

# RESEARCH NEWS



*The Quantock Hills – Outstanding beauty and outstanding heritage - story on page 10*

## *Inside this issue...*

<i>Introduction</i> .....	2
<i>NEW DISCOVERIES AND INTERPRETATIONS</i>	
<i>Chiswick House, London: archaeological evaluation</i> .....	3
<i>Laid to rest: two Anglo-Saxon graves reconstructed</i> .....	6
<i>Outstanding beauty and outstanding heritage: an archaeological survey of the Quantock Hills AONB</i> .....	10
<i>PROTECTING THE HISTORIC ENVIRONMENT</i>	
<i>Research and the Heritage Protection Review</i> .....	14
<i>URBAN LANDSCAPES</i>	
<i>England's Seaside Resorts Project: an architectural and social history</i> .....	18
<i>Religion and Place in Leeds</i> ..	22
<i>TRAINING AND OUTREACH</i>	
<i>The Rock Art Recording Pilot Project in Northumberland and County Durham</i> .....	24
<i>Eyes down! Learning about aerial archaeology</i> .....	28
<i>DEVELOPING METHODOLOGIES</i>	
<i>Flint Farm Iron Age Settlement</i> .....	30
<i>Housing Market Renewal Initiative (Pathfinder)</i> .....	34
<i>NOTES &amp; NEWS</i> .....	36
<i>NEW PUBLICATIONS</i> .....	42
<i>DIARY</i> .....	44



## RESEARCH THEMES AND PROGRAMMES

### **A Discovering, studying and defining historic assets and their significance**

- A1 *What's out there? Defining, characterising and analysing the historic environment*
- A2 *Spotting the gaps: Analysing poorly-understood landscapes, areas and monuments*
- A3 *Unlocking the riches: Realising the potential of the research dividend*

### **B Studying and establishing the socio-economic and other values and needs of the historic environment and those concerned with it**

- B1 *Valuing the historic environment: Quantifying the economic and social value of historic assets*
- B2 *Gauging the mood: Establishing perceptions and attitudes to the historic environment*
- B3 *Understanding the needs: Delivering sector intelligence*

### **C Engaging and developing diverse audiences**

- C1 *Opening Doors: Understanding public participation in the historic environment*
- C2 *Making Friends: Building understanding and appreciation through education and outreach*

### **D Studying and assessing the risks to historic assets and devising responses**

- D1 *Heritage at risk: Quantifying and analysing the historic environment*
- D2 *Measuring threat: Studying the reasons for risk and developing responses*
- D3 *Keeping it safe: Protection and conservation*
- D4 *Rescue! Threat-led last resort analysis*

### **E Studying historic assets and improving their presentation and interpretation**

- E1 *Presenting the past: Research to inform the presentation to the public of historic places*

### **F Studying and developing information management**

- F1 *Navigating the resource: Developing standards for Historic Environment Records*
- F2 *Wired! Studying and developing information management*

### **G Studying and devising ways of making English Heritage and the sector more effective**

- G1 *Sharpening the tools: Developing new techniques of analysis and understanding*
- G2 *Defining the questions: Devising research strategies, frameworks and agenda*
- G3 *Impact and effectiveness: Measuring outcomes and effectiveness of English Heritage and the sector*

*“Research is the key to understanding the historic environment, its scope, value and condition, and the threats and opportunities that confront it. Research underpins the sustainable management of the historic environment and helps to provide public access to, appreciation and understanding of, the historic environment for this and future generations. Research facilitates the building of intellectual frameworks for educational development and learning. By delivering practical, high-quality research results, we aim to contribute to knowledge and inform and direct policy decisions, advice, guidance and other forms of action and assistance – to support the historic environment sector and help deliver Government objectives.”* Simon Thurley – Introduction to the English Heritage Research Agenda.

The *English Heritage Research Strategy* and *English Heritage Research Agenda*, launched in October 2005, together establish English Heritage's plan of action for the use of research to deliver our corporate goals, government priorities, and the aims of the historic environment sector over the next five years. The Research Strategy sets out why and how we will undertake and govern research. The Research Agenda identifies our priorities for research now and in the future under seven key themes, each with supporting programmes (see left).

All research themes and programmes support the priorities defined in *Making the Past Part of our Future*, English Heritage's corporate strategy for 2005-2010, aiming to create a cycle of understanding, valuing, caring for and enjoying the historic environment in England. We see the Research Agenda as an aid to dialogue and more effective collaboration between English Heritage and our clients and partners across the historic environment sector.

In planning and undertaking investigative and analytical projects it is essential that we are rigorous in our assessment of need, that we ensure that we work to the highest standards, and that we communicate our results widely and effectively. It is also important that we are able to show clearly to all our audiences how individual initiatives support our broader objectives, and to this end all projects reported in *Research News* will be explicitly linked to the Research Agenda programmes which they support. How these in turn directly support our corporate goals and Government priorities is set out in detail in the *English Heritage Research Strategy*.

This issue of *Research News* gives a flavour of the range of issues confronting the historic environment which we are able to address effectively through coherent targeted research programmes. It also illustrates the range of essential partnerships within and outwith English Heritage which focus and underpin our research effort and help us to support our colleagues. I hope that you find it informative, stimulating and enjoyable.

**Christopher Scull**  
*Research Director*  
*Research and Standards Group*

The English Heritage Research Strategy and Research Agenda may be accessed online at [www.english-heritage.org.uk/research\\_strategy](http://www.english-heritage.org.uk/research_strategy)

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# Chiswick House, London: archaeological evaluation to assess the nature of survival of its historic environment

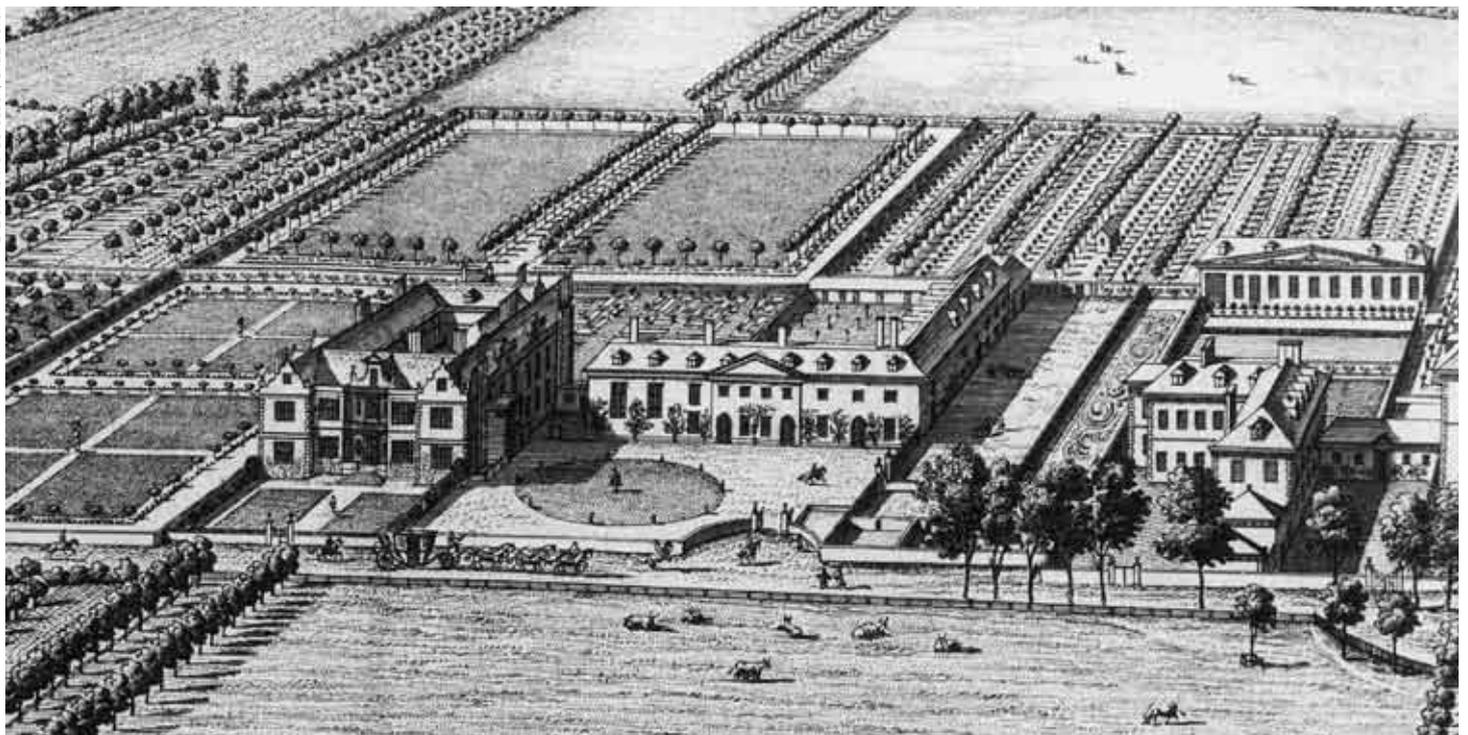
**Investigations in the grounds of the Palladian Villa at Chiswick have uncovered a wealth of archaeological information that will be of great importance for the future management of the site.**

Chiswick House is located in the London Borough of Hounslow in west London, overlooking the River Thames. This spectacular Grade I listed house is set within extensive landscaped grounds, with well preserved and important garden and landscape features of several 18th- and 19th-century phases that are Grade I listed on the Historic Gardens Register. The present house was built in the late 1720s by Richard Boyle, 3rd Earl of Burlington, and was constructed in the Palladian style. It was built adjacent to and to the west of an earlier 'H' plan Jacobean House, and was eventually

linked to it. To the north-east of the Jacobean House there was a large L-shaped Stable Block, constructed in the 1680s, possibly designed by the architect Hugh May.

As part of the Chiswick House and Grounds Regeneration Project, an area to the south and east of the present house was under consideration as the location for a new facilities building. Early in 2005 English Heritage's Archaeological Projects Team was approached to evaluate the archaeological sensitivity of this area in order to establish the level and nature of survival of the

Bird's eye view of Chiswick House showing the Jacobean House and 17th-century Stable Block to the east



archaeological remains. It was essential that a firm understanding of the archaeological deposits in this area was established to enable informed and timely advice to be made available to the Chiswick House and Grounds Regeneration Project Team (and the newly-formed Chiswick House and Gardens Trust) via the Inspector of Ancient Monuments. It was also an unrivalled opportunity to evaluate the remains of the Jacobean House and the related and later garden deposits.

