throughout the British Isles.

The condition of 53 of these 'standard' sites has been positively established and can be taken as a representative sample to assess probable rates of survival across the country. As a general rule, survival diminishes the further south and east one goes. Clearly land values and greater demand for brownfield sites has exerted some influence; national government policies have also had an effect on this pattern of survival. A number of sites have been demolished to permit the building of schools and the planting of forestry, while the majority of the extant sites have survived because they were used as agricultural hostels by the county agricultural committees of the late 1940s and early 1950s. During the late 1960s and early 1970s, a number of camps became hostels for international students doing seasonal agricultural work, but with the exception of Camp 90 (Friday Bridge Camp) at Wisbech, Cambridgeshire, this practice appears to have come to an end by the early 1980s, when the remaining sites passed into low-grade agricultural and light industrial uses.

Of the total of 53 'standard' sites examined, 33 have been demolished, though footings may survive, nine are semi-extant (at least 20% of structures have been demolished) and eleven are extant (over 80% of structures remain standing). Camp 93 (Harperley Camp) falls into this



© English Heritage/Roger J C Thomas

category and has now been scheduled (Nieke and Nieke, 22–5). The terms ‘semi-extant’ and ‘extant’ do not necessarily imply that the huts remain in good condition; on the contrary, and with a few notable exceptions, the standard of maintenance at these sites has been minimal or non-existent. It should be borne in mind, however, that the buildings were originally designed for speedy, low-cost, non-skilled construction and intended only for a short-term temporary use. Nevertheless there are a handful of sites that have been maintained to a high standard and these particular sites do give a good impression of their original appearance.

## Implications

Some 20% of the ‘standard’ PoW camps survive sufficiently to provide a clear impression of their original plan form and appearance. Some remain in use: Camp 83 (Eden Camp) at Malton, North Yorkshire, is a museum dedicated to ‘The People’s War 1939–1945’, Camp 108 (Thirkleby

Camp) near Thirsk, North Yorkshire, is a farm, while Camp 100 (St Martin’s Camp) near Gobowen, Shropshire, is a light industrial estate. Though these surviving examples are significant sites, even those where only footings survive tell a story and contribute to the local scene. They are also a reminder both of the presence of PoWs in England during World War II and the integration of some former prisoners into the local community. From this comparatively small number of surviving sites, some will now be considered for protection to ensure that these sites are not needlessly destroyed in the future. □

**Roger J C Thomas**  
**Military Support Officer**

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Ettington Park PoW Camp, Warwickshire, 1946, showing clearly its plan form

# HARPERLEY POW CAMP

## Memories and monuments

*The events leading to the scheduling and consideration of future management of a Prisoner of War camp in County Durham are a reminder of the close interweaving of the past and the present*

It came as a surprise to open *The Guardian* one day in 1999 and find an article on Harperley Prisoner of War (PoW) Camp in County Durham. The camp was for sale following the death of the owner, and the survival was of media interest. For us it was a surprise as this was the camp where my father, as a German PoW, spent the years 1944–8. It was a well remembered time, during which his life was to change totally and irrevocably. Some 60 years on, I became involved in having the site designated as a scheduled monument, an unusual turn of events and perhaps a unique dilemma.

Harperley, known in official records as Camp 93, is a purpose-built camp located in Weardale on requisitioned farmland. Originally built in 1943 for Italian PoWs, it soon housed around 900 Germans identified as of low risk. The prisoners were housed in quickly built Ministry of War supply standard huts. Adjacent to the tightly ordered PoW camp lay guards' quarters of similar construction but with slightly grander fixtures and fittings. A 1946 site plan, recently rescued from German files by a former PoW, confirms that over 85% (about 50) of the

buildings survive today in varying states of preservation. The site had survived because it had remained in one ownership and, apart from a spell when it was used for agricultural storage and chicken sheds, had been largely mothballed for years. Despite the loss of many internal fittings, sufficient survives – when allied with personal recollections, comparable sites and the limited documentary evidence – to allow the full ground plan and nature and function of individual buildings to be reconstructed.

Among the buildings are two remarkable survivals. One is a theatre, created within one of the standard huts, with a stage, orchestra pit, prompt box and tiered flooring in the auditorium. Walls were decorated with hessian sacking, presumably dyed, and fragmentary cuttings from German magazines remain stuck to the walls in the back stage areas. The second is a canteen building set aside for rest and relaxation in which a series of wall paintings of typical German scenes survive. Here windows were decorated with hardboard curtains painted in chequer patterns.

*Aerial photograph of the site taken in 1999. Prisoners were held in the three regimented rows of buildings on the right. The guard's camp lies on the left-hand side*



© English Heritage/NMR 17259-16

## Life in the camp

The history of Harperley is interwoven with the history of its many inmates, guards and the local community. Unlike contemporary PoW camps in Germany, camps in England were not hidden away but were important elements of the wartime British landscape. Life in the camp was obviously traumatic for many of the prisoners kept away from their families and homelands and uncertain about their futures, but many, like my father, were glad to be out of a war they never had any enthusiasm for. At least their families knew where they were and that they were safe. Prisoners were humanely treated and at Harperley the Camp Commander encouraged them to make themselves as 'at home' as possible. The camp had its own newspaper, *Der Quell* (The Source), and an eleven-piece orchestra performed regular concerts. A dramatic group was formed and performances included a series of comedies at Christmas 1947. There were educational classes and football games, with excursions to play neighbouring teams. The PoWs created and tended small gardens between the tightly packed huts. Craftsmen among them made wooden toys, chess sets and other small wooden articles as well as leather slippers and other goods, given away in exchange for favours or sold to supplement meagre incomes.

However, Harperley's main role was as a work camp from which the prisoners were taken each day to work on local farms. Throughout the country, a large number of such camps were built so that PoWs could be used for work in agricultural, forestry, dam, road and other construction industries. In total some 400,000 Germans and 100,000 Italians were held in Britain as PoWs, the vast majority undertaking hard manual work.

The contribution of PoWs to agricultural production cannot be under-estimated. At a time when increased production was essential to ensure sufficient home-produced supplies



© English Heritage/AA 035105

© English Heritage/AA 035140



despite a reduced local workforce (the majority of able-bodied men being away at the war), the impact of PoW labour helped Britain survive, not least through the harsh winter of 1946–7. Depending on their level of skill, PoWs were paid up to 6 shillings a week – at a time when the minimum wage for a British agricultural worker was 75 shillings a week. My father recalls earning just enough to buy a small piece of cake and a bottle of lemonade each week. The movement of Germans around the countryside to their places of work became commonplace and well remembered and was made possible by an agreement that the majority required little guarding.

My father was eager to spend as little time as possible in the camp and soon joined the parties working on local farms. Here he was able to use skills developed on his own family farm in Silesia to good effect. Like other prisoners, he was generally well and kindly treated by local people keen for cheap labour. Placements that provided free meals during the day to augment the meagre camp rations were always highly prized. Security throughout was generally low-key and it was not unheard of for the guards accompanying them to and from work to disappear into a local hostelry at midday and not reappear for the return to camp! Eventually a system of billeting PoWs on farms was developed to allow more personal freedom and a break from camp routines.

*Survival in 2002: some of the standard huts in which prisoners were housed. Conserving these buildings and finding suitable re-uses will be a major conservation challenge*

*Game bird in a German forest. One of the surviving wall paintings*

## Harperley PoW Camp



Courtesy of Reinhard Nieke

Reinhard Nieke (second from left standing) and some of his hut group at Harperley in 1945

Repatriation began after the war, although the authorities showed some reluctance to lose their additional labour force. By 1949 all who wanted to go had been sent home. This left some 25,000, my father included, to stay on. In his case he no longer had a real home to return to, his Silesian home having been given to Poland after the war under international agreement. (The resultant ethnic cleansing of some 13 to 15 million native Germans from their ancient homelands in Pomerania, East Prussia and Silesia remains the largest single refugee movement in European history). He had found a local farming family to stay with and indeed marry into.

### Significance and future management

Shortly after the survival of Harperley became widely known, English Heritage was asked to

comment on its national importance and the possibility of any statutory designation. Our impression then, now confirmed by Roger Thomas's national assessment of PoW camps (Thomas, 18–21), was that the nature of the site and the extent of survival were both remarkable and unusual. In total perhaps some 1000 PoW camps were created in Britain, of which around 100 were, like Harperley, purpose-built, though the vast majority of these have long disappeared. In considering it for protection, it was heartening to find a groundswell of local interest in securing the future of the camp and much support for the idea that it should be preserved. The publicity raised much interest in Germany. A range of personal and media requests for further information appeared, for example, from a man who wanted to see whether the paintings might have been by his late father-in-law, an artist who had been a PoW in England. (Sadly the paintings are unsigned but it now appears that the artist was held in a camp near London.) The site owners and local planners discussed future options. Overall, designation was thought to be appropriate only if a suitable and sustainable re-use could be found that would preserve as much as possible of its character, key buildings and plan form.

Rural idyll of a boy piper and his flock. Another surviving wall painting by a different hand



© English Heritage/AA 035109

A new future has been agreed. The camp has been bought by a local couple well aware of its history and interest. They are working closely with English Heritage's North East Regional

Team to identify appropriate repair, refurbishment and management programmes, that should allow at least part of the site to be opened to the public. In view of these new developments, scheduling was felt to be an appropriate management tool, and the site is now a scheduled monument – the first such camp to be protected in England.

## Troubled pasts

Dealing with this site has been difficult, both professionally and personally. Harperley was a significant part of my father's past. His experiences as a PoW are well remembered – some frequently recounted, others locked away. Recollections of the actual camp are partial – he has no memory of the theatre or wall paintings – in part because he worked hard to spend as little time as possible there, returning only to eat and sleep. Some of his strongest memories of the period are of working in the local area. Although we had heard rumours over the years of its survival, the camp itself was never a place he considered re-visiting. Sixty years on he is surprised by the degree of survival and is helping us try to understand the site better. These buildings provoke memories that might otherwise be lost. Life as a PoW was not easy; nor was life as a German in post-war England.

Preserving this site will ensure that the experiences of the thousands of PoWs, held at camps like Harperley, are not forgotten as memories fade.

Harperley has an important wartime story to tell, particularly important for the wide-ranging experiences of the PoWs, guards and local community. Many of these stories now need to be drawn together and recorded. The strength of local knowledge and interest in the site should not be forgotten, and a community-based recording project would be valuable. Overall as an educational resource, the camp has enormous potential. We hope that Harperley now has a secure future and can stand as a memorial to the PoW experience in Britain. □

**Margaret R Nieke**  
*Inspector of Ancient Monuments*  
*Monuments Protection Programme*

**R H Reinhard Nieke**

Harperley will be featured in the BBC's ten-part 'Restoration' series to be broadcast in August and September. The programme will include some former PoWs visiting the camp and an orchestra playing in the theatre.



*The theatre, with its orchestra pit, prompt box, stage and decaying wall decorations clearly visible*

## Military trenches

*With few exceptions, there has been little archaeological research about the trench warfare that figured so prominently in theatres of war during the closing decades of the 19th and first half of the 20th century. Field investigation on Salisbury Plain, Wiltshire – the largest military training area in the country – has highlighted the extent to which trenches were constructed as part of training programmes before soldiers were sent overseas. The investigation not only highlights the remarkable survival of the evidence but also demonstrates how the principles of defence were used in the siting and construction of trench systems*

The northern part of Salisbury Plain has been used as a military training area since the end of the 19th century. This large expanse of undulating downland, purchased by the Ministry of Defence during a period of agricultural depression when land prices were relatively low, was considered ideal for both training and large-scale manoeuvres. As a consequence, the evidence of over 100 years of military activity – rifle and anti-tank ranges, observation posts, gun emplacements, and impact areas – survives as earthworks (McOmish *et al* 2002). Trenches are particularly widespread and range from simple two-man slit-trenches to more complex planned systems covering several hectares and appearing to date mainly from World War I.

### Trenches

Despite their use by the Army since at least the 18th century, trench systems on the Plain were not recorded until 1902 when ‘three 4 foot deep S-shaped Boer trenches, filled with standing dummies, were fired at both by guns and howitzers with fair effect’ (Anon 1902, 23). This type of trench was used by the Boers during the South African War (1899–1902) and was considered far superior to those used by the British Army (Courtney 1900, 92); they were in effect the precursors to those used during World War I.

As trench warfare became established, a fully developed system had a number of structural elements. First, there was a front-line or firing trench, with a support trench situated some distance behind it. A reserve-line, that was essentially the battalion reserve and may consist of either trenches or dugouts, was located 400–600 yards to the rear (Anon 1997, 19). Each line comprised either zig-zag lengths of trenches or, as in the case of some front lines, crenellated bays, designed to give maximum protection against enfilade fire and shellbursts. The lines were connected by a series of communication trenches, with shelter bays positioned along their length with over-head cover. In addition, ‘saps’, dug from the front-line into ‘no man’s land’, were often used as observation or listening posts, as vantage-points, or as sally-ports for patrols.

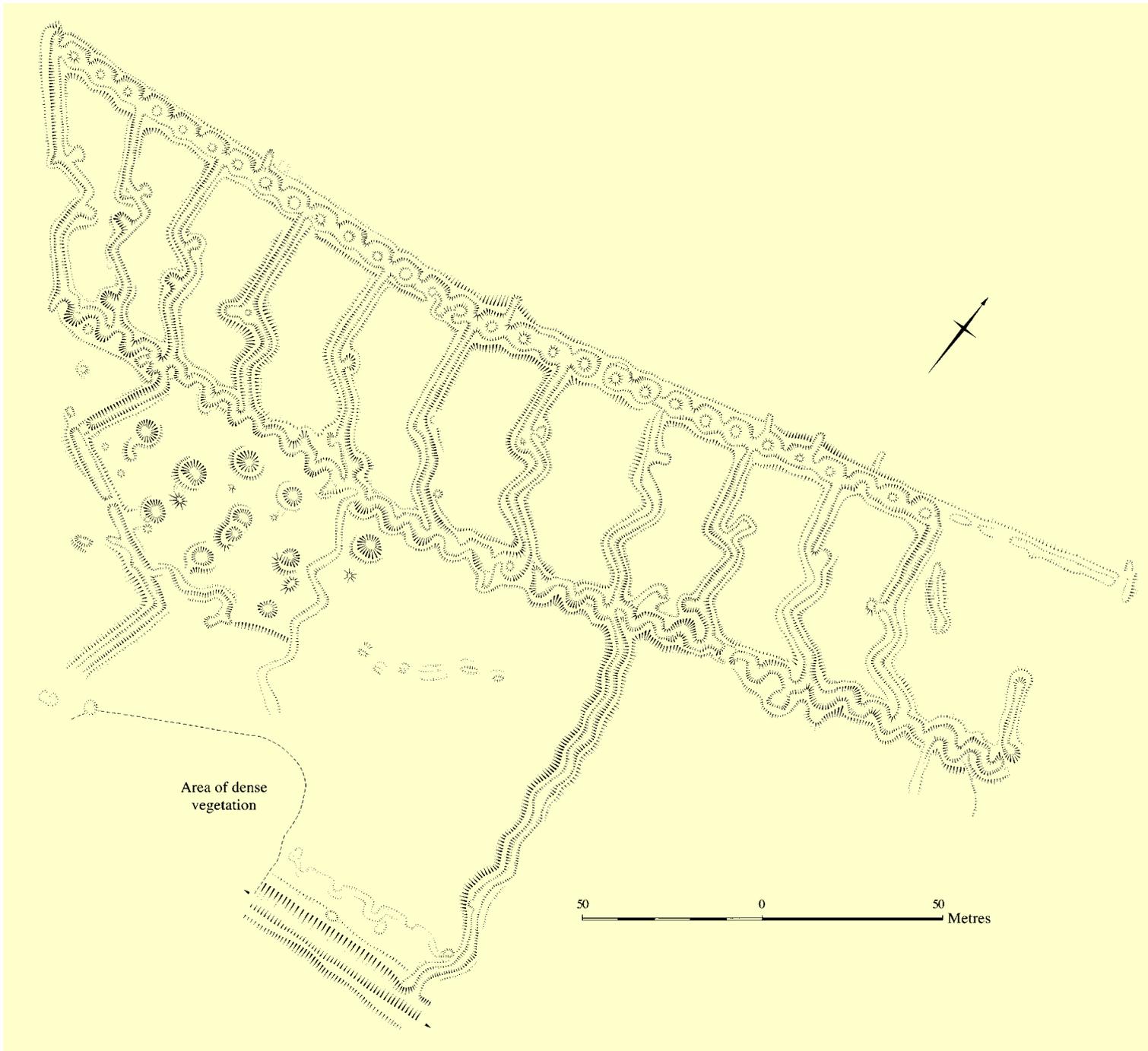
Great attention to the principles of defence was taken in siting trench systems within the landscape. A ‘covered approach’ was essential when approaching the rear communication trenches so that soldiers could enter the front-line unobserved. In the trench system on Perham Down, for example, a long hedgerow and tree-belt provided cover, while on Chapperton Down the approach from a hidden valley used a prominent prehistoric Celtic field lynchet for additional protection. On the Bulford rifle ranges, despite the ground being flat, full use was made of a prehistoric linear ditch and the Celtic field lynchets to conceal or blend the trenches into the landscape (Brown and Field forthcoming).

