

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.

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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



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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. □

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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