The evaluation was carried out between 20 June and 1 July 2005, and seven small trenches (up to 17 x 5m in size) were excavated. The trench locations were chosen to maximise the potential for archaeological discovery whilst minimising the level of disturbance to the site as a whole.

The results of the excavations exceeded expectations with a wealth of archaeological evidence surviving in each of the trenches investigated. Evidence was recorded for several of the buildings that formerly stood on the site, as well as important and intriguing evidence for the earlier garden design and layout. In some instances this corroborated the pictorial evidence from the historic estate views, whereas in others it has added to our previously-held understanding.

The trenches positioned to investigate the remains of the Jacobean House were the least successful in locating hard structural evidence, but they did reveal other archaeological features of great interest. A sequence of three gravel filled linear cuts parallel and to the south of the house front may relate to the construction or the drainage of the original building, with a raft of brickwork at the western end of the northernmost cut possibly forming part of the building's footings.

Several of the walls of the late 17th-century 'L'-shaped Stable Block were seen and recorded, as well as further walls from buildings added to the northern end of the original eastern range. Walls from several phases of structures linking the western end of the Stable Block with the buildings to the west (formerly to the Jacobean House, latterly to the 18th-century wing of Chiswick Villa) were recorded, with the walls surviving within 0.15m of the surrounding ground surface.

The early summer's dry weather had created parch marks on the grass lawns over some of the shallowly-buried walls, and at the eastern side of the area under investigation the wall lines of the 17th-century Stable Block of Moreton Hall, Chiswick's neighbouring

Excavation in progress, with the surviving footings of the northern wall of the Stable Block clearly visible on the right hand side of the picture





View of the rectangular mortar footings of the aviary building, with the unexcavated formal garden beds visible at the top right of the picture

Thames-side villa, were traced and recorded. One of the wall corners was excavated to show the surviving level and condition of these walls. The excavations across the garden deposits to the north of the Stable Block revealed what are arguably the most exciting and important remains seen during these small-scale evaluation trenches – evidence for the early garden designs. It was possible to identify two phases of inter-cutting garden bedding, with traces of the linear beds showing the extent of survival of the early formal garden layout. These were most probably the remains of the Knot Garden that can be seen in this area in the historic views of the site, and an important piece of dating evidence was retrieved from one of the Knot Garden bed deposits – an early 17th-century Nuremberg jeton.

An alignment of mortar and rubble footings seen in the same trench may have been the foundations of the aviary building constructed in Lady Burlington's garden and depicted on John Rocque's 1736 survey of Lord Burlington's Estate, and if so this is very significant as it is one of only a handful of investigations ever undertaken on this hitherto little-studied archaeological element of 18th-century pleasure garden design.

During the course of the excavation guided site tours were provided for interested members of the public, along with pre-arranged tours for local groups and for school children. Posters explaining the reasons for and nature of the works were displayed on

site, and the initial results of the evaluation were presented at the Chiswick Community Festival held over the weekend of 24-25 September 2005.

The level and nature of English Heritage's Archaeological Projects Team's future involvement in the regeneration project depends on a variety of factors, one of them being the result of a Heritage Lottery Fund bid for part funding of the landscaping elements of the project that has recently been submitted and is currently under consideration.

**Dave Fellows**

Detail of the formal 17th-century knot garden beds



# Laid to Rest – two Anglo-Saxon chambered graves reconstructed

**Investigative conservation has allowed the reconstruction of objects from two high-status graves, including the most complicated Anglo-Saxon bed ever found.**

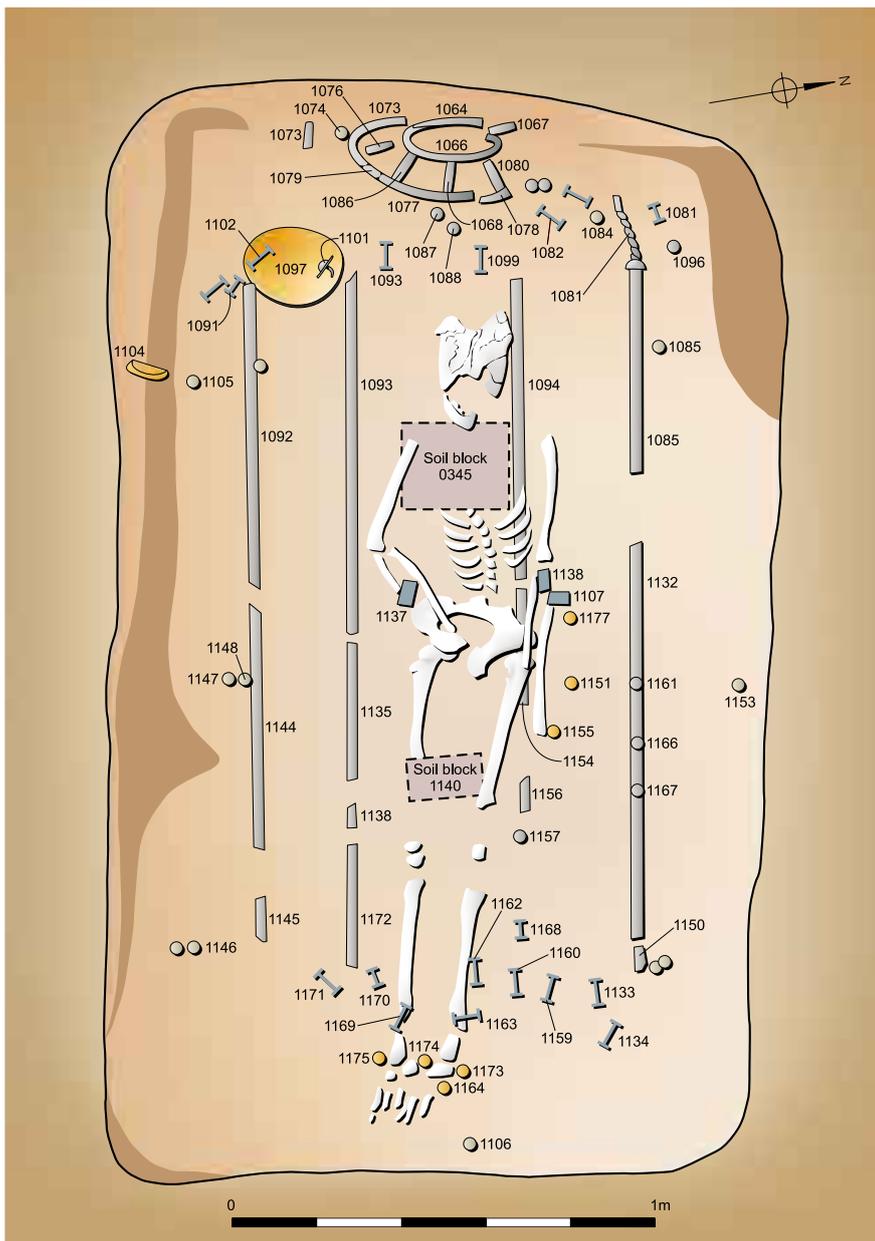
Grave plan of bed burial with the positions of over a hundred pieces of metalwork

The 7th-century Anglo-Saxon cemetery at Shrubland Hall Quarry, Coddendam, Suffolk, was discovered in 1999 during the excavation in advance of gravel extraction of a known Iron Age settlement by Suffolk County Council Archaeology Service.

Because the cemetery was an unexpected discovery of national importance, and the quarry operator had already made every reasonable provision to deal with the archaeology within the planning process, English Heritage funded excavation and analysis of the burials. As part of English Heritage's support for the project, investigative conservation of the finds was undertaken by English Heritage's archaeological conservation team, which has particular expertise in dealing with mineral-preserved organic remains. This expertise has stood the project in good stead because it has become apparent that at least two of the excavated graves appear to have been wooden-lined chambers with complex organic remains. One was the burial of a woman laid out on a wooden bed; the other a man buried with weapons.

The bed burial grave contained over 100 separate pieces of metalwork including parts of the bed, personal items and other structural components of the grave. Organic material was preserved on these fragments by contact with metal corrosion products, particularly iron. Most of the organic material was wood, along with fragments of textile, and from these traces it was hoped that it would be possible to reconstruct how the bed originally looked, though the quantity of fittings rank this bed as being the most complicated of any so far excavated. The story of the finding of the cemetery and the initial study of the bed burial were covered in a recent TV programme in the BBC's *Hidden Treasure* series.