Some of the best-preserved trench systems occur on Beacon Hill near Bulford. Here a recent programme of scrub clearance has revealed a particularly coherent pattern incorporating a front-line with bays, linked by sinuous communication trenches to the support-line. Further west, other systems snake across the slope using to best effect the natural profile of the hill.

### Further work

Salisbury Plain is by no means atypical since military earthworks survive on the majority of training areas in the country. They are also likely to exist in other areas that were used temporarily during periods of national emergency. The total resource is unquantified and, until recently, unrecognised, for when trench warfare is usually considered, thoughts immediately turn to the Western Front and the plethora of trenches that dominated the French and Belgian landscape. Archaeological investigation on the military estate on Salisbury Plain, coupled with further reconnaissance and detailed analytical survey will help to establish the extent of this important part of our national military heritage. □

**Graham Brown and David Field**  
**Archaeological Investigators, Swindon**



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A trench system on Beacon Hill. The trenches here survive to a depth of c 0.6m. The front-line, facing north, is shown as a length of crenellated bays with central 'islands' allowing troops to move along unhindered. The small bulbous features in the communication trenches are the shelter bays. The long communication trench from the support trench is linked to a prehistoric linear ditch and hedgerow that provided additional cover

# AIRFIELDS AND AVIATION BUILDINGS

## A national assessment

Various projects undertaken by the Monuments Protection and Thematic Listing Programmes together constitute a national assessment of airfields and aviation architecture

Powered flight, and in particular its use for military purposes, has had a profound impact during the 20th century on human events and the modern landscape. Military airfields represent the most significant manifestation of that impact. They are typically extensive and complex sites, whose planners took into account both the functions of a technology-based service and the accommodation, ordered by rank, of communities of flyers, technicians, administrators and their families. They were built in great numbers: 301 by 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 World War II.

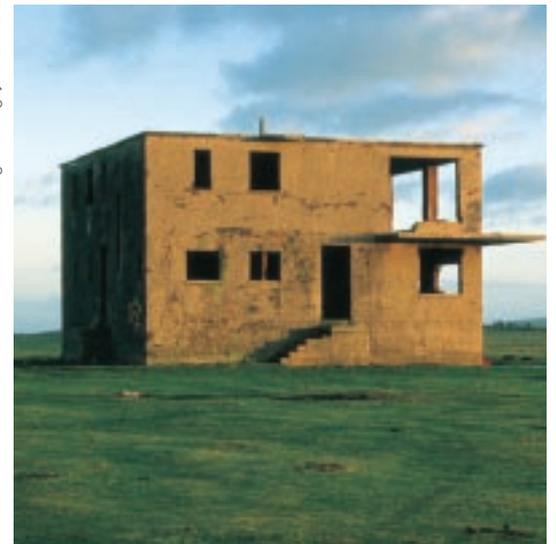
### Assessment

Given the character, number and diversity of military airfields, the strategy for protection has focused on the identification of the most complete, historically important and strongly representative sites. The assessment of groups and individual structures outside these key sites rests on their intrinsic historical or architectural importance. A statistical analysis of what has survived, comparison with original populations and a critical analysis of importance in a typological and national context, has been compiled by Paul Francis, author of *Military Airfield Architecture* and the acknowledged national expert on the subject. Additionally, Colin Dobinson has undertaken archival research, exploring certain themes relating to airfield planning and architecture, particularly from 1923, which has enabled us to gain a fresh overview of the subject at a strategic level and understand the rationale and forces that determined the typology, distribution and development of military sites.

Dobinson's work on airfield defences, undertaken for the Monuments Protection Programme, was also part of this wider survey and formed the basis for an assessment of surviving defence structures in England, again undertaken by Paul Francis. This assessment, backed up with records collated by the Defence of Britain Project, revealed that, for example, of

the 242 Picket Hamilton pneumatic pillboxes issued for airfield defence, fewer than 20 survive. Also, fewer than ten airfields originally defended have sufficient of their defence provision surviving in a coherent and legible form, and for at least some of their perimeter, to merit protection through scheduling. At Perranporth in Cornwall, all twelve of the original fighter pens survive, along with their perimeter track, the battle headquarters (from which defence of the airfield would have been coordinated), and a group of pillboxes. This site has now been scheduled.

© English Heritage/John Schofield



The iconic control tower at Davidstow Moor, Cornwall, one of several that will be considered for scheduling

### Management options

Where there is a role for statutory protection, the form of protection selected is designed to encourage the type of management that will best ensure the site or structure's long-term future. Airfield buildings are structures that fall most easily within the framework for listing, where continuing or new use of built structures is both desirable and feasible. Earthworks and pillboxes (both concrete and hydraulic) associated with airfield defence in World War II, in addition to structures such as fighter pens and bomb dumps, can be most suitably managed as monuments through the scheduling legislation. Sites of this nature, the most outstanding of which can also be managed through conservation area designation, demand specialist input into the



Aerial view of RAF Bicester which retains, better than any other military airbase in Britain, the layout and fabric relating to both pre-1930s military aviation and the development of Britain's strategic bomber force. The grass flying field still survives with its 1939 boundaries largely intact

drafting of guidelines for management (Holborow, 32–3). These guidelines will clarify the issues of maintenance and adaptation.

## International context

As befits the birthplace of powered flight, which celebrates its centenary year in 2003, America's National Parks Service has completed the most advanced work aimed at the protection of historic aviation properties through registration on the National Register of Historic Places. These have included the sites and structures associated with the early career of the Wright brothers and other pioneers, but also military sites such as the six seaplane hangars of 1916–18 at Pensacola Air Station in Florida, the training base at Randolph Field in Texas, under development from 1928, and the World War II bases on the Aleutian Islands off Alaska.

A recent European project, in which English Heritage's Listing Team has participated, was initiated in order to achieve a consistency of approach towards the evaluation of the civil airport terminals of the 1930s (*Conservation Bulletin* 41, 24–5). The project has also provided information on the survival and architectural diversity of the bases built for other European states. This has enabled a sharper and more critical focus to be brought on what has survived in this country and has underpinned the protection of key buildings and sites such as Deelen airfield in the Netherlands and the wind tunnel at Meudon in France.

## Aviation sites in England

The thematic survey of aviation sites and structures undertaken by English Heritage in 1999–2000 has identified a number of key sites and other sites and components which can be described as having special interest or being of

national importance. Some examples of these key sites and components follow.

The survival of hangars of 1910 at Eastchurch, Kent, and Larkhill, Wiltshire, on the south of Salisbury Plain – where both military and civilian flyers were trained – is especially important. More remarkable are the surviving structures at nearby Netheravon – developed as a prototype flying base – and Upavon, both in Wiltshire. Thus far, only three other comparable groupings have been identified elsewhere in Europe and none in America or further afield, making these sites of outstanding importance in an international context. Similarly, Duxford, Cambridgeshire, survives as the most outstanding multi-period site and fighter base in Britain and probably in Europe, with buildings of both inter-war expansion periods added to a uniquely well-preserved suite of hangars, workshops and technical buildings of 1918. The thematic survey has established that only nine sites in Britain (seven in England, plus Shotwick in north Wales and Montrose in Scotland) have retained relatively complete hangar groupings dating from World War I and earlier.

When the RAF was formed as the world's first independent air force in April 1918, and during the period of retrenchment that lasted from the Armistice until the early 1920s, its founding father and first Chief of Air Staff, General Sir Hugh Trenchard, concentrated upon developing its strategic role as an offensive bomber force. This principle of offensive deterrence continued to guide the shape and direction of Britain's air force for the remainder of the inter-war period, throughout World War II and into the Cold War period. Thus the importance of Bicester in Oxfordshire – an exceptionally well-preserved base under development from 1926 which has retained much of its original grass airfield – again

## Airfields and aviation buildings

*The officer's mess at Kenley, Surrey. This uniquely complete surviving landscape, remodelled for Fighter Command in 1939–40, is now used largely for amenity purposes*



© English Heritage/Jeremy Lake

merits consideration within its broader international context.

By the 1930s, the issue of airbase design had become inextricably bound with that of national identity, from the Moderne styles found in Finland and Italy to the self-consciously traditional style adopted for 1930s German training bases. In Britain, and in contrast with the more stridently modern styles for civil terminal architecture, the planners for the post-1934 expansion of the RAF were required to soften the impact of new bases on the landscape by politicians mindful of public concerns over the issues of rearmament and the pace of environmental change. The Air Ministry's main consultant in these matters was the Royal Fine Arts Commission. The result, for the first generation of bases constructed after 1934, was a curious blend of Garden City planning and architecture for married quarters, neo-Georgian propriety for the barracks and other domestic buildings, and a watered-down Moderne style for the technical buildings. Hullavington, Wiltshire, now a conservation area, is in every respect the key station representative of the improved architectural quality of post-1934 expansion. Architects in Germany, France and Italy had since World War I pioneered the construction of hangars in reinforced concrete, and protection has now been afforded to some of the best-preserved and most significant examples. The Air Ministry built on these precedents and took out patents on the Junkers Corporation 'Lamella' sheds for hangars on its reserve depots. These were under development from 1936, spearheading the concept of dispersed airfield planning which became a characteristic feature of the World War II period. Kemble, on the Wiltshire/Gloucestershire border, has the greatest range of such structures, which are grouped in

pairs around the airfield and survive in a better state of preservation than elsewhere in Europe. The landscape at Kemble is a reminder that the character and development of the flying field is fundamental to an understanding of military aviation's infrastructure. Efforts are being made to incorporate key examples into conservation areas where relevant and to set frameworks for future development within a sound understanding of their significance. Some 15 landscapes have been identified as being of particular importance, from the World War I airfield and its associated fabric at Old Sarum to the fighter and bomber bases that embodied the concept of dispersal pioneered at bases such as Kemble.

The ability of airfields to disperse and shelter aircraft from attack and ensure serviceable landing and take-off areas was first adopted in 1939 by the RAF for its most vital fighter sector airfields, whose perimeters were provided with fighter pens for parked aircraft. Of the key sector stations remodelled for Fighter Command in 1939–40, Kenley, in Surrey, survives as a uniquely complete landscape, now largely used for amenity purposes. The fighter pens and parts of the perimeter track are currently being assessed for scheduling and the officers' mess and airmen's institute – the former bearing the scars of the raids of August 1940, during the Battle of Britain – for listing at grade II.

### Historical associations

The Battle of Britain was one of the defining events of World War II, some historians would argue of the 20th century, and was associated with a limited number of sites (Lake and Schofield 2000). The most famous – besides Duxford – were concentrated in 11 Group, which bore the brunt of the Luftwaffe assault.

Biggin Hill, Kent, where battle-scarred barracks and other buildings have been recommended for listing, has already been designated as a conservation area. Further structures – ranging from the sector operations rooms at Debden, Essex, and Northolt, London, to 11 Group’s underground headquarters at Uxbridge, London (preserved exactly as described by Churchill in his famous account of September 1940) – will be recommended for protection, as will the fighter pens and defences at Biggin Hill and those at the remarkably well-preserved landscape at Debden. The importance of such landscapes as touchstones to the Battle was first raised by Sir Douglas Bader, who made representations against the development of the airfield at Duxford during the M11 Public Inquiry of the 1970s.

During World War II, Britain’s entire layout of military airfields was involved in the war effort, there also being a diverse range of nationalities associated with these sites. Some 15% of Fighter Command’s strength in the Battle of Britain came from overseas pilots, Czechs and Poles making up the largest European element, and training units such as Bicester, Oxfordshire, took in many thousands from overseas. However, the highly dispersed nature of those sites erected during the conflict – built of temporary materials and spread over many square miles of land – precludes structures on the great majority from being recommended for protection.

Exceptions include the former US Navy base at Dunkeswell, Devon, a uniquely important site associated with the Battle of the Atlantic, and some of the control towers. Particularly on airfields with distinguished operational histories, those towers survive as iconic structures in the landscape, testament also to the enormous losses sustained by American and Commonwealth forces in the course of the Strategic Bomber Offensive. The association of Scampton, Lincolnshire, with 617 Squadron’s raid on the Ruhr dams in 1943 is an exception to the general rule that the scale and diffused nature of the bombing campaign does not allow for a special historical distinction to be applied to specific sites, in contrast to the Battle of Britain’s involvement of a relatively small number of airfields. Consideration of the archaeology of conflict has also now extended to the thousands of crash sites, excavated under licence from the Ministry of Defence, which have been the subject of fresh guidance from English Heritage (Holyoak, 34–5).