Reconstructing the bed was a painstaking process. All the ironwork was laid out in the laboratory in its correct position according to the grave plan, then each piece was examined and all the organic material



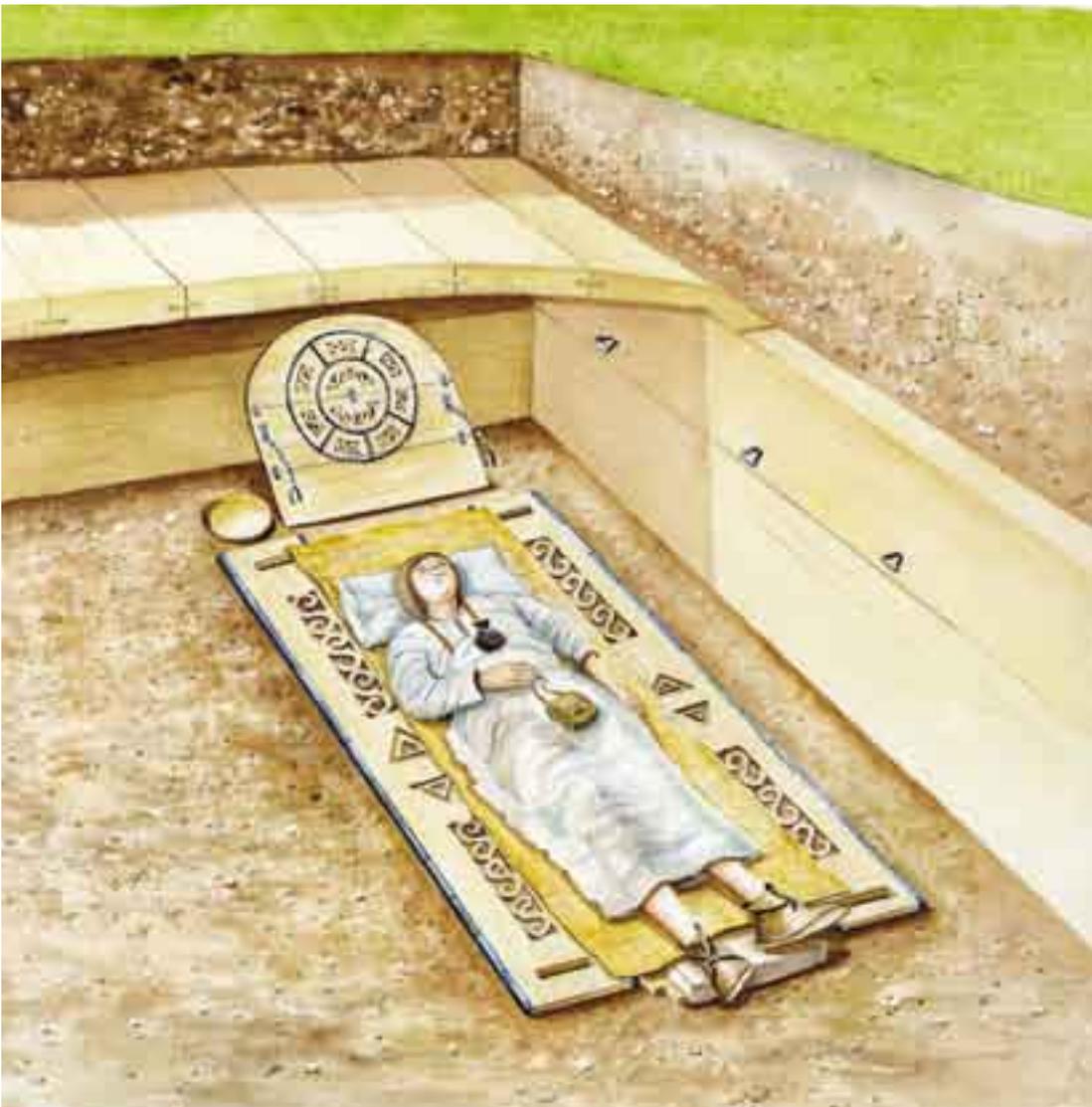
John Vallender, © English Heritage



Metalwork from the wooden headboard preserved on the side of the grave

recorded. This revealed evidence that allowed reconstruction of all the components that made up the structure of the grave and its contents, including the bed. Ideas about the shape of the bed changed several times as we examined this limited evidence, until, on

the suggestion of carpentry expert Richard Darrah, it became clear that the bed had been partly dismantled, and the sides had been removed from the main structure and laid on the floor of the grave.



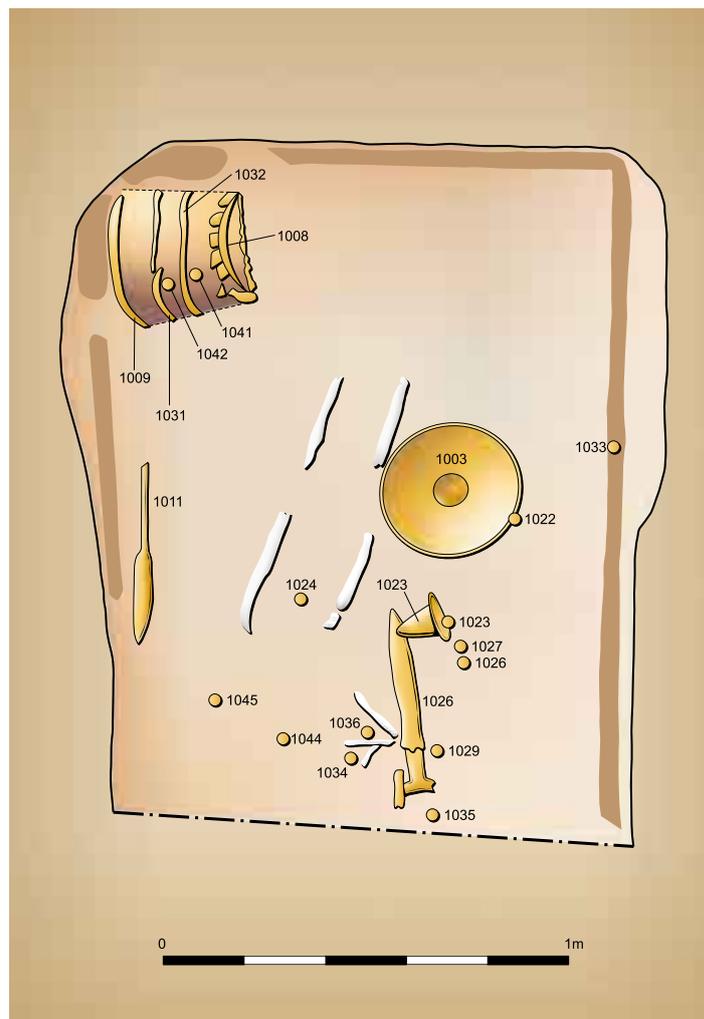
How the burial may have been laid out

The headboard of the bed was decorated with thin iron straps. Though the condition of the iron does not allow us to be certain, it seems that the pattern was of two concentric circles with connecting bars and diamond-headed studs. It is further assumed that, in addition to the ironwork, the wooden headboard itself was carved, though there is no evidence either for this, or for the presence of any covering between the metal and the wood. The wood preserved on the ironwork does, however, indicate that the headboard was made from at least two or three separate boards. The wood grain preserved on the headboard stay indicated that this bed, in keeping with other recently examined bed burials, had a reclined headboard. The sides of the bed appear to have been laid more or less horizontal in the grave and at a slightly higher level than the metalwork from the headboard.

The walls of the wooden grave chamber were laid horizontally along the long sides of the grave cut. Two groups of clenched nails did not seem to form part of the bed, and the plank

structure they represent is very similar to an example from Taplow, Berkshire on display at The British Museum. The latter seems to point to a curved wooden cover made from four or five boards joined together with loose tenons. In this grave the lines of clenched nails were found just above the other metalwork, but it is impossible to know if this is because the grave was originally quite shallow or if the nails just fell into the void when the wood rotted.

The woman, who is likely to have been from a wealthy and important family, had been dressed for burial and the small buckles and lace tags from her shoes were found near her ankles. A purse lay by her thigh, perhaps suspended from a girdle, but her jewellery seems to have been placed in a bag on her chest rather than worn. Her shoe buckles are very like those worn by the man buried in the very richly furnished grave at Prittlewell, Essex, and leather shoes with similar buckles have been reconstructed for Queen Aregonde, from the church of St. Denis, Paris.



Grave plan of male burial in a chambered grave

Fewer than 10 bed burials have so far been identified from England, including one from Swallowcliffe Down, Wilts, two from Barrington, Cambs, and several from other cemeteries of the 7th century AD in Cambridgeshire and Suffolk. The analysis of the Coddensham burial seems to indicate that the iron headboard stay is the one piece of metalwork that characterises a bed, and the other pieces of ironwork such as the cleats and eyelets can be used in any combination as part of the bed or grave structure.

The second chambered grave in the cemetery contained a male warrior, buried with a seax (a large single-edged knife or short sword), spear, shield, iron bound bucket, a copper alloy bowl and possible drinking horn. Only the lower half of the burial remained, the rest had been quarried away. Two large iron mounts were found in the centre of the grave, identical to the ones found on the bed



Reconstruction of the male burial

burial, and these have also been interpreted as being attached to a cover for the grave or just covering the body.

The weapons placed in this grave have some unusual features. The shield has a boss with a large garnet mounted on the flange and four silver-topped rivets on the shield board. Like all Anglo-Saxon shields the wooden board had been covered in leather, but the construction did not seem very robust. This, and the jewelled shield boss, suggest that it may not have been made for combat. The spearhead was originally hafted with a sapling, of one to two years growth, an inferior choice of wood compared to the use of ash cut from mature timber that is normally recorded for high-status weapons. Both the shield and spear may, therefore, appear have been made for ceremonial use rather than combat. The seax, though, is typical of this date and had been buried in its leather scabbard decorated with copper alloy bindings and studs.

The height of the chamber was probably no more than 500-600mm. The iron-bound bucket was placed on its side, and a nail or hook was found near the shield boss may have been fixed into the chamber wall to hang or hold the shield in a vertical position. There are similarities with the royal burial at Prittlewell where grave goods were hung from the chamber walls.

This research will be published as part of the monograph, *The Shrubland Hall Anglo-Saxon Cemetery, Coddanham, Suffolk* (East Anglian Archaeology), which is currently in preparation by Suffolk C.C. Archaeology Service. The finds from the site have generously been donated to Ipswich Museum by the landowner, Lord de Saumarez.

**Jacqui Watson**

# Outstanding beauty and outstanding heritage: archaeological survey of the Quantock Hills AONB

**Field survey and landscape analysis of a protected upland area in Somerset has led to the discovery of many new sites, from Bronze Age barrows and cairns to deserted medieval farmsteads and post-medieval formal gardens. This enhanced understanding will enable sustainable management of the historic environment in the AONB.**

The Quantock Hills are in Somerset, north of Taunton and south of the Severn Estuary, and cover an area of some 100 km<sup>2</sup>. The hills rise to around 400m in the north, where open heath overlooks the coast. Deep combs containing oak woodland lead up onto the hill

Beacon Hill, West Quantoxhead



NMR 15858/30 © English Heritage

tops and a mixed farming landscape of both arable and pasture fields fringe the hills. The Archaeological Investigation team in Exeter have recently completed a field survey of the archaeology of the Quantock Hills AONB. This is underpinned by the NMP air photographic transcription of the area, undertaken by Helen Winton.

The project was begun in 2002 as a response to a request from Chris Edwards (AONB team manager) and Bob Croft (Somerset County Archaeologist). The lack of current information about the archaeology of the area had been recognised in recent AONB Management Plans. This survey was set up to provide the baseline information about the historic environment of the hills which will underpin future management decisions. Completion of the fieldwork stage of the project coincided with the launch of the first joint accord on the historic environment between English Heritage and Cadw and the National Association for Areas of Outstanding Natural Beauty.

The open heath of the Quantock Hills preserves a complex historic landscape which tells the story of the hills in relation to the surrounding villages and farms. Air photographs are often the best way to appreciate this landscape. Much of the heath is covered with large areas of relict field system, characterised by the remains of narrow ridge and furrow ploughing. By a combination of documentary

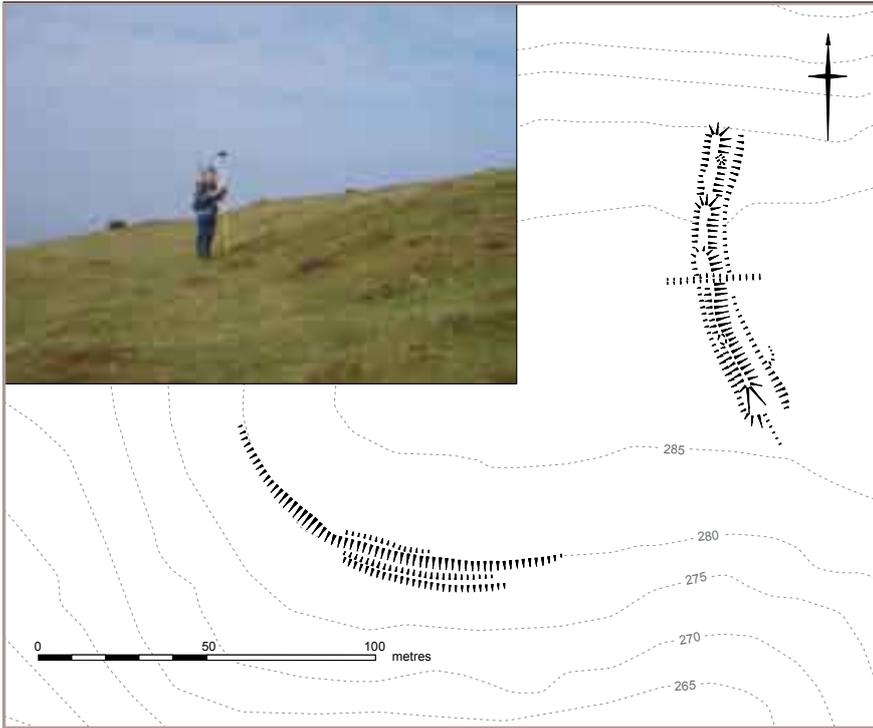


Bicknoller Hill: the prehistoric earthworks are overlain with narrow ridge and furrow ploughing. The Trendle Ring lies to the west (top)

evidence and field observation we can be fairly confident that this is the remains of the final phase of outfield cultivation of the heath and that it dates from the 15th to the late 17th centuries. The practice of outfield cultivation was common on the moors of the south-west. Rye was the favoured crop; not only was the grain used in bread making but the rye straw was a popular choice for roof thatch.

Components in the historic landscape can broadly be dated by their relationship with the relict field systems. On Beacon Hill the ploughing clips the edge of the prehistoric cairns and overlies the pillow mounds, but runs underneath six very regular circular banks. The pillow mounds are part of the medieval formal landscape which surrounded the manor house of West Quantoxhead; the circular banks are tree ring enclosures, part of the designed landscape associated with that manor house in the 18th century.

Across the hills this pattern is repeated and it has allowed us to date quite securely many new sites and interpret previously recorded sites with some confidence. On Bicknoller Hill a linear bank and ditch which cuts off the hill was recorded by Leslie Grinsell in the 1970s. Its interpretation as an outwork associated with the Trendle Ring, a large hill-slope enclosure some 400m to the southwest, was not satisfactory in topographic terms. In 1993 a ditch and bank to the southwest of the linear earthwork was discovered by Alan Preece, who tentatively suggested that this could be an unfinished enclosure. A large-scale survey of the site confirmed this interpretation and located the site for the first time. Relict field systems clearly overlie both elements of the enclosure. It may never have been finished, or it may have utilised the steep natural slopes of the hill to the north and south.



Elaine Jameson, © English Heritage

led to the identification of thirteen medieval deer parks, many with associated warrens, on and around the Quantock Hills. Some of the medieval manor houses became the farmhouses for the estate farms in the later post-medieval period and where this process occurred the potential for the survival of medieval and early post-medieval landscape features was high. The earthwork remains of early post-medieval formal gardens were discovered and recorded at Cothelstone, Crowcombe, East Quantoxhead and Over Stowey. The remains of an industrial landscape, based largely on the water power and woodland resources available in the combes, were also extensive. Collaboration with the architectural investigation team has resulted in an enhanced understanding of the historic period.

Earthwork plan of the enclosure on Bicknoller Hill and the differential GPS survey in progress (inset)

The wealth of evidence for the designed or formal landscapes of the medieval and post-medieval periods became apparent as the project progressed. A combination of documentary research and landscape analysis

At Cothelstone Manor the old medieval hall with a roof structure dating from the late 15th century lies adjacent to the manor house, newly built in the middle of the 16th century. Cothelstone Manor became the estate farmhouse after the Stawell family moved to Low Ham near Somerton in the mid- 17th century, and the surrounding landscape preserves a range of features as a result of this. There are three historic parks within a

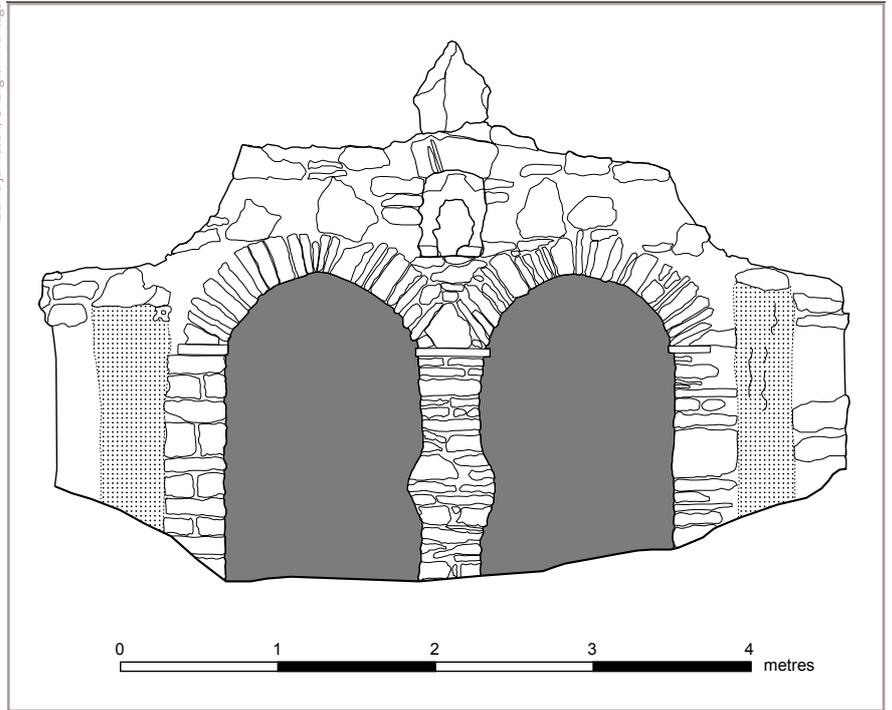


AA046412 © English Heritage

Manor Cottages, Cothelstone

few kilometres of Cothelstone Manor: the medieval deer park on Cothelstone Hill, the 18th-century landscape park of Terhill House and the 19th-century park laid out to complement Cothelstone House, built in the 1820s but now demolished. Fragments of the 18th-century landscape, including tree clumps, a ruined obelisk and a grotto, are dotted across what is now farmland. Intensive survey of some of the wooded combs has resulted in the discovery of over one hundred charcoal burning platforms, a woodland industry which continued into the 20th century on the Quantock Hills. This, together with tanning, textile manufacture and copper extraction must have affected the landscape of the hills in the 17th, 18th and 19th centuries. The Quantock Hills are well known for their association with the Romantic poets Coleridge and Wordsworth: perhaps the ‘wild simplicity’ of the landscape described in Dorothy Wordsworth’s journal was in the eye of the beholder. The publication of the results of this survey, an English Heritage monograph, *The Historic Landscape of the Quantock Hills*, will redress the balance. The book will detail the extent, nature and character of the historic environment of the hills, puts the evidence into a regional and national context, and

Elaine Jamieson, © English Heritage



forms the basis for the management of, and future research into, this precious resource.

The grotto, Terhill Park

**Hazel Riley**

Hazel Riley, © English Heritage



Industry in a rural setting: Glebe engine house

# Research and the Heritage Protection Review

**The Heritage Protection Review is the biggest review for decades of the way we manage England's historic environment.**

The Winterbourne Stoke Crossroads barrow group in Wiltshire includes a wide range of barrow types. The HPR is currently reviewing whether these various types should be streamlined into fewer Monument Class Descriptions, perhaps two – round barrows and long barrows?

The Heritage Protection Review was launched in 2002. In July 2004, following a major public consultation exercise, the Department for Culture, Media and Sport (DCMS) issued a decision report entitled *Review of Heritage Protection: The Way Forward*. Throughout the review, English Heritage has been working closely with the government.

The Review seeks to introduce greater clarity, flexibility and simplicity to the various systems of designating historic assets, without reducing the level of protection afforded to them. It is part of the overall review of the planning system, and the aim is to demystify the process, making it easier for owners, local authorities and others with an interest in the historic environment to understand why an historic building or archaeological site is significant and merits statutory protection, and what the management consequences are.

Statutory protection depends upon understanding and assessment. Research plays a vital role in helping English Heritage, the government's expert advisers on the historic environment, deliver consistently sound recommendations that reflect our ever-developing understanding of our environs. Working in partnership with colleagues in the Heritage Protection Department of English Heritage, Research Department staff are contributing to the Review in a number of important ways, and developing stronger working relationships as a result.