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## Management and designation

The assessment of airfields and other military sites by English Heritage has thus increasingly come to reflect a unified approach to management and designation. The listing proposals arising from the thematic survey of military aviation sites have been through a long process of evaluation and consultation, highlighting the importance of focusing on key issues of historical importance and international context, in addition to formulating policies for the sustainable and long-term management of key sites. The reports arising from this work are being issued to Sites and Monuments Records. □

**Jeremy Lake**  
*Inspector, Listing Team*

### Reference

Lake J and Schofield J, 2000 Conservation and the battle of Britain, in Addison P and Crang J (eds) *The Burning Blue: a new history of the Battle of Britain*. London: Pimlico, 229–42



The seaplane hangars at Calshot, Hampshire, which date from between 1914 and 1918, have been listed at Grade II\*. The site is now an outdoor activities centre, and the great steel-framed hangar of 1918, shown here, has been converted into a multi-purpose sports hall with velodrome, ski slope, tennis courts and sports pitches



# HISTORIC MILITARY AVIATION SITES

## Management guidance

Management guidance for military aviation sites has now been published. Here the principles and the key points are described

England's military aviation heritage is in the process of a comprehensive assessment by English Heritage leading to recommendations for statutory protection through listing and scheduling, as outlined in other articles in this issue. In parallel with this process, the number of conservation areas designated by local authorities on airfields is increasing and now includes, in order of designation, Hornchurch, Hullavington, Biggin Hill, Lee-on-Solent, Yatesbury and Old Sarum.

### Management guidelines

Management guidelines can help owners to understand the importance of their sites and the practical implications of designation. The guidelines provide a framework for positive conservation management, in line with the approach set out in Kate Clark's *Informed Conservation* (English Heritage 2001). They are of particular relevance to military aviation sites, many of which will be subject to a mixture of designations.

For property owners, property managers and their advisers, guidelines can explain the different types of designation and the differences between listing and scheduling. They can also help to answer questions about acceptable parameters of change – for example, faced with a listed hangar, is it possible that consent might be granted to change its cladding materials or to sub-divide the interior space?

Guidelines can provide information on whom to contact for advice and explain the differing roles of the Department for Culture, Media and Sport, English Heritage and the local planning authority. Within English Heritage, Inspectors of Ancient Monuments, Inspectors of Historic Buildings and Historic Areas Advisers may all need to be involved.

On defence sites, the Government Historic Estates Unit (GHEU) – formerly the Government Historic Buildings Advisory Unit (GHBAU) – has a role in providing informal advice to property managers and liaising with English Heritage's other professional advisers. GHEU team members have visited many of the aviation sites affected by listing recommendations

with the listing inspector. Their combined advice on architectural and conservation matters at an early stage has helped to prevent damaging works before buildings are listed.

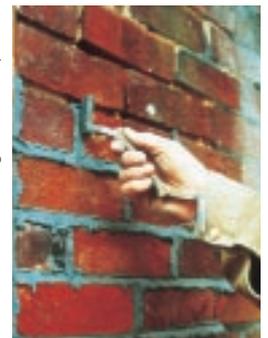
### RAF Bicester

The experience of meeting property managers has demonstrated an urgent need for site-specific guidance on the management of historic military airfield sites. A pilot version of this guidance was developed in 2000 for the former domestic site at RAF Bicester, now occupied by the Defence Logistics Organisation. These guidelines were developed at a series of meetings attended by GHBAU, English Heritage's Listing Team, Defence Estates, the property manager and Cherwell District Council. They have helped to guide development on this site during a period of intensive change and re-use.

For example, the original Officer's Mess (Building 16), recommended for listing at Grade II, has recently been adapted to provide new laboratory accommodation. Discussion of this project at an early stage succeeded in minimising its impact on the character of the building. It was also evident that many small-scale changes, such as the poor quality of brickwork repairs and repointing, were eroding the visual harmony of the site as a whole. Research was commissioned on the original mortars used at Bicester and a sample panel executed to demonstrate an agreed approach. The specification has been incorporated into the guidelines. Similarly, a research commission on the use of paint colour on the Bicester site has helped to underpin advice on a palette of approved external paint colours.

*Pictured left:  
Former RAF Bicester.  
The consequence of failure to  
specify matching bricks and an  
appropriate mortar mix*

*Pictured right:  
Sample panel of pointing being  
executed on one of the buildings  
on the Defence Logistics  
Organisation site at former RAF  
Bicester*



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## Generic guidance

Following the successful completion of the Bicester guidelines, generic management guidance for military aviation sites has been developed by GHBAU in partnership with colleagues in the Designation and Characterisation teams. This is applicable to sites laid out in the period up to 1945, including later developments on these sites in the period up to the end of the Cold War in 1989. This generic guidance can be used as a template, tailored to the circumstances of individual sites.

The guidance has been subject to wide consultation with outside bodies, including Defence Estates and the Office of the Deputy Prime Minister. □

**Will Holborow**  
**Historic Buildings Architect**  
**Government Historic Estates Unit**

To order this free publication, please see details on page 63.

## GENERIC MANAGEMENT GUIDELINES

### Summary of key points

- Military aviation sites have left a unique imprint on the English landscape and, along with other military sites, serve as a reminder of the global conflicts and fast-changing technology of the 20th century. Their historical, cultural and environmental significance needs to be understood and protected through careful management.
- English Heritage has carried out a thorough review of England's 20th-century military heritage, including studies of airfields, airfield defences and Cold War monuments. A thematic survey report of military aviation sites and structures, first issued as a consultation document in 2000, identified approximately 200 buildings and structures deemed worthy of listing at 39 separate sites. A small number of additional sites have been identified as nationally important following English Heritage's subsequent assessment of Cold War sites.
- Of the hundreds of military aviation sites that were in use in the period up to 1945, comparatively few survive in a recognisable form. Many of the latter have now passed into commercial use and those that remain in military use have often been adapted to new purposes. The adaptation of existing buildings and the construction of new buildings may be necessary to ensure the vitality of these sites, whether in commercial or military use. Finding the right balance between change and preservation requires a partnership between the owners and the various statutory agencies concerned.
- English Heritage recognises that some degree of change is inevitable to allow the most important buildings and sites to continue in operational use. All parties involved – including local authorities, building owners and their advisers – should show reasonable flexibility and imagination in considering alterations. With care, most airfield buildings can be adapted to new uses without harm to their essential character.
- Any decisions about the development of military aviation sites should be based on a proper understanding of their special archaeological, architectural or historic significance. Management guidelines can assist in defining the significance of a site and in framing policies for alterations and repairs, as well as any future development.
- On sites where coherent groups of historic buildings survive, it is desirable to maintain the scale and density of the original development and the visual connections between the original buildings. The 'campus' character of many airfield sites derives from the open layout of the buildings, the consistent use of materials and the generous provision of trees and grassed areas. Such cohesiveness may warrant designation of a conservation area by the local planning authority. This should help to ensure that any development preserves or enhances this special character.
- The landscaping of military aviation sites tends to have a distinctive character due to the coordinated and restrained approach to colour, signage and surfacing materials. This character can easily be eroded by piecemeal changes. It is therefore desirable – particularly in designated conservation areas – to adopt a consistent policy towards all aspects of landscaping.
- The architecture of military aviation sites is characterised by simplicity in detailing and consistency in the use of materials. In historic areas the design of any new buildings or extensions should respect the prevailing character, although this approach should not exclude contemporary buildings that have been sensitively designed.

# MILITARY AIRCRAFT CRASH SITES

## Management guidance

*As part of the Monuments Protection Programme, and following consultation with aviation archaeology groups and the Ministry of Defence, English Heritage has issued advice on the future management of military aircraft crash sites*

Military monuments, particularly those relating to 20th-century conflicts for which there is a wealth of documentary sources, have sometimes been dismissed on the grounds that there is little they can add to what we already know. Paradoxically, however, not only do these monuments yield new information, but their value is enhanced precisely because they belong to the recent past, the events of which are still within living memory and stir strong emotions. Of all the remains that English Heritage's Monuments Protection Programme (MPP) has dealt with since it was established in 1986, military aircraft crash sites are one of the most emotive and challenging. The MPP has done much to increase our understanding and management of the diverse elements forming the historic environment but, as crash sites demonstrate, there are rarely simple solutions, particularly where the needs of a disparate range of organisations and individuals must be recognised.

### Crash sites

Military aircraft crash sites combine two elements: the aircraft themselves and traces of their crews, a jumble of remains that can tell us much about the mechanical but also the human aspects of modern warfare. They are places of loss. Documentary sources suggest that during World War II alone some 11,000 aircraft crashed in or around the UK and around 100,000 aircrew of all nationalities were killed flying from UK airfields. Of the latter, roughly a fifth are still officially missing, many beneath the sea.

There are significant variations in the quality and extent of survival at crash sites, depending upon the aircraft type (primarily its size and the materials used in its construction), the circumstances of its loss and the location of the crash. Losses included those of the Royal Air Force, the Royal Navy's Fleet Air Arm, the Luftwaffe, the US Army Air Force, the US Navy and the Regia Aeronautica. In terms of distribution, World War II crash sites were clustered in and around south and east England. However, the English Midlands and western margins of the British Isles also saw intensive, if less extensive activity in relation to training and anti-submarine operations over the Irish Sea and the Atlantic. Aircraft in World War II were much

larger and heavier than their predecessors and characterised by the extensive use of lightweight metals rather than wood and canvas. Air activity in World War II was also much more extensive and intensive than in either World War I or the inter-war period. Most aircraft that crashed in the lowlands left few small traces, due to a combination of the speed of impact and the extent to which remains were disturbed by contemporary recovery operations, carried out either for the purposes of salvage or intelligence gathering. Large but fragile portions of the aircraft, such as wings, tended to break off on impact and were easily removed by recovery teams while subsequent agricultural activity, development and in some cases amateur excavation may have further reduced what survives. What remains, usually engines and severely compacted airframe and ancillary components, will be buried at great depth, leaving only a small surface-scatter of twisted and burnt components.

*Remains of a crashed Heinkel III  
on Lundy, Bristol Channel*

© English Heritage/John Schofield



By comparison, in upland areas inaccessibility reduced the effectiveness of contemporary salvage, with the result that many sites remained remarkably intact into the immediate post-war era, some retaining large and easily recognisable pieces of wreckage. However, rising interest in aviation history over the past 30 years, the growth of leisure activities such as hill-walking and the removal of debris for reasons of appearance or health and safety have led to a severe depletion in the number of sites with substantial surface remains. Aircraft that crashed in or around the coast, or within inland lakes or rivers, tended to disintegrate less at impact and were difficult to salvage at the time. Despite the effects of tidal scouring or sports diving, they are

likely to have been subject to much less disturbance, although immersion in salt water can significantly advance corrosion. Nonetheless, an almost complete Wellington bomber was recovered from Loch Ness in 1985 (now displayed at Brooklands Museum), while in 1987 a remarkably intact P51 Mustang fighter was raised from the sea bed off Clacton.

© English Heritage/Vince Holyoak



## Current legislation and management

On land, high speed impacts, explosions and fire often rendered aircrew remains fragmentary, and such were the frequency of losses and the difficulties of recovery that identification relied on the aircraft's serial number or a few personal possessions. In some cases, the depth to which wreckage had penetrated, waterlogging, unburned or burning aviation fuel or simply lack of time meant that contemporary recoveries were not as thorough as they might have been. Although an individual may have a known grave, further human remains might still exist at the crash site. Increasingly, as aviation enthusiasts began to search for and excavate wreck sites in large numbers during the 1970s and 1980s, both human remains and live ordnance were inevitably uncovered.

Such difficulties resulted in legislation to control recovery, namely the 1986 Protection of Military Remains Act, which makes it an offence to disturb the remains of any aircraft within the UK or its territorial waters without a licence from the Ministry of Defence. In respect of aircraft, it is MoD policy not to grant a licence if records indicate the likelihood of human remains being present. As laudable as the aims of the Protection of Military Remains Act are in protecting the interests of relatives, excavators and the public, they do not, however, acknowledge the potential importance of the aircraft remains as a valuable resource in their own right. This is a significant omission, which the MPP survey set out to examine.

## The MPP survey and results

The survey and a new advice leaflet concentrate on the research potential of the aircraft, of which it is estimated just under 300 different types of all nationalities were in use in the UK in the period from 1912 to 1945. Of the 93 different aircraft types in use over the UK in the period from 1937 to 1945, no complete examples of 21 of them are known to survive. Such a statistic is made more surprising still by the fact that some of these types – the RAF's Short Stirling,

Armstrong Whitworth Whitley, Armstrong Whitworth Whirlwind, Avro Manchester and the Vickers Warwick, or the Luftwaffe's Dornier 17/217 and Heinkel 177 – were either produced in large numbers or had particular historical significance. The results of the survey are now on English Heritage's website, but it is clear that in some circumstances crash sites, particularly submerged sites, may offer an opportunity either to resurrect some of these 'extinct' types, or at the very least to add significantly to our knowledge of them.

As for many elements of the historic environment, the future conservation and management of crash sites will be based on achieving an acceptable balance of interests. In addition to aviation enthusiasts engaged in aircraft excavations and recoveries, there is immense popular interest in the air war. Naturally, crash sites also form a focus for veterans and families, and for the communities upon whom the losses made an indelible impression, in many cases becoming a part of local folklore. Whatever the historic or archaeological merits of a wreck, the feelings of relatives must always be respected. But in the light of the MPP survey, it is right that we should also recognise the potential historic and archaeological importance of the aircraft wreckage. The new guidance leaflet discusses many of these issues in greater depth, and outlines English Heritage's recommendations for future management frameworks. □

**Vince Holyoak**  
**Regional Policy Officer**  
**East Midlands**

*A crashed Wellington bomber is recovered from a beach on the Isle of Lewis*

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Further details of aircraft types, their construction details and survival rates can be found at [www.english-heritage.org.uk/filestore/publications/pdf/free/Mil%20Air%20C%20Sites.pdf](http://www.english-heritage.org.uk/filestore/publications/pdf/free/Mil%20Air%20C%20Sites.pdf)

# DOCKYARD ARCHAEOLOGY

## The Royal Naval Bases at Portsmouth and Devonport

A recent assessment and characterisation of two key Royal Naval Bases will inform the future management of the yards

The Royal Dockyards are among the most long-lived, extensive and coherent monuments to the history of the United Kingdom. Many of the industrial, technological, military and social changes that occurred in the post-medieval and modern periods are embedded within their surviving fabric. Whereas many individual buildings within the Naval Bases had previously been protected through scheduling, recent changes in the strategy of conservation have led to a new emphasis on listing to protect above-ground remains. In order that their approach be comprehensive, English Heritage sought to identify below-ground remains and structures other than buildings that either warranted statutory protection by scheduling or could be defined as significant. It was also important that the remains and structures could be managed accordingly within what are typically operational bases. Consequently, Wessex Archaeology was commissioned to carry out a wide-ranging assessment of the archaeology of the Royal Naval Bases at Devonport and Portsmouth, to be accompanied by management proposals.

### Scope

The archaeological assessment of each Naval Base – comprising the Dockyard, Old Gun Wharf, Priddy's Hard, New Gunwharf and Clarence Yard at Portsmouth, and South Yard, North Yard (Keyhaven), Morice Yard, St. Budeaux/Bull Point, the Royal William Victualling Yard and Southdown at Plymouth – was based predominantly on early maps, charts and other documents. Each 'component' (building, structure or area) of the Naval Bases was entered in a specially designed database, and its footprint digitised, to form a Geographical

Information System (GIS) that allows the user to find details of a specific component or to query the whole dataset by phase, monument type, class and so on. Totals of 1,801 and 1,814 components were recorded for Portsmouth and Devonport respectively, together with cross-references to previous archaeological investigations, secondary sources, maps and photographs. Cross-references were also made to other concurrent and related assessment projects, notably those looking at the buildings of the ordnance yards.

### Management zones

The assessment was used to divide each dockyard into management zones: 34 in Portsmouth and 56 in Devonport. Using a system analogous to the Monument Protection Programme's assessment of single monument classes and built into the GIS, each management zone was subject to a process of characterisation and discrimination in order to define its importance. An appraisal was then carried out, which included a walkover survey, to understand the sensitivity of each zone. The combination of importance and sensitivity provided a guide to the most suitable management option for each zone. In the light of this assessment, English Heritage developed specific proposals for statutory protection. Six areas in Portsmouth and five in Devonport were subsequently identified for scheduling, and an existing scheduled monument in Portsmouth is likely to have its boundaries revised.

### Wider relevance

The GIS created for the project is, however, of far wider value than informing designation decisions. Scope to enhance the record of each component and an overall interpretative capacity was built into the system, so that it could be used by researchers and curators alike. In a subsequent phase of work, proposals were developed to make the entire system available over the Internet, to be accessed and updated by English Heritage, local archaeological officers, the MOD and Defence Estates, and the general public. □

**Antony Firth, Wessex Archaeology**

GIS screenshot of Keyham, Devonport, showing components of the 19th-century Steam Yard over the 18th-century Magazine



© Antony Firth / Wessex Archaeology

English Heritage's projects on early ordnance and the steam navy will be published in 2004.

# CORSHAM STONE MINES

## Former military use and proposed development

The Central Ammunition Depot at Corsham, since its creation immediately before World War II, has been much more than just an underground munitions store located in disused stone quarries. The government and military presence has created a multi-layered landscape above and below ground with over 60 years of development. The surface features include defensive lines, railways, barracks, housing, laboratories, workshops and offices with attendant ventilation and lift shafts and communication aerials. Underground in the extensive former stone mines, there have been munitions depots, naval stores, aircraft engine and gun barrel factories, centres of regional and national government, a RAF fighter command centre, as well as communications centres. The quarries also had non-military uses in wartime, such as repositories for national art treasures from the British Museum, the Victoria and Albert Museum, the Banqueting House and Westminster Abbey, while in later years they have been used for commercial secure storage. The absorbing saga of government involvement around Corsham has been chronicled in detail in N. J. McCamley's *Secret Underground Cities* (1998) and *Cold War Secret Nuclear Bunkers* (2002), and much of the following detail is taken from these sources.

### The move underground

The idea of bomb-proof shelters to protect men and stores is enshrined in much military defence planning since the advent of military explosives, but only with the threat of aerial bombardment did it become necessary to escape the confines of designed fortresses. Thus, immediately prior to World War I with the apparent threat of Zeppelin raids, the Ministry of Munitions sought to protect stockpiles of bulk high explosives by storing them underground. Initially, existing mines and caves were used, such as a salt mine near Northwich adapted to house 1500 tons of explosives for north country filling factories and the Chislehurst caves for the Woolwich Arsenal. Significantly for the present article, a small Bathstone mine at The Ridge near Corsham was converted in 1915 for the storage of TNT and cordite.

### Munitions depots

The development of underground munitions depots in the inter-war years is marked by indecision on behalf of government ministries and inter-service rivalry and argument. In 1934 when re-armament was once again on the agenda following Hitler's accession as Chancellor of Germany, the process gained some momentum. In the summer of 1936, the War Office, having decided that the stone mines in the Corsham area was the preferred location for its main underground ammunition depot, completed the purchase of Ridge, Tunnel and Eastlays Quarries at a cost of £47,000. From these rather modest beginnings was to develop the Central Ammunition Depot, Corsham, which by 1943 encompassed some 125 acres of subterranean chambers containing 300,000 tons of explosives and munitions. Its widely dispersed components stretched from Limpley Stoke and Monkton Farleigh (one of the largest single quarries) in the west and Westwood and Bradford-on-Avon in the south to Corsham and Gastard in the north and east. The total cost of the depot was over £4.5 million – a far cry from the £100,000 for six acres originally envisaged. The 50-acre Tunnel Quarry was directly served by a standard gauge branch off the Great Western Railway main line at the eastern portal of Brunel's Box Railway Tunnel. This branch, complete with underground platform and refuge sidings, fed a narrow gauge railway system with diesel locomotives, turntables, engine houses and workshops serving the ammunition 'districts'.

*The proposed development of the Barracks Hill military site at Corsham by its present occupant, the Defence Communication Services Agency, has involved English Heritage in photographic recording of some of the underground remains and advising on the management of both the surface and underground structures*

*Tunnel Quarry Ammunition Depot, Corsham, 2001. General view of a typical 'District'*

© English Heritage/Mike Heskeith-Roberts





© English Heritage/Mike Hesketh-Roberts



*Spring Quarry, Corsham, 2001. The canteens in the underground factories were decorated with floor-to-ceiling murals by Olga Lehmann. They have only survived in one of the former canteens, re-used by the RAF for a variety of purposes with scant regard to the murals*

## Underground factories

The onslaught of the German air offensive in 1940 also caused the various supply ministries to seek protected sites for crucial industries such as the manufacture of aircraft engines and weapons. Huge sums were spent constructing underground factories in new tunnels driven into hillsides such as at Drakelow near Kidderminster and converting existing quarries as at Henley-on-Thames, Westwood, near Bradford-on-Avon, and at Corsham itself. Under pressure from Lord Beaverbrook, the vast Spring Quarry, on the other side of Box Railway Tunnel from Tunnel Quarry, was requisitioned late in 1940 and converted by the Ministry of Air Production for factory use at exorbitant cost to become 'the largest underground factory in the world'. It was to be occupied by the Bristol Aircraft Company (BAC) for the production of Centaurus engines while a separate part was occupied by BSA for the manufacture of gun barrels (including half of the country's entire output of Hispano and Polsen barrels).

When Spring Quarry was in BAC occupancy, its chairman, Sir Reginald Verdon Smith, commissioned a professional artist, Olga Lehmann, to decorate some of the canteen areas with vivid floor-to-ceiling murals. Over 40 of these survive in one of the canteen areas despite 60 years of disregard and neglect. They are executed in a distinctive style very much of the pre-war period and mainly depict racing and

attendant show-ground themes interspersed with drinking scenes, cricket matches and even missionary boiling!

The expenditure on the underground depots was to be justified after the war by their continued use as ammunition and naval stores for some 50 years but the factories, as such, were an expensive fiasco. By the time they finally opened early in 1943, German bombing was no longer the threat that it had been when they were first conceived and they were less than satisfactory for their purpose. When they closed just two years later the bill for their construction had exceeded £20 million.

## The RAF comes to Corsham

At the onset of World War II, RAF command centres were, whenever possible, located underground. In the case of the RAF No. 10 Fighter Command covering the West Country, this was accomplished in Brown's Quarry, a spur off Tunnel Quarry. At the same time, a communications centre was created and, although the command centre itself has long since been abandoned, the RAF communications presence has continued to this day.

## Cold War

For the next 50 years, however, the whole suite of converted quarries achieved a valuable second life as home to a variety of Cold War uses, the chronology of which reflects the course of

strategic thinking throughout this period. Thus in the 1950s, in addition to the burgeoning uses as naval stores, the quarries housed radar and communication centres and, by the end of the decade, the Emergency Government War Headquarters. Code-named originally SUBTERFUGE, this facility developed in the early 1960s under the code-names BURLINGTON (and finally TURNSTILE) into an office for the War Cabinet and Chiefs of Staff to accommodate a standby staff of 1000, equipped with a lavish telephone exchange and bar. The Emergency Government War Headquarters had its final upgrading in the early years of the Thatcher government but, with the end of the Cold War in 1989, these uses have been scaled down or abandoned.

The original *raison d'être* for the military presence has long since gone. The last munitions were shipped out or destroyed by the end of 1962, and the stores function was finally wound down in the 1990s. Much of the complex has now been mothballed or sold, though there is still a significant RAF and military communications presence. Among the decaying evidence of disused offices and stores are poignant and sinister reminders of this fascinating but little heralded chapter in our history.

## Future development

The proposal that the Defence Communication Services Agency (DCSA) concentrate most of its southern England operations on the Basil Hill Barracks site at Corsham has opened discussions on the future management of the historic elements of the site both above and below ground. In the late 1930s, the attempt to disguise the real purpose of the surface buildings produced a group of high quality and historically interesting buildings built to resemble a private school set in the Cotswold countryside. While these will continue in sympathetic use and are eminently listable, the underground remains, some of which may be considered for scheduling, present much greater problems. At present, at considerable cost, the largely redundant but extensive underground workings are ventilated and dehumidified. Should this cease, the condition of the historic remains and especially that of the wartime machinery and murals will be at risk. DCSA is very much aware of this, is in close contact with English Heritage and has commissioned consultants to advise on a whole raft of options. The outcome is still uncertain. □

**Keith Falconer**  
*Head of Industrial Archaeology*



Spring Quarry, Corsham, 2001.  
Shelves of mess kits survive in their  
oil paper packaging with signs  
providing sinister reminders of Cold  
War hazards – GAS, BIO, ATOM

# THE COLD WAR

## What to preserve and why

*For more than 40 years, the stand-off between the United States and the Soviet Union – known as the Cold War – dominated the political landscape of the post-World War II world. It brought the constant threat that an escalating political crisis, or even a faulty computer system, could lead to devastating global nuclear war. A recent assessment by the Monuments Protection Programme of the bleak earth, steel and concrete structures that remain from this era has sought to define what is important and what to retain*

By the late 1980s, as a result of economic disintegration and failed attempts to reform, communist governments across eastern Europe fell in quick succession, represented most spectacularly by the opening of the Berlin Wall in November 1989. The effects of the end of this time of dangerous stability reverberated through the 1990s and continue to affect us today. Across Europe, there were wide-ranging reappraisals of defence needs, resulting in the scrapping of enormous amounts of military equipment and closure of defence installations. In Britain during the early 1990s, the Ministry of Defence, under the banner slogans of *Options for Change* and *Frontline First*, began a massive disposals programme, affecting over 100 major sites in England.

The Home Office also stood down its emergency government bunkers and the Royal Observer Corps, responsible for reporting the spread of fallout should the country be attacked with nuclear weapons. At the same time, the United States was drastically scaling down its forces in Europe, resulting in the closure of many large installations. These included the airbases at Greenham Common, West Berkshire, and the twin bases at Bentwaters and Woodbridge in Suffolk, all of which had been extensively modernised during the 1970s and 1980s. These bases – covering many hundreds of hectares and comprising many hundreds of structures – were

also home to thousands of people, and their closure effectively meant the loss of small towns.

Some of the sites destined for closure were of clearly recognised historic significance, including some of the naval dockyards. More difficult were those sites built specifically to wage the Cold War, which had been closed and secret establishments. One of the first challenges that faced English Heritage was to establish what had been built. Some documentation was available in the Public Record Office and for certain classes of monument this was identified and reported on by Colin Dobinson for the Monuments Protection Programme.

In-house recording work was at first directed at Cold War sites on the government's disposal lists, as these were at immediate risk of stripping out and demolition. Ironically for many sites built during the 1970s and 1980s, fieldwork was the most effective way of gathering information, as the official documents relating to their construction and use were often closed to public scrutiny under the 'thirty year rule'. It was soon appreciated that sites on the disposals list would only provide a very partial impression of the full range of defence sites built during the Cold War, and the project was extended to include sites sold off over the preceding decades and still active bases.

*Alconbury, Cambridgeshire, 'The Magic Mountain'. This massive, double-storeyed, late-1980s bunker was built primarily to process and analyse data from high-altitude reconnaissance aircraft. It represents the pinnacle of Cold War bunker architecture and will be considered for scheduling*



## Assessment

English Heritage also recognised that the government disposals and sales programme might eventually result in the demolition of key Cold War installations. Fortunately, the recording project had provided sufficient information to undertake an assessment of which were the most significant Cold War sites and structures in the country.

The duration of the Cold War (1946–89) spanned a greater period of time than from the outbreak of World War I in 1914 to the end of World War II in 1945. During this time, changing defence strategies were influenced by such factors as new technology, developing intelligence assessments of the threats posed to the country, and the ability of the economy to meet the demands of the defence budget. These issues affected the types of sites and structures that were built during a given period of the Cold War.

During the late 1940s, defence planners imagined a scenario not dissimilar to a decade earlier, whereby aircraft coming from the east might attack the country, but instead of high explosives they might be armed with atomic weapons. The defences planned to counter this threat followed the pattern of their wartime predecessors, even down to the resurrection of the Civil Defence Corps and Home Guard. Radar stations were re-equipped, and in the early 1950s their control rooms were placed in underground protected bunkers. Anti-aircraft gun sites were also re-activated and in some instances new sites built.

Not until the late 1950s was the country fully equipped to fight the Cold War. By 1958 the jet bombers of the V-force were in operation, carrying the first British atomic bomb Blue Danube. It was also at that time that the first British guided weapons came into service, including the surface-to-air missile Bloodhound and the air-to-air missile Firestreak. All these weapons were designed for the era of Mutually Assured Destruction, a policy that sought to deter aggression by threatening to unleash devastating nuclear retaliation in response to a Soviet attack on the West.

By the 1970s, Western policy had changed to one of Flexible Response, whereby any Soviet aggression would be met in kind. This policy required new structures that were capable of withstanding a pre-emptive attack by

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conventional armaments or by nuclear, chemical or biological weapons, to direct a retaliatory attack against the East. This policy was reflected by a massive infrastructure building programme across all North Atlantic Treaty Organisation (NATO) countries to place all of its key facilities within heavily protected, or hardened, structures. The resulting, usually dull brown, sometimes buried, concrete structures are characteristic of 1980s defence sites; illustrations of some of these massive constructions accompany this article. Probably the best-known structures of this date are the shelters constructed at Greenham Common to house the transporters and command trailers for the ground-launched cruise missile system. This site also came to worldwide notice as the focus of protests against nuclear weapons during the 1980s.

The assessment process has followed the pattern of other Monuments Protection Programme reports. It has sought to classify Cold War defence sites, to document their current condition and to identify surviving examples that might be worthy of conservation. For many classes of sites – for example, late-1950s Bloodhound missile sites – only 12 sites were built, while losses since their closure in the 1960s have resulted in the survival of less than a handful that might be worthy of retention. In assessing which sites and structures should be

*Alconbury, Cambridgeshire. Rows of doors leading through 'The Magic Mountain's' decontamination centre reveals its grim purpose – to operate in an environment contaminated with nuclear, biological or chemical agents*

## The Cold War

Alconbury, Cambridgeshire. Seemingly indestructible structures, such as this hardened aircraft shelter, are just as vulnerable to clearance as the more fragile remains of earlier eras



put forward for protection, the report identified those that had been central to British defence or NATO policy. Sites in this category include facilities associated with the V-force, fundamental to Britain's nuclear deterrent policy from the late 1950s to the late 1960s.