A key change will be the creation of a fully integrated *Register of Historic Sites and Buildings of England*. This will amalgamate the various current designation systems, bringing information on listed buildings, scheduled monuments, registered parks and garden, and battlefields together, and allowing a more holistic approach to be taken. The integrated approach will be facilitated by bringing together specialists from a range of disciplines within the Research Department. This is illustrated by the development of a number of multi-disciplinary research initiatives, such as the proposed project to study the impact of the car on the historic environment.



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English Heritage is conducting a number of pilot projects to test new approaches to the integrated designation of sites comprising a range of different types of heritage asset. At RAF Scampton, Lincolnshire, a thematic study of military aviation buildings carried out during the 1990s highlighted the architectural importance of its group of 1930s hangars, given greater significance through their association with 617 Squadron – The Dam Busters. The Research Department’s national study and assessment of Cold War sites drew attention to the significance of the later modifications to the airfield to accommodate the 1950s V-Force and during the 1960s Blue Steel missiles. In effect the air base could be regarded as a landscape created to serve the policy of bomber deterrence between the 1930s and 1960s. At the early stages of the Heritage Protection project, Research Department staff advised on the significance of its specialised building types and drew up recording briefs for structures that could not be saved. The Characterisation Team also commissioned a study of the air base to identify the main historic character zones, which will be used to inform the future management and development of the station.

A second series of case studies, to be undertaken over the next six months will focus on the implications of applying the new

designation approaches to a range of ecclesiastical sites including internationally renowned buildings such as Rochester and Canterbury Cathedrals. Later next year, groups of urban and rural parish churches will be looked at too. Cathedrals form some of our most intricate and remarkable historic enclaves. How can we create a new approach to assigning value that helps in their active management? What is the scope for Heritage Partnership Agreements as an alternative to close and constant regulation? Many of these notable buildings have rich collections of stained glass, monuments and fittings as well as important below-ground archaeology and other structures of significance. Research Department staff, together with regional colleagues, the Cathedrals Fabric Commission, and the Deans and Chapters themselves, will be members of the project teams undertaking these case studies and will provide advice on the significance of the various historic assets at these sites.

An integrated approach to the historic environment demands that we expand our areas of competence and break down the compartments that have separated us in the past. Research Department staff are also contributing to the development and delivery of a range of training courses designed to increase the number of appropriately qualified professionals that will be needed to

Air photographs can help us to change perceptions about places. Viewed from the air this bomber landscape at RAF Scampton is revealed

'Leicester's Gatehouse', Kenilworth Castle, a guardianship property forming the subject of a Heritage Protection pilot project. Research Department staff have been involved in the analysis of the adjoining 'Elizabethan Garden' area and associated structures



© English Heritage

help deliver the changes and new approaches inherent in the Review: there is a particular need for buildings' specialists and landscape archaeologists who can combine the ability to capture and accurately analyse field evidence with an in-depth historical knowledge of their subject area. This is being addressed through a range of short courses, professional placements, and the development of new post-graduate degree programmes to meet particular knowledge and skill shortages within the sector overall.

Clarity in our thinking, and better communication of our understanding, are key commitments of the Heritage Protection Review. Architectural Investigators with specialist knowledge of a wide range of historic buildings are helping to draft and revise a series of essays that explain and characterise 22 main building types. Known

as Selection Guides, these essays will provide detailed guidance and technical information on building types such as 'agricultural', 'domestic vernacular', 'industrial' and 'transport'. The Selection Guides will underpin revised building type criteria or Principles of Selection that were put out for consultation by the DCMS in July 2005 as *Revisions to Principles of Selection for Listing Buildings: Planning Policy Guidance Note 15*. Unlike the Principles of Selection, the Guides will not form part of government policy but will serve as English Heritage guidance documents that will be available through the *Heritage Gateway* (the proposed digital portal to a wide range of heritage information) and updated to incorporate new research. Examples of Selection Guides for the agricultural and commemorative categories were published in the 2005 DCMS consultation document.

Research Department staff are also reviewing the research underpinning scheduling. Archaeological Monument Class Descriptions (MCDs) have been in existence since the late 1980s and have characterised over 200 distinct classes, or sub-classes, of archaeological site, as diverse as Jewish ritual baths and archery butts. These MCDs are being reviewed to improve their accessibility and classification and where necessary, descriptions will be updated. This enhanced baseline data can then form a more user-friendly benchmark for the archaeological designation process, and bring the formerly separate realms of archaeology and listing closer together.

The production of Selection Guides for the various building types and the revisions to the MCDs does not only satisfy Heritage Protection needs. This work will help to identify those parts of the historic environment that are inadequately understood at present, and serve to inform the development of new research projects as part of the regular updating of the English Heritage Research Strategy.

Above all, the Heritage Protection Review is about communication, which is also central to English Heritage's corporate mission. The Selection Guides and adapted MCDs will serve as the basis not just for future designations, but for triggering more general involvement in the management of change in the historic environment. The clear, accessible and authoritative advice contained in these documents has the potential to engage not only heritage professionals but a wide range of new audiences in a way that will encourage people to undertake their own research into the historic environment using the proposed *Heritage Gateway*. The results should be an improved public perception of the importance of the historic environment, and of the critical relationship between understanding and the twin processes of assessment of significance and designation. These lie at the heart of our approach to the sustainable management of this country's remarkable and multi-layered past.

**John Cattell and Peter Topping**

The Ziggurats (student residences) by Denys Lasdun & Partners, 1966-67, at the University of East Anglia, Norwich. This Grade II\* building lies within the part of the campus chosen for a Heritage Protection pilot project



# England's Seaside Resorts Project: an architectural and social history

**This major study of traditional seaside resorts will raise awareness of their significance, and inform the development of regeneration programmes.**

In spring 2002, Allan Brodie and Gary Winter, of the Research Department's Architectural Investigation Division, set out from landlocked Wiltshire to begin a seaside odyssey. After having completed national research projects on prisons and law courts, a trip to the seaside was seen by some as a welcome change from studying institutional building types. Part of the inspiration for the project was the publication by the English Tourism Council in 2001 of *Sea Changes – creating world-class resorts in England*. It included a number of statements that would not have been out of place in English Heritage's own *Power of Place*:

Blackpool Tower was built in 1891-4 by the architects Maxwell and Tuke and the engineer R/G Reade. As the nation's iconic seaside structure, it signifies fun, pleasure and entertainment.



*The resort townscape of promenade, piers, pavilions, entertainment and exotic architecture combined with the natural coastal landscape of sea, sky, cliffs and beach provide a distinctive sense of place. (Sea Changes, 14).*

*Seaside resorts have made an enormous contribution to the cultural identity of England and contain some of the finest examples of our built heritage. This is overlooked rather than promoted. (ibid., 23).*

The historic built environment at the seaside has been struggling to meet the changing demands of a more discerning holidaymaker. This fact, together with the lack of any comprehensive national study of resort towns as a whole, encompassing both social and architectural history, underlined the need for a major research project. The main aims of the project are to increase understanding of the historic development of resort towns and their facilities, to raise awareness of their historical significance and to provide information that will contribute to the development of regeneration programmes. Initial research and discussions with a wide variety of interested parties revealed that the level of understanding of the significance of resorts in general and of their historic built environment in particular, was limited, and this in turn was an impediment to the successful management of change in resorts. This was especially clear at those resorts that harboured ambitions to re-invent themselves and undertake regeneration programmes. Our research is intended to contribute to the 'understanding' element in English Heritage's 'virtuous circle', to help make the past part of the future for England's seaside resorts.



Arguably England's best Modernist building, the De La Warr Pavilion was built in Bexhill-on-Sea in 1935 to provide culture and entertainment facilities to residents and visitors in a setting that embraced sun-worship. This Grade I listed building, featured in *Shifting Sands*, re-opened in October 2005 following an extensive £8 million refurbishment project, and is now styled as 'A Modernist icon for contemporary arts and architecture on the coast of South East England.'

England's seaside resorts and the seaside experience are embedded in the national psyche. There is an enormous appetite for information about the history of these towns and how they have been influenced by changing tastes, economic and social factors, and technical advances. Therefore, the project team have contributed to a number of seminars hosted by organisations as diverse as The Georgian Group, North Norfolk District Council and Anglia Polytechnic University, Leicester University's Centre for Urban History and the Institute of Historical Research. A significant partnership was forged with CABE, resulting in the publication of *Shifting Sands: design and the changing image of English seaside towns* and contributions to a series of associated, regional seminars in 2003.

Interest in seaside resort history and heritage also extends into Europe. In summer 2004 the project team met a number of French seaside researchers employed by the Ministère de la Culture and the Inventaire Général during a research trip to Normandy, Belgium and the Netherlands. In early 2005 Allan Brodie contributed a paper and an article to a Europe-wide seminar on holiday camps, organised by the architecture department of Bologna University and discussions are taking place concerning an international conference that will be hosted by English Heritage in 2007.

The information gathered and the conclusions drawn during the project are the result of

fieldwork and documentary research. The first phase of fieldwork involved a rapid assessment of around 250 coastal settlements. Together with the documentary research conducted in local and national libraries and archives, we were able to target around thirty resorts for more detailed study. This preliminary phase of study also allowed us to identify the main, national themes that will be discussed in the monograph that is currently being drafted.

Four major factors seem to have contributed to the creation and development of the English seaside resort: a desire for improved

In striking contrast to many resorts on the Norman, Belgian and Dutch coasts, English seaside resorts retain distinctive pre-World War II seafronts. Here at De Panne in Belgium, virtually all of the seafront buildings are post-war and provide holiday accommodation with some ground floor commercial function.