### Selection

In addition to selecting sites that reflect the changing nature of the Cold War, the assessment process has also chosen sites and structures that characterise the British experience of the Cold War. One distinctive feature of post-war British defence policy has been the heavy commitment to the independent capacity to keep at the forefront of all areas of military technology, including nuclear and guided weapons, defence

electronics and aeronautics. This policy is reflected in many unique and intriguing remains scattered across the country, including the pagoda-like structures of the Atomic Weapons Establishment at Orfordness, Suffolk, now owned by the National Trust.

The assessment report was presented to English Heritage and local authority staff at a seminar held at the Public Record Office in December 2001. The former Royal Observer Corps Group headquarters bunker at York, owned by English Heritage, has been scheduled, as have the cruise missile shelters at Greenham Common, and the preparation of other listing and scheduling proposals is now underway.

### Further work

The assessment report may be seen as a stocktaking exercise and a summary of our current knowledge of Cold War structures. Already the report is enabling advice to be given about development proposals that affect many Cold War sites and decisions made about which are the most significant structures. Nevertheless, as in all areas of historical research, it is recognised that further work is needed. Some of the topics that require further work include post-war anti-aircraft sites, civil defence structures, military communications facilities and intelligence-gathering sites – a subject surrounded by much secrecy.

The importance and distinctiveness of Britain's Cold War remains, as part of a wider European and global heritage, will become increasingly apparent as comparative studies are undertaken overseas. Based on the progress made in this new field over the last decade, English Heritage is proposing to work with other agencies in Europe to ensure that adequate recognition is given to these remains of our recent past. □

**Wayne Cocroft**  
**Archaeological Investigator, Cambridge**

The assessment report, *Cold War Monuments: an assessment by the Monuments Protection Programme*, is available on CD from English Heritage's Monuments Protection Programme, 23 Savile Row, London W1S 2ET

The results of English Heritage's fieldwork programme to record the Cold War sites and structures, Wayne D Cocroft and Roger J C Thomas's *Cold War: Building for Nuclear Confrontation 1946–1989*, have been published. For details, please see page 64.

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# IMAGES OF THE COLD WAR

## Combat art

Examples of folk art or casual doodling by soldiers may be traced back many centuries, ranging from crude representations of ships scratched on walls to exquisite pieces of scrimshaw fashioned by Napoleonic prisoners of war. The personal, and later commercial, adaptation of discarded military items from World War I, especially shell cases and bullets, is now recognised as trench art. Probably more familiar to many people are the cartoons applied to aircraft and flying jackets, especially by American air force personnel during World War II. Artwork ranging from unit insignia to risqué pin-ups was also commonplace in many airfield messes and crew rooms.

Military artwork may be studied to offer insights into the culture of different armed forces. Within military environments, all activities and spaces are tightly regulated, and the application of any artwork might be regarded as damage to government property. The type of image will differ depending on where it is found. In semi-public areas, where authorised visitors have access, paintings are usually restricted to official unit insignia or heroically realistic representations of men and machines reflecting pride in the unit. In the technical areas, some images are clearly training aids. Access to parts of these areas was usually highly restricted, and was often in these areas that more unrestrained images were found; greater latitude was also permitted in crew messes and barrack areas.

### Conservation of wall art

Wall art was particularly prevalent in United States Air Force (USAF) bases during the 1980s. This resulted partly from official air force policy, which sought to reinforce unit cohesion through history and the pride of belonging to a given unit. This policy manifested itself in the re-introduction of World War II-style leather flying jackets, the application of nose art to aircraft and less formally to crew areas on the ground. The often-aggressive 'Street Gangsta' cartoon styles of many USAF images contrast with the more restrained RAF artwork, often restricted to a unit badge. A greater contrast still is found with the formulaic and politically ordained wall art found in Warsaw Pact bases. In England, combat art

has been photographed by English Heritage photographers at some of the key USAF bases of the Cold War. Among these are Upper Heyford, Oxfordshire, Bentwaters, Suffolk, Alconbury, Cambridgeshire, and Greenham Common, West Berkshire. At Greenham, the artistic interventions of protestors include graffiti within the base and painted fence posts and graffiti on the roads outside.

The conservation of wall art presents many challenges; paintings on external surfaces are especially prone to weathering and casual vandalism. The long-term stability of some of the media used to execute the images, including paint, aerosol sprays and fibre tip pens, is also unknown. If retention in place is not an option, in exceptional circumstances the image may be physically removed, as happened recently to images from a hangar at Greenham Common. This building is likely to be demolished and, following discussion with West Berkshire Council and English Heritage, the paintings have now been removed with their wall sections, for display at nearby RAF Welford.

Given the many uncertainties about the survival of wall art, English Heritage recommends that examples should at the very least be recorded using medium or large format colour photography. Afterwards, in exceptional circumstances, removal to a secure location may be acceptable.

### Inspirational value of Cold War sites

Perhaps more surprising than the artistic interventions of servicemen is the inspirational value of the sites on which they served, and the influence this has had on creating representations of the Cold War. Subsequent to the closure of

*During English Heritage's recording and assessment of Cold War sites, combat art was recorded at several bases. An assessment of this artwork is leading to an understanding of the inspirational and social values Cold War architecture holds for contemporary artists and writers*

*Alconbury, Cambridgeshire, a Hercules gunship painted on an external wall. This image was applied when the 352 Special Operations Group arrived in the early 1990s*

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## Images of the Cold War

Bentwaters, Suffolk, 'Death' holds a depleted uranium round. The image is in spray paint in the munitions maintenance area



some military bases, photographers, artists and writers have used the architectural forms and the rhetoric of apocalypse that they convey to inspire works ranging from installation art to photographs, photographic essays, poetry and music.

Perhaps best known is the Turner-nominated Wilson twins' video sculpture *GAMMA* [sic], recorded and filmed at Greenham Common Airbase, which investigates the themes of power, surveillance and paranoia through photographs, performance and installation art (Schjeldahl, 1999). Greenham was also the inspiration for John Kippin's photographic essay, *Cold War Pastoral* (2001), which documented the changing landscape of Greenham as it reverted to common land, and Michael Symmons Roberts' book of poetry, *Burning Babylon* (2001). Most recently, the Cold War was the inspiration for Yannis Kyriakides' musical composition, 'ConSPIracy Cantata', performed in The Debrief Centre or 'Star Wars Building' at Bentwaters Airbase, Suffolk, as part of the 2002 Aldeburgh Festival.

Since the publication of English Heritage's assessment of Cold War sites in December 2001, photographers are increasingly asking to see the report for guidance on suitable subjects, while similar work is taking place on former Soviet bases, with photographers recording the process and state of abandonment. Angus Boulton's *Cood Bay Forst Zinna* (2001), a video tour of a deserted Soviet base, was screened during the Imperial War Museum's 'Moving Image and the Artist' season. The potential also exists for closer collaboration between archaeological recording and artistic interests. The possibility of documenting the process of monumentalisation at Cold War sites – combining conventional archaeological recording, oral testimony and an artistic project – is being explored during English

Heritage's survey of a 1950 missile test site at RAF Spadeadam, Cumbria.

Historic sites of all periods can provide inspiration for artists of all media. The sites of the Cold War, however, have a particularly poignant value where events and fears are still within living memory. In 1998, the Commander of British Forces on the Falkland Islands invited four young artists to spend a month there, visiting the battlefields and creating murals and an exhibition space for the so-called Millennium Mile, the mile-long corridor at the Mount Pleasant Base that connected the living quarters with other facilities (Ashcroft *et al* 2002). The aim of the project was to improve signage and transform the corridor through the artists' depictions of the war and its legacy. The results, which draw heavily on the conflict and its physical remains, were the subject of an exhibition in 2002 at the Imperial War Museum, London.

### Promoting understanding

Both contemporary combat art and the later representations of the Cold War, inspired by the front-line bases, demonstrate the link between experience and imaginative response. In transforming the redundant spaces of Cold War military bases, art can create a dialogue between the past and the present. As seen in the Millennium Mile at Mount Pleasant, art can be an effective medium for interpreting past events in a challenging way. It can also be an eloquent expression of opposing views – between East and West, the military and political authorities, the protest movement and the media. Artistic representation too plays a significant role in increasing public understanding of the physical remains of the Cold War. The longer-term cultural benefits of a partnership between art, architecture and archaeology could be immense. □

**Wayne Cocroft**

**Archaeological Investigator, Cambridge**

**John Schofield**

**Head of Military and Naval Evaluation**

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# THE ROC HQ ACOMB

## Presenting the recent past

The Royal Observer Corps Headquarters Building, opened in 1961 and fully active until September 1991, was built to replace a World War II surface installation near York racecourse as part of the revision of the role of the Royal Observer Corps – reporting nuclear explosions and monitoring radioactive fallout. The site was scheduled in May 2000 following a national assessment of Cold War monuments by the Monuments Protection Programme (Cocroft, 40–2).

Its full title was the No. 20 Group Royal Observer Corps Protected Headquarters. It was one of 25 purpose-built structures, constructed between 1960 and 1965, 19 of which were in England. An extensive network of underground monitoring posts had been constructed between 1957 and 1965, organised into regional groups. These individual posts reported to a group headquarters that analysed the data and then passed that information to civilian and military authorities. Most of Yorkshire formed No. 20 Group.

The building consists of a two-storeyed brick and reinforced concrete structure with a basement. Internal dividing walls are of concrete block-work; most of the structure is protected with an outer brick shell and three layers of asphalt. Apart from the first-floor entrance block, commonly known as an ‘Aztec Temple’, the whole structure was covered with earth to a minimum of 0.9m thick to provide some protection against blast and radiation.

### Use

The semi-sunken building was only staffed when the ROC was on alert; for most of the time a single-storeyed brick building next to the structure was used by the core full-time staff of three. During an alert, the semi-sunken building could accommodate 40 to 60 people divided into three watches. Facilities include male and female dormitories (8 and 12 two-tier bunks respectively), washrooms and lavatories, but the sleeping arrangements necessitated a ‘hot-bed’ system whereby one person gets into bed when another gets out. It was the intention that in the

event of a nuclear attack the command centres would be self-contained. For that reason, each also included a kitchen, canteen, generator room (diesel and electric), sewerage ejector plant, air filters and stores. Unusually, most of these rooms at the Acomb site retain the original plant, fixtures and fittings.

The core of the building – its purpose – is dominated by the Operations Room with its associated wireless, teleprinter, and GPO (later BT) equipment rooms. This area is of two floors. An upper floor was staffed by the post plotters and communications staff who received reports from the underground monitoring posts. By using data from two or more posts, staff were then able to locate and gauge the power of nuclear detonations. A record of the projected number of deaths would also have been made. The lower floor contained the command table and various charts that logged the total number of nuclear bursts, the dose log, European situation map and UK situation map (mapping the spread of fall-out). Many of these rooms too still contain their fixtures and fittings.

### Management

The scheduling and donation of the command building has raised an interesting range of management problems. First of all, why schedule it? The site is one of very few surviving command buildings and one of an even smaller group of such buildings that still retains many of its fixtures and fittings (coats still hang on the coat hangers). Some features (such as one of the etched glass plotting maps) were moved to other locations but can be returned. Also it seemed important that English Heritage should be prepared to make a statement about the significance of such buildings and to extend the notion of exemplary treatment, seen in the context of sites held in guardianship, to the 20th century. The site could provide the basis for relevant Key Stage school work and address issues not covered on most other English Heritage sites, such as women’s history (many of the ROC staff and staff in related fields were women).

*The recent transfer to English Heritage by the Department for Culture, Media and Sport of Shelley House, the former RCHM(E) York office, brought with it the additional responsibility for managing a semi-sunken, Cold War-period Royal Observer Corps Headquarters building*



*Operations Room, showing the Command Table (bottom centre), tote boards (upper left) and situation maps (centre). Two of these maps are etched glass, one of which was removed before scheduling but will be returned. The Operations Room will be open to the public on a limited basis and could inform relevant Key Stage school projects and women's studies*

The management of the site has been passed to a trust made up of two special interest groups, with a steering group including English Heritage staff. The aim is for English Heritage's Yorkshire Regional Team to hand over to the trust a fully conserved monument, complete with interpretation and access strategy. Achieving this raises its own issues: how should repair be conducted and using what materials? Should repairs be made using a material that is known to fail, or should new materials be used that may then reduce the authenticity of the building? Where fittings have been removed (light fittings for example) a decision has been taken to replace them using 'chunky' industrial-type elements that do not stand out as replacements but do not pretend to be original. It would be possible to go to similar sites and recover examples of those missing elements, but this could be considered to push restoration too far.

### **Access**

A particularly pressing problem is the difficulty of getting visitors – especially disabled visitors – into a subterranean building designed to ensure

difficult access. We believe it can be done using the emergency exit, giving access to the command room and staff areas, perhaps the most important parts of the building. Virtual access can then be provided to inaccessible areas.

The existing ventilation and air circulation systems contain chemicals now considered harmful, which raises questions about the use of the original machinery and the manner in which replacement machinery can be installed. One answer would be to use such conflict as part of the interpretation by presenting this dilemma – and the solution – to visitors alongside the site's historical interpretation.

The intention is that the site should be open to the public on a limited basis and made accessible through Quick Time Virtual Reality on the Internet. The team believes that there is a significant body of interest to make this a popular site and one that marks a new departure for English Heritage. □

**Keith Emerick**  
Inspector, Yorkshire Region

# THE ARCHAEOLOGY OF OPPOSITION

## Greenham Common and Peace Camp, Nevada

There is a developing interest in the cultural legacies of the Cold War, which ended in 1989. From an archaeological perspective, however, a significant legacy from the period has been largely ignored. Yet for anyone visiting, Greenham Common, West Berkshire – one of the Cold War's front-line bases – there is a striking contrast between the stark and monumental military architecture and regular plan form, and the now newly wooded peace camps immediately beyond the fence.

### Greenham Common

The Greenham Common fence was the focus of opposition during the latter stages of the Cold War, when ground launched cruise missiles were stored at Greenham, and those opposed to its deployment lived permanently outside the base. Recent investigations at Greenham show that the archaeological evidence for that opposition remains legible. The cruise missile shelters within the so-called GAMA site remain as they were, robust and now empty, their vast doors permanently open. The tattered fence betrays the many break-ins that took place over the years, though the peace camp itself appears only in the remains of painted fence posts and areas of disturbed earth, the traces of clearance that followed many of the evictions.

### Peace Camp, Nevada

Much better preserved are the remains of Peace Camp, the camp established outside the main gate to the Nevada Test Site, some 65 miles north-west of Las Vegas. A survey of the site, undertaken by the authors, recorded and interpreted this archaeological record through conventional archaeological means, but also through oral testimony and archive searches. The objective was to assess this material record, to draw out the contrasts between it and what exists beyond the fence, on the Test Site itself, and finally, to document for the first time how the peace movement manifested itself. Staff of the Desert Research Institute have been studying the Cold War archaeology of the nuclear testing ground for about ten years. Our work is a continuation of that, though telling another side of the story.

Peace Camp is located in the desert, beside the multi-lane highway leading north-west from Las Vegas and opposite the Test Site's main gate; access between the two is through two drainage tunnels and a vehicle underpass beneath the highway. It was (and still is) at Peace Camp where anti-nuclear activists from around the world staged some of the largest civil disobedience actions in America. In 1988, an estimated 8,800 participants were involved in a single protest event, some 2,067 of whom were arrested. From 1986 to 1994, government records document 536 American Peace Test demonstrations near the Test Site involving 37,488 participants, 15,740 of whom were arrested. During the mid- to late-1980s, Peace Camp was permanently occupied; during the current project, some of its former occupants were interviewed.

### Archaeology

Given the remoteness of Peace Camp and the number of participants, it is not surprising that the traces of occupation remain. What was surprising was the complexity of what remains: its diversity of form and the phasing within the site. It appears that there were three peace camps in all. The first dates from the 1950s and is thought to have been a transit camp and meeting place for those on peace marches to the Test Site. Locating and recording this site remains one of the project's objectives, though we believe from participants that this was a relatively small, conventional campsite, at most characterised by hearths and tent pads.

*Part of the history of the Cold War is the opposition to nuclear armament and, in some countries, the expansion of military holdings at the expense of the land's traditional owners. Greenham Common and Peace Camp, Nevada, provided an opportunity to explore this archaeology of opposition, a new dimension to our understanding of Cold War legacies*

*Peace symbols at Peace Camp, outlined in white quartz pebbles, outside (foreground) and within the Nevada Test Site boundary*

© English Heritage/John Schofield



*The archaeology  
of opposition*



© Colleen Beck

*Two of the authors recording  
archaeological features at  
Peace Camp*

The second, largest and best surviving camp lies in the area near the tunnels and was permanently occupied through much of the late-1980s. Traces include stone arrangements in the form of geomorphs, animals, birds (doves, for example) and peace signs and symbols, many reminiscent of Richard Long's sculptures in landscape. There are also outlines of human figures. The site has a distinct plan form: some areas are clearly set aside for occupation (tent pads and hearths) and others perhaps for communal and ceremonial activity (display and artistic intervention). Without exception, the low ridges that cross the site contain concentrations of signs and symbols, typically the peace symbol, often outlined in white quartz pebbles, and white doves. In one area, a 370m-long path bordered by small pebbles winds its way through the vegetation to reach one of these ridges. A stone circle divided by pebbles into quadrants, with distinct groups of offerings and objects in each, marks the location for a prayer pole where the path starts. Close to the tunnels, the name 'Peace Camp' is spelt out with stones.

The third camp was established around 1990, further to the east near the underpass. This is the present Peace Camp and includes both the hearths and tent pads of a campsite and stone arrangements and symbols. Some of these are traditional peace signs, but there are also new forms, such as a large and elaborate floral design, outlined and decorated with stones of different sizes and shapes. Here too is the form perhaps of

a tortoise, sacred to the Western Shoshone Indians on whose ancestral land both this and the Test Site lie. The role of the Western Shoshone in this peace movement, which is also involved in land rights issues, is most apparent at this later camp. Sweat lodges exist for spiritual cleansing, as do 'wickiups', wicker tent-like constructions still built and used by the Shoshone Indians as temporary structures. There are no artefacts to be found at any of these sites, except where they have been left as offerings. Respect for the land ensured that the clean up after each occupation was very thorough. Only the stone arrangements, that had become part of the landscape, remain.

Finally, the material remains of the protest movement – some very recent – are to be found beyond the underpass and along the line of the fence bordering the Test Site. These include peace signs (some painted on the fence posts), small cairns (that are used across the site to indicate other significant places and to serve as navigational aids) and small circular or ovate pebble enclosures around shrubs and cacti.

South-west of the second Peace Camp is what is known to protestors as Pagoda Hill: a conical hill topped with cairns. A protestor built these cairns over several years, travelling there from Peace Camp every day with a new boulder. On the side of the hill is a sculpture of a pregnant female figure painted red.

The entrance to the Test Site includes significant features. Two adjacent pens (one for men, one for women) were placed to detain those arrested; both are fenced enclosures with a single portable lavatory at the centre. There was also a cattle grid, now infilled, that marked the entrance to the Test Site, a feature of significance both for the protestors and the Sheriff's department: anyone who touched the grid was arrested. The sound of a military vehicle driving across the grid served also as a prompt, in the silence of the desert, for howls of opposition. These features, close to the Test Site, form part of the larger landscape of opposition.

### Presentation and understanding

This project has generated much interest. The Western Shoshone spiritual leader, Corbin Harney, conducted a sunrise ceremony during the project that was recorded on film. This ceremony took place immediately outside the Test Site's perimeter fence and provided the opportunity for us to meet former protestors. Corbin Harney later spoke on camera about the significance of Peace Camp, both to the American Indian community and to humanity. The project also attracted media attention (see [www.lvrj.com](http://www.lvrj.com) – March 24, 2002 edition) and is supported by protestors and former inhabitants of the camps. The project is also relevant to the current debate about Yucca Mountain, 20 miles



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Detail of the red lady 'buried' on Pagoda Hill

from the Peace Camp at the western edge of the Test Site. This location was recently designated as the high-level US nuclear waste repository. In May 2002 during the annual Mother's Day demonstrations, protests against nuclear testing combined with protests against this waste repository. If this proposal is confirmed, then a permanently occupied peace camp here or nearer Yucca Mountain may become reality once more.

The project has given Cold War archaeology a new dimension, though further work remains to be done. Interviews with former inhabitants, many from Las Vegas's diverse religious community, may help with interpretation and may also help to distinguish New Age symbolism from that of the Western Shoshone.

Work has begun on the Nevada Atomic Testing History Institute in Las Vegas, including a museum of the Nevada Test Site and its role in America's nuclear testing programme. Following the work at Peace Camp, it is hoped that alongside the displays on atmospheric testing and environmental management will be one on the peace movement and the many events that occurred 'beyond the fence'. □

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*The Peace Camp pathway that leads 370m from an area of occupation to one of the low ridges on which clusters of symbols are typically found*

# National Monuments Record

## News and events



ENGLISH HERITAGE

## NATIONAL MONUMENTS RECORD

The NMR is the public archive of English Heritage. It includes around 10 million archive items (photographs, drawings, reports and digital data) relating to England's historic environment.

### On the web

#### Access to Archives

#### NMR archive catalogues on the web

Catalogue entries for nearly 200,000 photographs and other archive items held in the NMR are now available over the Internet. In November 2002, catalogues for 132 collections were mounted on the *Access to Archives* site at [www.a2a.pro.gov.uk](http://www.a2a.pro.gov.uk). These include major

*Access to Archives* is a nation-wide initiative to make archives catalogues available over the Internet, and the NMR catalogues join archives data from 198 other repositories all over England. This means that searchers do not have to know where archives are held in order to access data about them: a search on 'Stonehenge', for example, reveals references in archives held in 13 different repositories from Manchester to the Isle of Wight. It also enables 'virtual' reunification of collections that have been split up: for example, part of the important collection of photographs taken by the Leicester photographer Alfred Newton is held in the Leicestershire Record Office and part by the NMR. Catalogues of both parts are now available through *Access to Archives*, so a search on 'Charwelton Station', Northamptonshire, reveals photographs of the station taken by Newton on the same occasion in 1901, some now held in Leicestershire and some at the NMR.

For more information, please contact Gillian Sheldrick on 01793 414635 or email [gillian.sheldrick@english-heritage.org.uk](mailto:gillian.sheldrick@english-heritage.org.uk)

### ViewFinder

#### On-line image resource for England's history

The NMR has just launched *ViewFinder*, a new on-line picture resource, in partnership with Oxfordshire County Council and with funding from the New Opportunities Fund. It comprises a searchable gallery of 20,000 historic photographs supported by 60 'stories' or photo essays that help to set the images in a wider context.

Two collections are available on the site: the Henry W Taunt Collection and 'England at Work'. Henry Taunt was an Oxford-based photographer active from 1860 to 1922. He was especially interested in Oxford, the River Thames, and customs and traditions. In partnership with Oxfordshire County Council, which owns part of the collection, all 14,000 of Taunt's surviving photographs have been made available. By contrast, 'England at Work' is a thematic selection of 5,000 photographs from the



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An employee of the Great Central Railway sticking up a poster for the County Show outside the waiting room at Charwelton Station, Northamptonshire. Photographed by Alfred Newton & Son

collections such as the Nigel Temple collection of postcards of parks and gardens, the work of major 20th-century photographers Hallam Ashley and York & Sons, the Jackson Stops sales particulars collection and many smaller photographic collections. Though the images themselves do not appear on the site (though this may change in the future), users can now search for any words contained in the catalogue descriptions, including place names, subjects and people. The catalogues available at the moment cover just a small proportion of the 10 million items held in the NMR, but additional catalogues will be added at a later date.



© English Heritage/NMR

In addition to country houses, castles and churches, there are some more unusual listed structures such as lavatories, lamp posts and pigsties. The *Images of England* website provides a key resource for conservation officers, heritage professionals, teachers and students as well as ensuring that future generations can enjoy the heritage that surrounds us today.

*A block of red-hot steel is hammered to reduce impurities at Bath Steel Works, Sheffield. Photographed in 2001 for a study of the Sheffield Metal Trades*

For more information on the project, please visit [www.imagesofengland.org.uk](http://www.imagesofengland.org.uk) or contact Alexandra Saxon on 01793 414779 or email [alexandra.saxon@english-heritage.org.uk](mailto:alexandra.saxon@english-heritage.org.uk)

### photoLondon

#### **NMR takes the lead in a pioneering regional web project**

The *photoLondon* website [www.photolondon.org.uk](http://www.photolondon.org.uk) was officially launched at a press event at Westminster City Hall on 3 October 2003. The NMR has led the way in establishing this cross-sectoral project to promote Greater London's public photographic collections. Opened by the Lord Mayor of Westminster, Frances Blois, with guests from funding bodies, founding institutions and the media, this was a highly successful event. Our guest speaker, English Heritage's Commissioner Loyd Grossman, said:

I'm delighted to lend my support to the *photoLondon* project. This invaluable tool unveils a smorgasbord of delights for lovers of London and of photography.

*Five-rise locks and overflow channel, Leeds and Liverpool Canal, Bingley, West Yorkshire. Taken as part of the Images of England project*

NMR's extensive collections to illustrate English working life since the Industrial Revolution. Its remit is the whole country and the whole time span of photography from 1850 to the present.

These two collections are a first step in making the NMR's photographic archive collection available to everyone via the Internet. More collections will be added to *ViewFinder* as they become available.

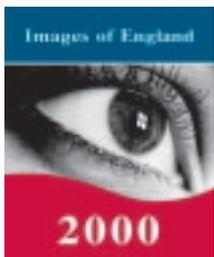
Launched on 6 March 2003, *ViewFinder* has already attracted considerable interest. In the words of two visitors:

The concept of the project is really fantastic. I have been looking at the site and telling family members to look also. It is this sort of thing that allows me to justify spending money on a broadband connection!

This is an amazing project and a good example of the Internet providing original added value. Congratulations to all of you.

Please visit the site at [www.english-heritage.org.uk/viewfinder](http://www.english-heritage.org.uk/viewfinder)

### Images of England



*Images of England*, funded jointly by English Heritage and the Heritage Lottery Fund, aims to create a 'point in time' photographic record of England's 370,000 listed buildings. Each photograph, taken by a

volunteer photographer, is matched with its list description and displayed on the *Images of England* website. Currently there are over 70,000 images available on the site, with more being added on a regular basis.

© Mr Alan V Whetton LRPS



## National Monuments Record

English Heritage Commissioner  
Lloyd Grossman speaking at the  
launch of photoLondon



As lead body, the English Heritage NMR has initiated this ground-breaking collaboration between London's libraries, museums, record offices and national institutions that hold photographs of Greater London. The site offers users an electronic gateway to 60 public collections that collectively hold over 20 million images of London, and it provides interesting exhibitions and features on the history of photography. For peers and partners, it offers a vehicle to aid communication and share expertise.

Westminster Council's cabinet member for Leisure and Lifelong Learning, Councillor Catherine Longworth, said:

The *photo*London website is fascinating and very easy to use. Anyone with access to the Internet can now easily discover where to find images of London from throughout the photographic age.

## Standards

### It's MAGIC!

#### Multi-Agency Geographic Information for the Countryside

MAGIC was the winner of the Geographic Information Systems category of the IM2002 awards, sponsored by the Ordnance Survey and the Association of Geographic Information Central Government, at IGGI (the Inter-

governmental Group on Geographic Information) in 2002.

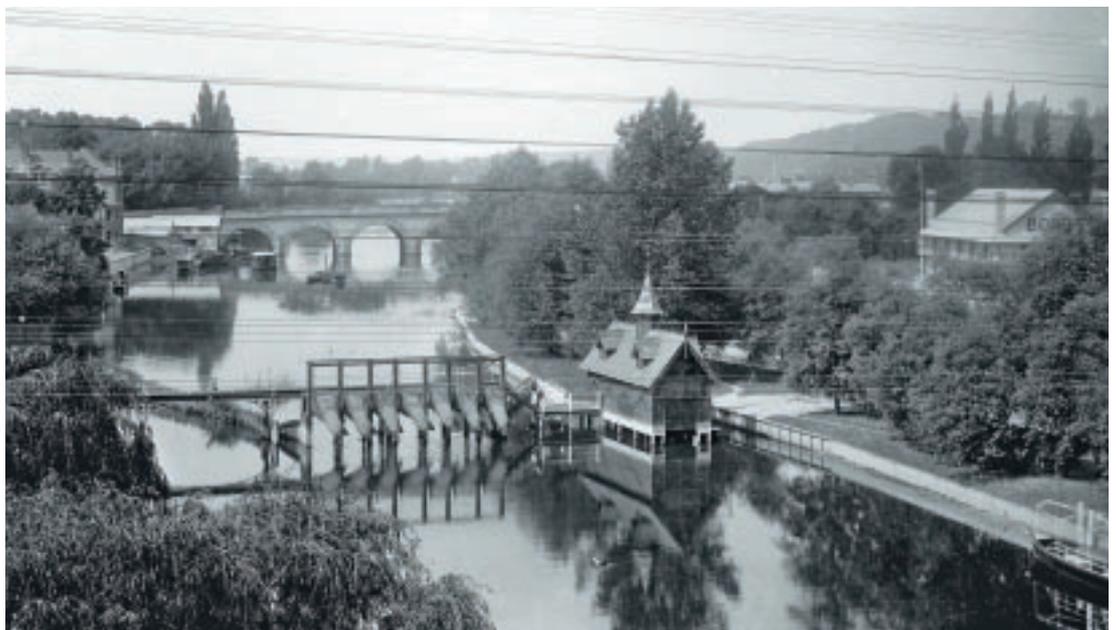
MAGIC is a one-stop shop for information about rural land-based schemes and definitive rural designation boundaries. This information is available in one place for the first time at [www.magic.gov.uk](http://www.magic.gov.uk). At the formal launch on 25 July 2002, the Rt Hon Alun Michael, Minister of State for Rural Affairs, highlighted the importance of projects such as MAGIC in enabling delivery of environmental information.

Over 50 individual data sets are available, grouped into six broad categories:

- Joint Character Areas, such as Countryside Character Areas
- Classifications of Countryside, such as DEFRA Agricultural Land Classification
- Rural Designations, including English Heritage data sets such as Scheduled Monuments and Protected Wreck Sites
- Rural Schemes, such as Countryside Stewardship agreements
- Administrative Boundaries, including departmental and regional structures
- Habitat Inventories, such as Ancient Woodland.