Often, buildings that were constructed in an attempt to attract visitors to resorts have become victims of changing fashions, economics and health and safety concerns. Scarborough's South Bay Pool opened in 1915, closed permanently in 1989 and was finally demolished and infilled in 2003

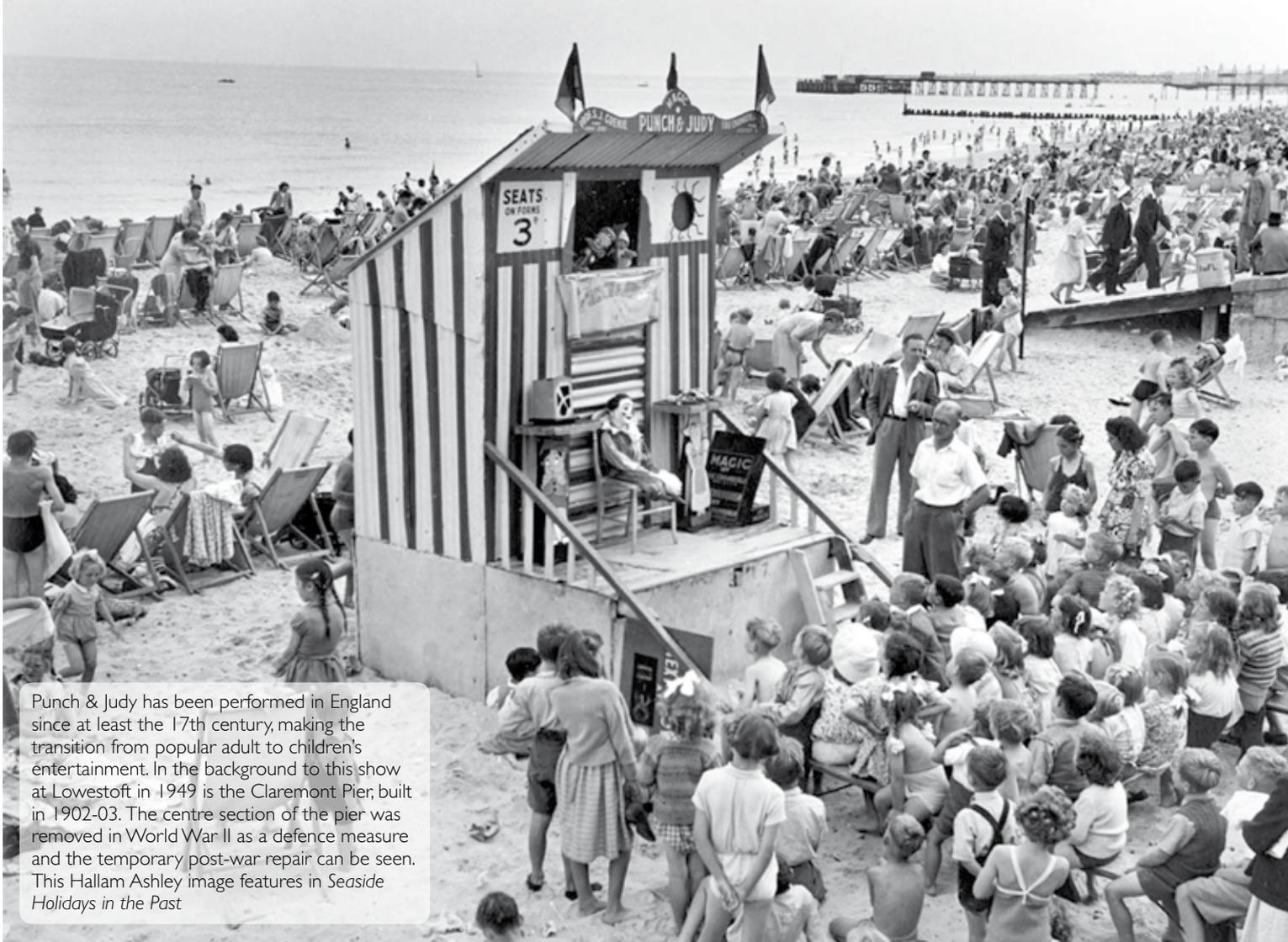
health and entertainment; disposable time allowing people to 'get away' from routine life at home and work; disposable income for travel, accommodation, health and leisure pursuits; and access to effective means of transport. All of these factors evolved over time: the prime motive shifted from a search for health to a desire for fun; disposable time and income increased especially from the late 19th century onwards and improvements in transport increased the number of resorts and made travelling less difficult and relatively cheaper. This story of widening access and opportunity has left its mark in the overall form and in the individual buildings of resorts.

The first fledgling seaside resorts adopted, and adapted, the culture that had influenced the behaviour and facilities at inland spa resorts. Coincidentally, two major English Heritage properties oversaw, literally, the early evolution of the seaside, Scarborough Castle and Whitby Abbey. Scarborough has been recognised as the first seaside resort as it became the first coastal spa following the discovery of mineral waters in the 1620s. However, it was not until 1667 that the first documentary reference to bathing using sea water occurs at Scarborough. Whitby may also have a claim to being the first true seaside resort. A poem written by Samuel Jones in 1718 described the virtues of the town not only as a health resort, but, significantly, also as a leisure resort. It praised its seafront spa, its salubrious climate and bathing. It also recommended the resort for viewing shipping, for the pleasures of the Abbey, its piers, fish, fossils, hunting opportunities and picturesque landscapes. The claims made by Samuel Jones are not dissimilar to the message delivered by many modern, glossy, resort brochures.

The initial project outline envisaged the production of two publications, one popular and one academic. Towards the end of 2004 work began with colleagues in the National Monuments Record to produce a popular

As well as being a historic harbour and religious centre, Whitby was one of the first English seaside resorts, offering a variety of health and leisure pursuits for discerning visitors, including some directly related to the sea





Punch & Judy has been performed in England since at least the 17th century, making the transition from popular adult to children's entertainment. In the background to this show at Lowestoft in 1949 is the Claremont Pier, built in 1902-03. The centre section of the pier was removed in World War II as a defence measure and the temporary post-war repair can be seen. This Hallam Ashley image features in *Seaside Holidays in the Past*

book that would disseminate and promote our photographic collections alongside a brief history of England's seaside resorts. The resulting book, *Seaside Holidays in the Past*, was published in summer 2005. This nostalgic, black and white view of the seaside holiday appeared at the same time as *The English Seaside* by our colleague Peter Williams, which celebrates the contemporary seaside experience in full colour. Media interest following these two publications has highlighted the continuing interest in the subject.

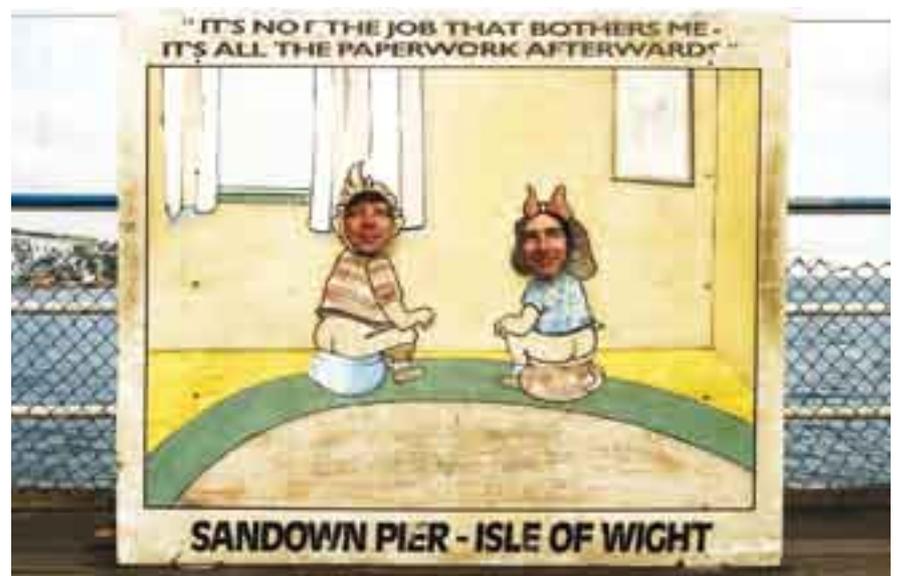
The text of the research monograph, which will outline the development of the seaside resort town as a whole, is currently being drafted and will be published in 2007. The project team are also currently in discussion with regional colleagues about the publication of a number of Informed Conservation books that will combine the research we have carried out with a discussion of conservation issues facing individual resorts and seaside towns in general. The project team will also be making a contribution to Heritage Counts 2006.

Our largest forty seaside resorts are home to more than three million people, almost 7%

of England's population, and they are visited by millions more each year. English Heritage has recognised that they are places with their own distinctive architectural vocabulary. It is our task now to describe their colourful past and explain why they should continue in the future to enjoy a special place in all our hearts.

**Gary Winter**

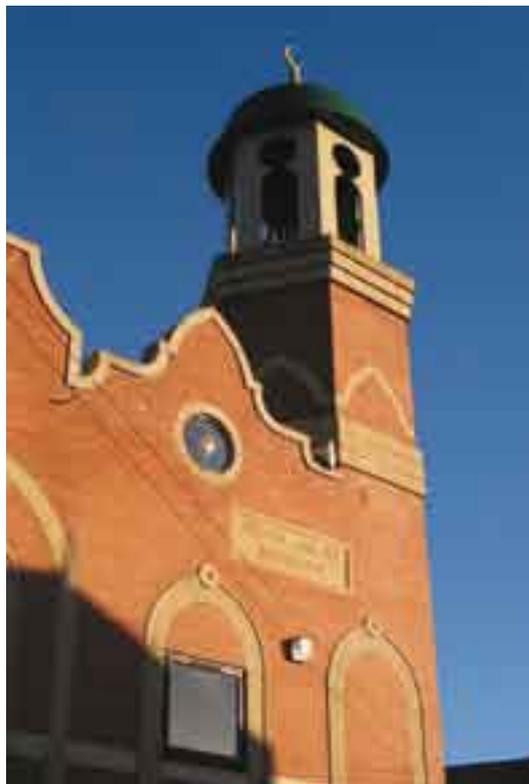
Allan Brodie and Gary Winter on holiday, Sandown Pier



# Religion and Place in Leeds

**Religion and Place is a national project intended to increase understanding of how architecture reflects the religious practices of a multi-faith society.**

This project aims to demonstrate the ways in which the places of worship of a diverse range of faith communities have shaped the historic environment of the past and are helping to re-shape it for the future. Architectural history has traditionally focused on Anglican churches and because of this has failed to take proper account of thousands of buildings that are at the heart of religious, cultural and social life for millions of people in Britain today. Religion and Place is intended to make a start on redressing the balance, raising awareness of English Heritage's work within communities that have tended to feel themselves excluded from the heritage arena and helping to provide a framework for conservation decisions affecting a significant category of buildings, currently unprotected, that have major significance for the communities they serve. Case studies include Leeds, Liverpool, Tower Hamlets and, commencing in 2006, Coventry.