The project has been funded by Invest to Save, a central government budget created to help government departments work together in innovative ways. Led by DEFRA's Geographic Information Unit, its partners include the Forestry Commission, the Office of the Deputy Prime Minister (formerly the DTLR), the Countryside Agency, the Environment Agency, English Nature and English Heritage. There are plans to widen the partnership base to other government departments and agencies as well as to provide access to the Information Society.

The River Thames at Maidenhead,  
photographed in 1883 by Henry  
Taunt. A set of eel bucks (fish  
traps) can be seen next to the  
boathouse in the foreground, with  
Maidenhead Bridge in the distance



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English Heritage contributes to the project at a number of different levels. As a member of the Project Board, it is responsible for guiding the direction and management of the project. It has also supplied data sets – Scheduled Monuments, Parks and Gardens, World Heritage Sites, Protected Wreck Sites and Historic Battlefields – and has participated in the development and evaluation of the system.

Jeff West, English Heritage's Policy Director, has emphasised the benefits to English Heritage, including casework and advisory services, in having access to MAGIC as a knowledge base and in being able to share information with others. The future direction of the project is under discussion, and it is hoped that the information base will be expanded to include Listed Buildings and also other data sets from the NMR.

For further information about MAGIC, please contact the NMR Data Services on 01793 414883 or at [dsu.info@english-heritage.org.uk](mailto:dsu.info@english-heritage.org.uk)

### **The Heritage Illustrated Thesaurus**

The *Heritage Illustrated Thesaurus* (HITITE) was developed by English Heritage in partnership with Adlib Information Systems Ltd as a European Commission-funded project.

Through the use of direct questions and visual representations, the search mechanism presents heritage terminology in an easy-to-use way. A prototype web-based visual search mechanism has been produced that allows users to explore thesaurus terminology (in this case, the Thesaurus of Monument Types) through the 'visualisation' of a monument's characteristics, while at the same time providing conventional word search facilities. The *Heritage Illustrated Thesaurus* meets the expectations of Internet users by prompting them to answer a short series of questions based upon their perception of a monument's form and function (shape, size, number of storeys, location). The answers given to these questions create a query that retrieves a selection of thesaurus terms that the user might need, each illustrated to help identify the monument type. Once chosen, the term can then be used to search further resources.

During the testing programme, the prototype was demonstrated to a range of potential users encompassing all ages and levels of expertise.

The overwhelming approval and enthusiasm expressed by the participants indicates that the *Heritage Illustrated Thesaurus* has the potential to satisfy a large and varied audience within the heritage community and beyond.

At an end-of-project review held by the European Commission in Luxembourg in February 2003, the Project was judged to have successfully proved that the concept of accessing heritage terminology through the use of visual cues was a practical contribution to the Information Society.

For more information and to view the prototype, please visit: [www.heritage-thesauri.org.uk](http://www.heritage-thesauri.org.uk)

### **Outreach**

NMR Outreach offers a varied programme of workshops, tours, lectures, weekly classes and events designed to help participants make the best use of NMR resources for work, research or personal interest.

Short introductory tours to the National Monuments Record Centre in Swindon are available, and for those wishing to explore the resources in more detail, study days are organised on a number of different themes. All workshops start at 10am and finish by 4.30pm.

#### **NMR resources for local history**

Thursday 10 July  
Thursday 20 November

#### **NMR resources for archaeological desk-based assessments**

Evaluate a site of proposed development using air photographs, archaeological data, surveys and other resources from the NMR.  
Thursday 9 October

#### **Using air photographs and maps for local history (in conjunction with Oxford University Department for Continuing Education)**

This ten-week course will explore how evidence from air photographs may be combined with map and non-spatial data from a range of sources to bring together the two essential elements of local history: people and place.  
10 weeks, Wednesdays 2-4pm, starting September/October

For further details, please contact Jane Golding:  
Tel 01793 414735; Fax 01793 414606;  
[jane.golding@english-heritage.org.uk](mailto:jane.golding@english-heritage.org.uk)

# Bastions, Trenches and Palisades

## Military links with parks and gardens

Links between the military and designed ornamental landscapes are surprisingly common and varied: this article explores these connections in the context of parks and gardens included in the national Register of Parks and Gardens of special historic interest

*D-Day Memorial Garden, Grade II, Clarence Esplanade, Southsea, Hampshire, 2001. Exterior detail of memorial stone unveiled in 1948 by Field Marshall Viscount Montgomery of Alamein. With inscriptions:*

1940  
France and the Low Countries  
having been overrun we  
laboured alone to obstruct our  
coasts with such blocks as this  
against invasion by the enemies  
of freedom

and

1944  
Yet from this very beach in the  
company of powerful allies  
many thousands of our men  
embarked on the great  
adventure of liberating Europe  
and achieved their objective

Early defensive structures have offered a framework at some sites for later ornamental design. The Town Walks of Dorchester, for example, have their origin in the elaborate defences of the Roman town of Durnovaria. These earthworks came into use again during the Civil War and then were adapted around 1712 to form the series of public walks that remain in use today. Similarly, the early-18th-century garden of The Moot, at Downton, Wiltshire, uses as its base the substantial earthworks of a 12th-century motte-and-bailey castle.

More commonly, traces of military activity within historic gardens or parks impose upon and make no concession to the design of the underlying landscape. A line of World War II dragon's teeth, for instance, marches through the mid-17th-century pleasure grounds of The Deepdene, Surrey, while at Clumber Park, Nottinghamshire, linear earthworks across the mid-18th-century park mark the work of an experimental army trench-cutting machine. Elsewhere in the park, rectilinear earthworks accompanied by rows of silver birch (colonisers of newly turned ground) mark extensive areas that were used for ammunition storage during World War II.

### Major country gardens

'War is the normal occupation of man. War - and gardening', Winston Churchill said to Siegfried Sassoon<sup>1</sup> and, indeed, a good number of military leaders have been equally closely, and often simultaneously, involved in warfare and in the

development of beautiful gardens. Chartwell in Kent, Churchill's home from 1922 until his death in 1965, is a case in point. Immediately after acquiring the estate, Churchill called in the architect Philip Tilden not only to enlarge the house but also to lay out the structure of the garden in which Churchill was to maintain a close and lifelong interest.

Churchill's ancestor, John Churchill, 1st Duke of Marlborough, had received a somewhat more magnificent garden from a grateful Queen Anne in 1705 as part of her gift of Blenheim Palace, Oxfordshire, to honour his victory against the French forces at Blenheim, Bavaria. The great formal landscape was laid out with military precision by John Vanbrugh, himself on and off an army man, and the Royal Gardener, Henry Wise.

Similarly, the Hampshire estate of Stratfieldsaye was the 1st Duke of Wellington's reward for his defeat of Napoleon at Waterloo in June 1815, and he developed the existing pleasure grounds particularly through enhancement of the ornamental planting.

Plenty of other fine landscapes have been financed by the business of war, such as the striking Cragside in Northumberland. Here, during the second half of the 19th century, William George, Baron Armstrong, inventor and proprietor of the Elswick Engine-works (a company famous for its ordnance), developed very extensive pleasure grounds focused on a rocky gorge and planted with an outstanding collection.

### Mock naval battles

During the mid-18th-century classical revival, a number of parkland landscape owners built large lakes not only for their ornamental qualities but to provide a stage for mock naval battles. At Newstead Abbey, Nottinghamshire, for example, the 5th Lord Byron began work in 1749 on enlarging the lake to make room for his small navy, a fleet manned by professional sailors with support from estate staff. About the same time, the 2nd Duke of Kingston enlarged his lake at Thoresby, Nottinghamshire, in order to present such 'naumachiae'<sup>2</sup>.



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The tradition continues. In Peasholm Park, Scarborough, North Yorkshire – an early-20th-century public park – a mock sea battle has been fought twice-weekly each summer since the late 1920s, except for a short break during the austerities of World War II.

## Military manpower used for major landscaping schemes

At Virginia Water, Surrey, the real army empowered the sailing of the mock navy. George II had the two-mile-long lake excavated so that he could direct naval battles there and, under the oversight of the Duke of Cumberland, Ranger of Windsor Park since 1746, all the construction labour was by Cumberland's own men, the 23rd Regiment of Foot.

The peacetime army has contributed to many of our historic parks and gardens, undertaking the spadework needed to create these prestigious settings of country houses. At Stowe, Buckinghamshire, for example, Baron Cobham, one of Marlborough's chief commanders, bought in army labour from his old regiments to undertake the early-18th-century landscaping work.

## Celebrations in the town parks

The town park has proved a popular place for the celebration of military achievements. Many large statues of military heroes stand in these parks, symbols of civic pride and patriotism. A few cannons can still be seen on display, municipal parks having once been seen as the ideal showcase for such trophies of victory. The Russian cannons, captured at Sebastopol and donated to the City of Nottingham in 1859, remain in The Arboretum and are incorporated into the Chinese Bell Tower, constructed in 1862 to house a bell captured at Canton and also presented to the City.

## Memorials

In the early-16th century, The Hoe, Plymouth, was already a popular public resort, where 'the townsmen pass their time of leisure in walking, bowling and other pleasant pastimes'<sup>3</sup>. It was here in 1588 that Sir Francis Drake played his famous bowling game, awaiting the arrival of the ships of the Spanish Armada. When the site was developed more formally in the 19th century as a park and parade ground, a statue of Drake, erected in 1883, became the first of a significant group of public monuments and memorials to be erected.

© English Heritage/Peter Williams A024273



Part of the D-Day Memorial Garden. Statue of Field Marshal Viscount Montgomery of Alamein unveiled in 1997, which faces the memorial stone and English Channel beyond (see opposite)

Elsewhere across the country, parks have offered an appropriate setting for remembrance of the dead. Included among the numerous military memorials within registered town parks are: the 1904 South African War Memorial erected in Cannon Hill Park, Birmingham, in memory of the 521 soldiers from the town who lost their lives; the monument at the centre of Queen's Park, Crewe, unveiled in 1903 in recognition of the sacrifice of the men of Crewe who also fought and died in the Boer War; the World War I City War Memorial facing the park gate in Northernhay and Rougemont Gardens, Exeter, Devon; and the Queen's Park War Memorial in Bolton, Greater Manchester, designed to commemorate the 1,060 members of the 5th battalion of the Loyal North Lancashire Regiment who fell in both World Wars.

The *Register of Parks and Gardens* includes a number of historic cemeteries, the majority of which contain at least one war memorial. Mostly these are to British dead, but there are exceptions such as the memorial in Southampton Old Cemetery, Hampshire, to Belgian soldiers of World War I. At some cemeteries, discrete areas have been set aside for war graves, such as the military section at Brookwood Cemetery, Surrey, sub-divided into national zones including American, Canadian, Turkish, Dutch and French.

One of the most moving of registered cemetery landscapes is the American Cemetery, Cambridgeshire, the only permanent American World War II cemetery in Britain. Dedicated in

## Bastions, Trenches and Palisades

American Military Cemetery,  
Grade II, Madingley,  
Cambridgeshire 1992



© NMR/BB92/4665

1956, this site – with its powerful architecture and stunning design – shows just how intimate the link between the arts of war and peace can be.

### Landscapes at military properties

The present Ministry of Defence (MoD) is responsible, through ownership, for a number of registered landscapes. A few are purpose-built properties, but most have passed from private to military ownership.

The Officers' Terrace, Chatham Docks, Kent, is a row of twelve houses built in the 1720s as part of the dockyards and owned by the navy until the 1980s. Each house in the terrace has a walled garden, and there is an impressive amount of surviving early-18th-century garden layouts.

The Royal Naval Hospital, Haslar, Hampshire, was opened in 1753 as the first large naval hospital, and it remains in use, owned and run by the Royal Navy. Overlooking the Solent to the south-east, the hospital is set within spacious park-like grounds. The series of walled enclosures laid out around the main buildings include gardens for the use of patients and ornamental airing courts intended, when constructed in the early- and mid-19th century, for use by the mentally ill.

No longer in MoD ownership, the Royal Victoria Country Park, Southampton, Hampshire, was originally the setting for the Royal Victoria Military Hospital. This was the largest of the military hospitals, set in a 109-acre site overlooking Southampton Water. Opened in 1863 to care for the large numbers of injured returning from the Crimean War, but demolished in 1966, the hospital was set within grounds comprising formal terraces surrounded by parkland, probably laid out by the locally-based landscape designer and nurseryman, William Bridgwater Page.

The landscapes in MoD ownership which have been acquired vary greatly in date and style. Chicksands Priory, Bedfordshire, for example, is surrounded by parkland developed by the

Osborne family primarily in the mid-18th and early-19th centuries. The landscaping around Bentley Priory, Harrow, Greater London, is of particular note because, during the second half of the 18th century, the owner, the Hon John James Hamilton, was a friend and correspondent of Sir Uvedale Price with whom he discussed landscape improvements. Subsequently, William Sawrey Gilpin was called in to advise.

The mansion and an area of surrounding land, including the early-19th-century garden terraces, is currently owned by the RAF. The RAF also has a base at Halton House, Buckinghamshire, which is surrounded by the late-19th-century formal gardens laid out for Baron Alfred de Rothschild around his then new country house. The gardens and pleasure grounds of Minley Manor, Hampshire, the property of the Royal Engineers, are of similar date: laid out in the last decades of the 19th century, these were the work of nurseryman James H Veitch. Slightly later are the formal gardens – laid out in 1920 to the design of the landscape gardener Edward White – which surround Frimley Park, Surrey, and are in turn surrounded by 19th-century pleasure grounds and parkland. These grounds now provide part of an Army Cadets training centre. Also registered and in MoD ownership are Ampport House, Hampshire, and, in part, Welbeck Abbey, Nottinghamshire.

Not only, then, do gardens and war share a common terminology – bastion, trench, palisade to give the three most obvious terms – but other strands link these two radically different activities, giving yet another indication of how designed landscapes pervade so many aspects of our lives. □

**Harriet Jordan**

**Head of Register of Parks and Gardens**

This article is based on research carried out by Jenny Charnick, landscape student, Gardens and Landscape Team. An article on the history of the development of public parks will appear in the next issue.

- 1 September 1918, in Siegfried Sassoon, *Siegfried's Journey 1916–20* (1945 ed., 79), quoted in Brown, J 1999 *The Pursuit of Paradise*. London: HarperCollins
- 2 *New Arcadian Journal* 39/40 Naumachia (1995)
- 3 Westcote quoted in Worth, R N 1890 *History of Plymouth*

# Legal developments

Judgement was handed down by the High Court on 9 April 2003 on a case that will be of interest to all practitioners. The case of **R (on the application of Sullivan) –v– Warwick DC & Others** (as yet unreported) concerned proposals for the re-development of the Regent Hotel in Leamington Spa. The Regent Hotel is a Grade II\* listed building dating from 1819, the work of C S Smith of Warwick for a Mr John Williams. Constructed in Flemish bond with painted stucco facades, it is believed to be the second oldest purpose-built hotel in England and the oldest of its type to survive. It became known as the Regent Hotel when, shortly after it opened, the Prince Regent, the future King George IV, stayed there and gave permission for the name change.