Shah Jalal Mosque, built in 2002-4 with funds raised within the Bangladeshi community, occupies a corner site, marked by a minaret. The design continues the architectural rhythm established by the gables of the terraced houses that adjoin it.

Leeds has a rich and varied heritage of religious buildings built by successive waves of communities with their own religious practices and traditions moving into the city. The process began with the Irish during the mid nineteenth century, leading to the building of a number of impressive Catholic churches, grew with the arrival of Jews from central and eastern Europe in the latter part of the century and continues to the present with Muslims, Sikhs and Hindus from Asia, Christians from Poland and the Caribbean and more recently refugees from Africa, the Middle East and Kosovo.

A rapid survey of all places of worship in Leeds has been undertaken and a gazetteer recording several hundred places of worship, which will act as a starting point for further research, has been compiled. Detailed investigation is underway of buildings that have been chosen either for their architectural interest or because they exemplify the buildings of a particular faith or denomination. The study is primarily focusing on the period from 1900 onwards. It is taking in buildings of established faiths that have been neglected by architectural historians – inter-war and post-war Anglican churches on housing estates, twentieth century Roman Catholic and nonconformist churches, the black majority churches – and how these churches are adapting their buildings to suit changing pastoral or liturgical needs, but also pays particular attention to the architectural impact of the new generation of mosques, mandirs and gurdwaras. The new mosques display a confidence in faith echoing that of the builders of High Victorian Anglican churches with minarets and domes towering above the terraces in much the same way that steeples did in the nineteenth century, while respecting the scale and materials of that nineteenth century environment. There has as yet been little study made of the purpose-built structures now being erected by these



The traditional Indian carving of the porch and the aedicules topping its buttresses blend with the West Riding vernacular of the rock-faced stone walls of the Shree Hindu Mandir, built 2000-1, seen during Diwali celebrations

faith communities and the Leeds examples will substantially inform our knowledge of them.

Fieldwork has also revealed several exceptional and previously unnoticed twentieth-century churches including three, St Cyprian and St James, St David and St Paul by a local architect, Geoffrey Davy of Kitson, Pyman & Partners, who was a member of the influential New Churches Research Group, founded by the architect Robert Maguire and Rev. Peter Hammond, author of *Liturgy and Architecture*. It is hoped to produce an informed conservation booklet on Leeds places of worship in the twentieth century, looking at the changing architectural expression of religious faith in the city.

The project is being supported by the Churches Regional Commission for Yorkshire and the Humber which is holding an event *Treasures Revealed in Leeds* in May 2006. It will involve most of the faiths in the city and will take place over a week. It is intended to open up access to large numbers of places of worship that are locked up for much of the time with a variety of events and activities to encourage people to go inside and look around them.

**John Minnis**



St Paul, Ireland Wood, an octagonal church designed by Geoffrey Davy of Kitson, Pyman & Partners is virtually unaltered since its opening in 1965. The East window and Cross are among the furnishings and fittings designed by the architect

## TRAINING AND OUTREACH

# The Rock Art Recording Pilot Project in Northumberland and County Durham

**This pilot project has trained a great many enthusiastic volunteers, and developed pioneering new suites of survey methods.**

The Rock Art Recording Pilot Project is funded by English Heritage in partnership with Northumberland and Durham County Councils. It aims to identify and prioritise conservation issues associated with rock art, and to raise awareness of rock art through community involvement and improved access. To this end, over 100 local volunteers, most with little or no previous archaeological experience, have been recruited, trained and equipped to carry out non-intrusive recording to a common standard of each of the 1,500-odd examples of Neolithic and Bronze Age rock art known in the two counties. This is inevitably leading to the discovery of new sites, which are being recorded to the same standard. As this is a pilot project, every effort has been made to develop a robust, repeatable and user-friendly recording system that can be applied by anyone, with a minimum of training. In due course the information

collected will be entered into a database, and made available via a website. An exhibition will be held at the end of the project in 2006-7.

Our baseline recording has deliberately moved away from traditional methods such as tracing and rubbing, which impact on the rock surface, and can be inaccurate and subjective. Instead, each example is recorded by a group of volunteers on a specially designed recording form, with a visual record collected through interpretative measured drawings and high-resolution digital photographs. A complete panorama of the setting of each site is created by taking a series of overlapping images, which can be automatically spliced together. To determine the NGR of each site, hand-held, or 'navigation grade', GPS mapping sets are used. This is the ideal tool, as rock art commonly survives in open moorland, which is often completely devoid of mapped features. Training in the use of the GPS sets has been provided by English Heritage's Archaeological Survey and Investigation Team in order to ensure consistency. As the sets cannot be relied upon for accuracy of better than 10m, volunteers have been trained to qualify the readings by using basic graphical survey to plot the sites against a map background. Where rock art survives within enclosed fields, and where rocks bearing motifs have been incorporated into post-medieval field walls, this method is neither difficult nor time-consuming, and accuracy as good as  $\pm 2\text{m}$  can be achieved. These 'low-tech' survey skills are also useful where overhanging trees or rock outcrops obscure the reception of the satellites.

A tour of the landscape around Lordenshaw Iron Age hillfort, Northumberland, which is rich in archaeological remains of all periods, gave the volunteers an introduction to the conservation and research issues surrounding rock art



Volunteers are experimenting with photogrammetry to make 3D records of some motifs. English Heritage's Metric Survey Team has developed an innovative low-cost technique for the project, which is proving so successful and cost-effective that it could in time replace traditional recording methods. Following calibration to measure the precise focal length and map distortion of each lens (by Dr Jim Chandler, Loughborough University), volunteers are trained by English Heritage's Photogrammetric Unit in how to use their standard Nikon cameras and a set of simple scale bars to capture sets of overlapping 'stereo' images of motifs. Coupled with the recent development of relatively inexpensive photogrammetric software, the amalgamation of modern digital technologies offers the potential for making objective three-dimensional records which are accurate to millimetres. The resulting images are also visually attractive and accessible, in part because they clearly convey the relationship of the carvings to the uneven natural rock surfaces. This technique therefore has important implications for improving public awareness of the carvings, particularly when combined with other three-dimensional information that provides a wider context for the rock art.

A small number of sites have been identified where specific conservation concerns give rise to a need for a more detailed and precise