Mr Justice Pitchford (the judge in the case) described it thus: ‘The principal range on the east side of The Parade, fronting westwards, is a large four-storey rectangular block. Bays at each end of the block are stepped slightly forward. Its main elevations are clad in stucco, a feature familiar in Leamington Spa. Rear wings project eastwards from the northern and southern ends of the principal range to form, to the rear, a courtyard, since cluttered with a variety of modern additions ... The south wing ..., listed as “rear range of four lower storeys, seven first floor windows”, is the subject of controversy. It is contemporary with the principal range but subordinate to it in architectural quality and status. Its four storeys reach the same height as the first three storeys in the principal range.’

The case concerned proposals to re-develop the Regent Hotel. The proposals involved the ‘demolition’ (post-Shimizu, of course, we must use the word ‘demolition’ relating to part of a building with some care!) of the southern wing of the hotel and its re-use for restaurant and bars on the ground floor and hotel use on the remaining floors. A new shopping street with residential above was proposed which ran to the rear of the hotel. English Heritage was consulted on the case, which was referred to its Historic Built Environment Advisory Committee (HBEAC). HBEAC was content with the proposals and no objection was raised with Warwick District Council. The Council subsequently granted planning permission and listed building consent for the proposals. The decision to grant those consents was the subject of the judicial review proceedings brought by Mr Sullivan on behalf of local residents groups who objected to the proposals and wished to see the hotel retained in its original form and run as a traditional hotel.

The argument put forward by those opposed to the scheme was that the loss of the southern wing to the hotel constituted the demolition of a ‘significant part’ of the listed building and that therefore, by virtue of paragraph 3.15A of PPG15, the tests in paragraph 3.19 of PPG15 – particularly the requirement to market the property before carrying out works – were triggered. The objectors contended that ‘significant’ meant architecturally or historically significant. English Heritage argued that it meant volumetrically significant – a significant proportion of the building – and had advised the local planning authority accordingly.

The judge’s decision was that ‘significant’ did encompass architectural/historical significance and that therefore Warwick DC had been misdirected by English Heritage’s advice in relation to paragraph 3.19. However, he decided not to quash the decisions because he concluded that if Warwick DC had been properly directed in respect of paragraph 3.19 it would have reached the same conclusion, so there was no point in remitting the matter back to it for reconsideration. It is not entirely clear how the judge came to his decision not to quash, but he may have been influenced by evidence put forward by Warwick DC and English Heritage. English Heritage argued that if the true construction of ‘significance’ were that contended for by Mr Sullivan (architectural or historic significance) the same result would be reached. English Heritage’s view was that the southern wing was not architecturally significant. As the judge observed in his opening remarks (above) the southern wing was ‘subordinate to [the principal range] in architectural quality and status’.

While the judgement is good news for practitioners – who on occasion may wish to argue for the retention of a small but architecturally significant part of a building – and brings welcome clarification, the judgement is not without its problems. For one thing, the judgement could be seen as leading to, in my opinion, the absurd situation where an owner of a listed house is required to put it on the market because he wants to remove a historically significant fireplace or cornice. For another, who decides whether the part of the building is significant? Presumably, the local planning authority, but PPG15 doesn’t say that, so if the developer’s expert disagrees, an appeal may be the only way to resolve the issue. □

**Nigel Hewitson**  
**Legal Director**

# Notes

## Designation Review

The DCMS and English Heritage Review of Heritage Protection was announced by the Secretary of State in November 2002. The aim is to improve and re-focus the way in which England's historic environment receives statutory protection.

There are several reasons to carry out such a review now. First, there are at present separate systems for designating monuments, buildings of historic importance or architectural merit, gardens, battlefields, ecclesiastical buildings and wrecks. The DCMS policy statement, *A Force for our Future* (2002), identified the need to examine these systems.

Second, the Office of the Deputy Prime Minister is revising PPG15 and 16 in addition to carrying out a review of consent regimes. Legislation now before Parliament will achieve major reform of the land use planning system. Heritage protection needs to operate effectively alongside the new arrangements. This affects in particular the role of the historic environment in regeneration and redevelopment in both urban and rural contexts.

Third, in recent years there has been growing interest in the context and setting of the historic environment as a whole, rather than just the component parts. For major complex sites, the modern approach of conservation plans and management agreements covering areas rather than single buildings needs to be fully reflected in the designation regimes.

Fourth, following the quinquennial review of English Heritage, work is already well advanced to improve processes in English Heritage and to direct resources to programmes and projects in areas of regeneration and redevelopment. This work, including pilot projects to test different protection methods, will continue alongside the Heritage Protection Review.

The review has three phases. Up to the end of May, the DCMS and English Heritage will have sought views and ideas from all stakeholders – developers, local authorities, other government departments, archaeologists, architects, heritage experts, owners of listed buildings and many others. Afterwards, the DCMS will issue a Consultation Paper in July setting out the main

changes the Government is minded to make. Finally, having listened to the response, the Government plans to publish a White Paper early in 2004.

## Review of grants strategy

English Heritage is reviewing its grants strategy to ensure that it is focused on *A Force for Our Future and State of the Historic Environment Report* (SHER) priorities and is supported by modernised procedures. This will include regionally-based strategies for the delivery of both advice and grants casework. Strategies for the nine regions will be published as consultation drafts in the autumn.

In order to allow for the implementation of changes to grant priorities and procedures, any grant applications received after 30 September 2003 will not be processed until the new system is in place and may not receive a decision until at least April 2004.

## Directory of funds for historic buildings launched on the Internet

The Architectural Heritage Fund (AHF), with the support of English Heritage and Cadw, has launched a unique and comprehensive online guide to the funding available for rescuing and restoring historic buildings. The guide, *Funds for Historic Buildings*, can be accessed free of charge at [www.ffhb.org.uk](http://www.ffhb.org.uk)

Looking after historic buildings costs money. The website details over 140 sources of funding and will be the first port of call for people seeking funds for vital restoration and regeneration projects in England and Wales. A search function enables users to find the sources of funds most likely to apply to them. The website also provides invaluable practical information and includes easy-to-read sections on topics such as how to make funding applications, fundraising from individuals and companies, and where to get advice on restoration work.

The AHF can be contacted on 020 7925 0199; [ahf@ahfund.org](mailto:ahf@ahfund.org); and [www.ahfund.org.uk](http://www.ahfund.org.uk)

# Project APPEAR

## Accessibility Projects. Sustainable Preservation and Enhancement of urban subsoil Archaeological Remains

The APPEAR Project is a three-year, EU-funded research project, led by In Situ (Centre for Archaeological Research) and the University of Liège in Belgium and carried out in partnership with a number of organisations, including English Heritage, that are involved in urban planning and archaeology in six European countries.

It forms part of the European Commission's Fifth Framework Programme for Energy, Environment and Sustainable Development, Key Action 4 – The City of Tomorrow and Cultural Heritage, Action 4.2.3: to foster the integration of cultural heritage in the urban setting.

The research focuses on accessibility projects, schemes that make urban subsoil archaeological remains accessible *in situ* to the public.

The project was inspired by the case of the remains of the foundations of the gothic Cathedral of St Lambert in Liège, which were destroyed at the beginning of the 19th century. The excavated site – which also includes prehistoric, Roman and early medieval remains – has been the focus of a number of initiatives over the years to preserve and open to the public those parts not destroyed by the building of a car park and other nearby urban improvement works. These programmes have been fraught with difficulties and have led to a series of delays in the opening of the site. A review of practice elsewhere in Europe led to the realisation that these problems were relatively common and prompted In Situ and the University of Liège to put forward the project proposal.

Over the last few decades, inhabitants of European cities and towns have shown a growing awareness of, and interest in, their archaeological remains as a means of identifying with their cultural heritage. At the same time, increased urban planning, the exponential growth of towns and technological advances in urban development have led to conflicting priorities in terms of the preservation of the subsoil heritage.

The lack, however, of a proven reference framework to facilitate dealing with the complex issues often faced by those concerned with the decision-making process has sometimes led to missed opportunities or the application of inappropriate solutions to the problems

associated with the integration of archaeology into the social and economic fabric of urban centres.

The APPEAR project seeks to redress this by developing practical solutions and advice for those working on accessibility projects. It will adopt a multi-disciplinary approach by involving representatives from all stakeholder groups, including architects, archaeologists, historians, curators, developers and planners. An extremely important group it also intends to target is the public who in the past have often not been involved in the process and whose views have not been taken into account.

Through the close collaboration of the various participants, step-by-step guidelines will be produced for use by all parties involved in the process of instigating and managing these projects. The resulting practical system will allow a universal approach, but it will also be flexible and adaptable to local conditions.

The end product will consist of two elements:

The **APPEAR Guide**: this will allow users to:

- make coherent and well-founded choices concerning the conservation, integration, enhancement and exploitation of urban archaeological sites
- defend these choices based on tried and tested methods and indicators, and on noteworthy examples
- identify, put into place and carry out the operations induced by these choices.

The **Existing Practices Database**: this database will contain examples of successful and unsuccessful accessibility projects. It will be added to throughout the life of the project and beyond, providing a dynamic aid to decision-making. It will be available on the APPEAR website that will be developed within the first few months of the project.

The aim of the APPEAR project is to provide clear procedures for use by all those involved in accessibility projects for urban archaeological sites, in order to ensure their full integration within the sustainable urban development programme and to allow the public maximum benefit and enjoyment from their heritage.

For further details, please contact Valerie Wilson at English Heritage: Tel 01793 414745; Fax 01793 714770; [valerie.wilson@english-heritage.org.uk](mailto:valerie.wilson@english-heritage.org.uk)

## Notes **Regional priorities**

English Heritage has produced a plan for each of the nine regions outlining priorities for the next two years. If you would like copies of any of them, please contact Customer Services on 0870 333 1181 or visit [www.english-heritage.org.uk](http://www.english-heritage.org.uk)

## **Green Heritage Sites**

### **A new Green Flag Award**

English Heritage is sponsoring a new Green Flag Award for Green Heritage Sites to promote the value of, and best practice in, the care and upkeep of parks and green spaces that are of local or national historic interest. The Green Heritage Site forms part of the Green Flag national standard adopted by the Office of the Deputy Prime Minister.

This award aspires to give voice to public expectations about what parks can and should offer. It aims to set standards for management and to promote the value of parks and green spaces as social places as well as places for walking, play, informal sports and for contact with the natural world. The Green Flag Award has now become the benchmark against which the quality of public parks and green spaces can be measured. It also recognises the diversity and value of green space to the local community, including: town and country parks, formal gardens, nature reserves, cemeteries and crematoria, water parks, open space, millennium greens, doorstep greens and community-run green spaces. For more information, please visit [www.civictrust.org.uk](http://www.civictrust.org.uk)

*Bouldnor Battery on the Isle of Wight, scheduled in the 1960s. The national importance of this site was confirmed by the Monuments Protection Programme's assessment of coastal batteries*



## **AIHV 2003**

The British Section of the International Association for the History of Glass (AIHV) will host the 16th Congress of the AIHV in London, 7–13 September 2003. The AIHV exists to promote the study and enjoyment of all aspects of glass from antiquity to the modern period and holds a congress every three years. Its membership includes archaeologists, art historians, artists, collectors, museum curators, scientists and researchers from over 30 countries. At the Congress, based at Imperial College, there will be a full programme of lectures, two poster sessions, the opportunities to visit collections both in London and elsewhere in the south-east of England and a full social programme. It will be followed by a post-congress tour to the south-west of England. Everyone interested in glass is warmly invited to take part.

Further details can be obtained from The General Secretary AIHV, 16 Lady Bay Road, West Bridgford, Nottingham NG2 5BJ. Alternatively, please visit the website of the organising committee [www.historyofglass.org.uk](http://www.historyofglass.org.uk) where you can find full details of the congress. More details of the AIHV can be found on [www.aihv.org](http://www.aihv.org)

## **Building conservation masterclasses**

### **WEST DEAN COLLEGE Near Chichester, West Sussex**

**A collaboration in specialist training between West Dean College, English Heritage, and the Weald & Downland Open Air Museum, sponsored by the Radcliffe Trust**

Each course is an intensive combination of lectures, demonstrations and practical exercises. All courses are £515 Residential and £410 non-residential.

For further information, please contact Patricia Jackson, West Dean College, West Dean, Chichester, PO18 0QZ; Tel 01243 818294/811301; [pat.jackson@westdean.org.uk](mailto:pat.jackson@westdean.org.uk) or [liz.campbell@westdean.org.uk](mailto:liz.campbell@westdean.org.uk);

[www.westdean.org.uk](http://www.westdean.org.uk)

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In association with HarperCollins Newark, 2000

PRICE £19.99

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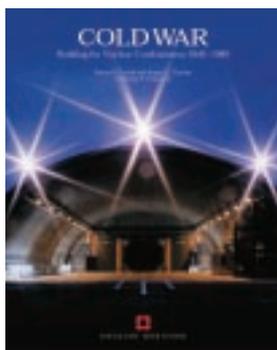
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### Cold War

#### Building for Nuclear Confrontation 1946–1989

by Wayne D Cocroft and Roger J C Thomas  
edited by P S Barnwell



In the early 1950s, the historian Professor William Hoskins, in his pioneering work *The making of the English Landscape*, lamented what he saw as the devastation of the countryside by scientists, the military and politicians. He saw his world as dominated by ‘the

obscene shape of the atom-bomber, laying a trail like a filthy slug upon Constable’s and Gainsborough’s sky. England of the Nissen hut, the ‘pre-fab’, and the electric fence, of the high barbed wire around some unmentionable devilment’. A generation later, this book reveals what lay behind the fence and how these sites are now, in dereliction, a new aspect of the complex landscape history of Britain.

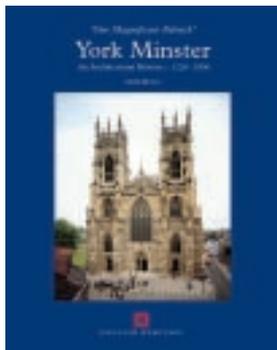
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by Sarah Brown



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pilgrims and visitors, was built over a period of more than 300 years. This book charts the

building’s construction and development, which was by no means smooth and uninterrupted. Progress was checked by financial constraint, Scottish wars, the effects of plague, political upheaval, structural crisis, local rebellion and sometimes the indifference of the archbishop and Minister clergy. For many years at a time the liturgy was performed against a backdrop of scaffolding and half-built masonry. This analysis of the Minster is based on the architectural recording of the building begun in the early 1970s by the former Royal Commission on the Historical Monuments of England.

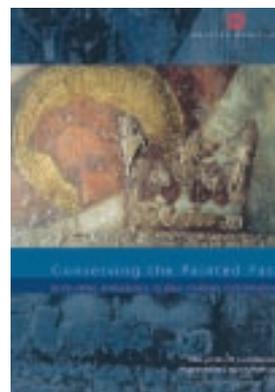
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interest to wall painting conservators, architects, surveyors, engineers, art historians and scientists as well as local authority conservation officers, conservation funding bodies, students and all those concerned with the welfare of the historic environment.

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