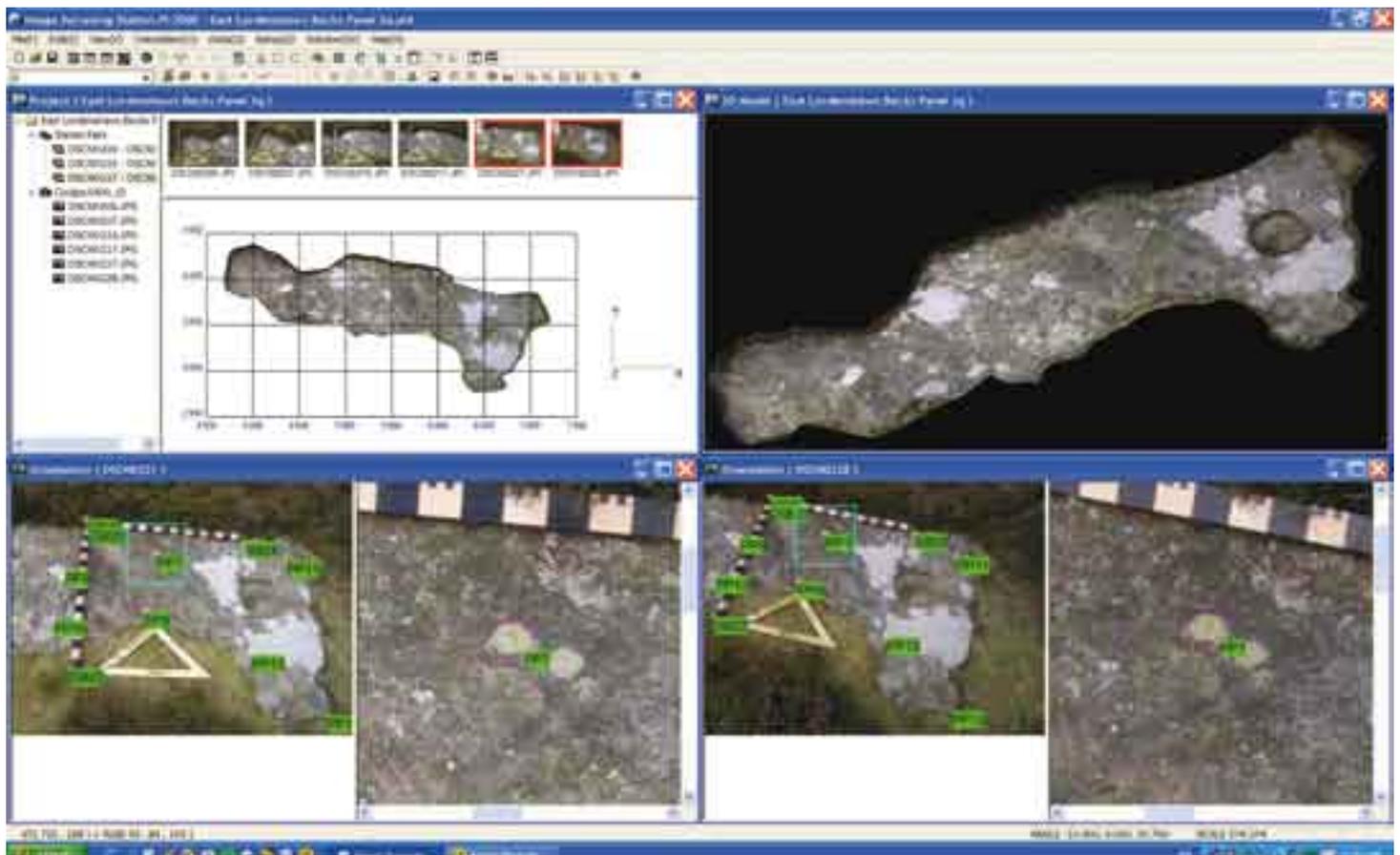


Above: A team of volunteers undertake baseline recording



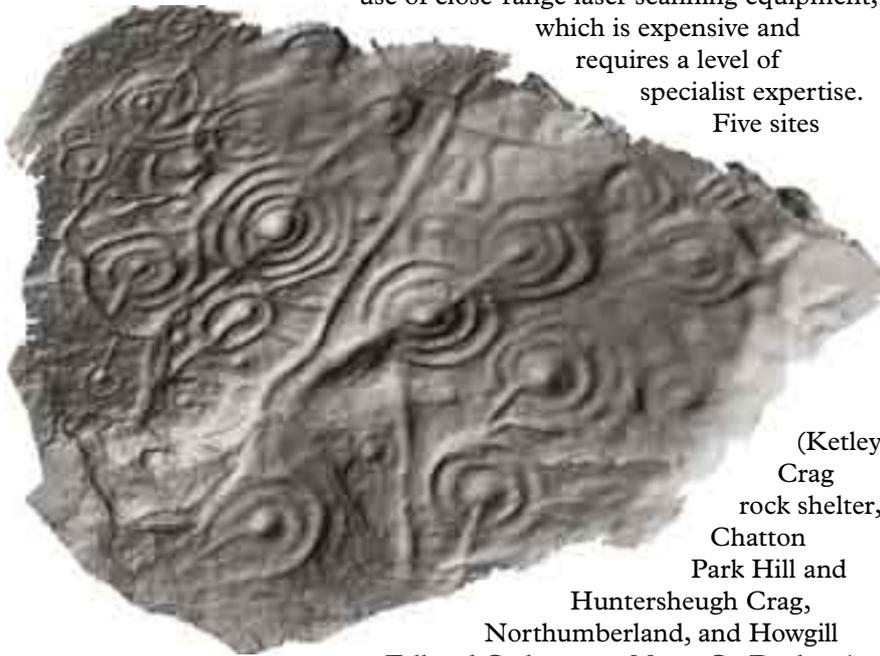
Left: Training the volunteers in taking stereo-photography of rock art.

Below: Processing photogrammetric data using Topcon's PI-3000 software (the motif shown is at East Lordenshaws, Northumberland)



level of recording. Monitoring of erosion, for example, requires recording at sub-millimetre accuracy. This can only be achieved through the use of close-range laser scanning equipment, which is expensive and requires a level of specialist expertise.

Five sites



(Ketley Crag rock shelter, Chatton Park Hill and Huntersheugh Crag, Northumberland, and Howgill Fell and Cotherstone Moor, Co Durham)

have been singled out for this treatment. The tender to carry out the work was won by Archaeoptics Limited, whose equipment has achieved a level of accuracy of around 0.5mm.

In addition to describing the topographic setting of each site, the volunteers are also asked to comment briefly, on the recording forms, on any other archaeological features in the environs that they consider might be of relevance to the survival or condition of the rock art. For example, nearby prehistoric field clearance cairns or post-medieval quarrying might well shed a very different light on the present distribution pattern. Such contextual analyses are fundamental to the understanding of rock art, particularly on portable stones that may no longer occupy their original sites. To address this, English Heritage staff are working with enthusiastic volunteers to complete three analytical field surveys of more extensive areas that include rock art. For these case studies, specialist 'survey grade' GPS sets, which offer accuracy better than 2cms, are being used to map the surface remains in 3D. These surveys will provide the basis for interpretative layered plans. The intensive fieldwork is giving the volunteers valuable experience in understanding the process of disentangling the development of historic landscapes. In this aspect of the project, as in others, the transfer of skills is arguably as important as the research itself.

Laser scan of Ketley Crag Rock Shelter; Northumberland



Training the volunteers in the operation of 'survey grade' GPS sets



The real challenge lies in the visual identification of non-rock art features on the ground and, based on this evidence, the interpretation of processes that may have affected the distribution and condition of the rock art itself.

The three case studies aim to achieve holistic overviews of specific natural and cultural landscape contexts in which rock art survives. At Snook Bank in Northumberland, the detailed survey is revealing the extent to which Bronze Age field clearance, together with medieval and later millstone quarrying, has distorted the present distribution of rock art. The pattern of rock art in the landscape surrounding the Iron Age hillfort at Lordenshaw, in Northumberland, owes more to the effects of Late Iron Age, Romano-British and medieval agriculture, while the construction of stone-faced Iron Age ramparts also seems to have played its part. Detailed survey has also been undertaken on Chatton Park Hill in Northumberland. This site was singled out for recording through the full range of available techniques, the prime intention being to test how these can be brought together most effectively.

The project is exploring ways of integrating and presenting the different datasets that have been gathered. GIS software offers a promising way forward. A number of volunteers have

been trained in the use of GIS and are beginning to use it to analyse and to present the findings of the baseline field recording. Some volunteers are developing their own small research projects into specific aspects of the rock art, such as the relationship between artificial carvings and natural geological anomalies on the rock surface. All this additional information is contributing to the understanding of rock art and is helping to refine the recording methodology.

The pilot project was expected to be a learning process for amateur enthusiasts and professionals alike, and so it is proving. The digital project archive will be invaluable in helping to inform conservation and management decisions about the sites that have been examined and about rock art as a whole in the region. It will improve access to the sites, both physically and through remote research. Above all, the pilot has created a pool of energetic and skilled volunteers, who are developing a deeper and broader understanding of the historic environment. In responses to questionnaires, many have expressed an interest in participating in long-term monitoring and stewardship of the rock art and associated landscapes.

***Al Oswald, Paul Bryan and Tertia Barnet***

Volunteers in action at Gled Law, Northumberland

## TRAINING AND OUTREACH

# Eyes down! Learning about aerial archaeology

**Enjoyable, hands-on, practical training enables students to apply new skills in their wider working life.**

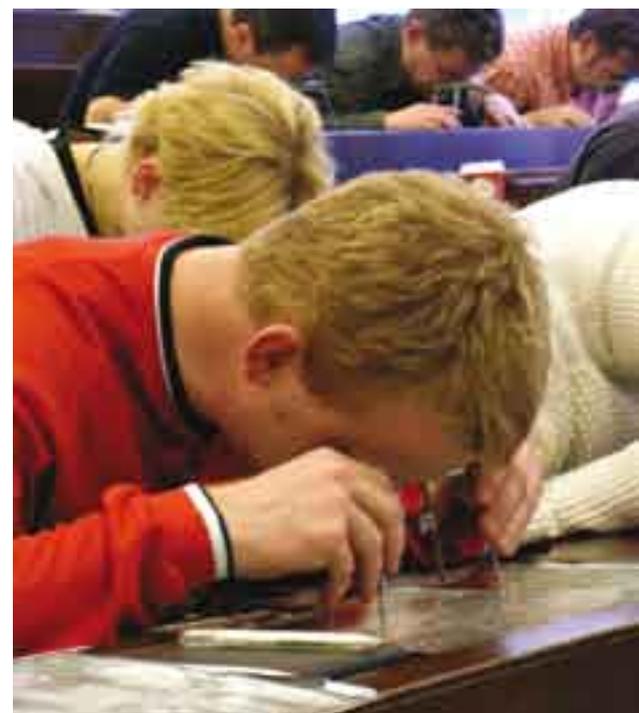


The Aerial Survey and Investigation team (AerSI) is preparing for an important training school next summer as part of the Culture 2000 project *European Landscapes: Past, Present, Future* for which English Heritage is the lead body. This project aims to deliver a range of activities including the promotion of landscape studies using traditional and new airborne remote sensing techniques. This and previous NATO and Culture 2000 funded projects have concentrated on developing the use of aerial archaeology in mainland Europe, with the first training schools held in Hungary and Poland. Further schools and workshops have taken place in Italy, Finland, Romania and Germany. In summer 2006 the Culture 2000 project arrives in Britain. AerSI staff are organising an intensive nine day course for an international group of participants, at Cirencester in Gloucestershire. The students will learn how

to interpret archaeological and non-archaeological features on aerial photographs and carry out small landscape analysis projects. They will also take their new interpretation skills into the air for a practical course in aerial photography for the historic environment.

AerSI have been teaching and lecturing to professionals, universities, local societies and the general public for a number of years. The format of our teaching varies from series of lectures and workshops to intensive courses ranging from half a day to a full week. The content of our courses takes the student through the whole process of aerial archaeology from taking photographs (in reality or virtually using video) to interpretation and synthesis of information on air photos. There is always a strong emphasis on practical work and students participate in a wide range of interpretation exercises, site transcription

Tutors, pilot and students get hands-on experience of flight planning in as part of the Culture 2000 funded course held in Tuscany, June 2005



Using stereoscopes to assist in the interpretation of aerial photographs at a Culture 2000 workshop in Helsinki in 2004



and landscape analysis using aerial photographs and maps produced by the National Mapping Programme.

Students are introduced to a range of archaeological features from the Neolithic to the 20<sup>th</sup> century which can be seen on aerial photographs as earthworks and stonework as well as sub-surface features visible as cropmarks. They are taught how to distinguish non-archaeological marks such as those caused by geology, agriculture and photo blemishes. The uses of aerial photographs for landscape and site based archaeological survey, conservation and architectural recording are covered. Students also learn the uses of air photos for different kinds of thematic

archaeological research such as industrial, coastal and military landscapes. They also learn how to map and to analyse multi-period archaeological landscapes. The aim of our courses is to provide an enjoyable and informative experience for our students and is geared, according to the needs of the participants, so that they can go away and use aerial photographs for their own projects, research or work.

Come fly with us....The Cirencester 2006: Aerial Archaeology Training Course will run from Saturday 1 July – Sunday 9 July 2006 and spaces will be limited...contact for further details and an application form (p.44).

**Helen Winton**

Students return from a successful reconnaissance flight whilst the next student crew prepare for their flight. Culture 2000 project Tuscany 2005

The "Introduction to stereo photography" always provides good entertainment for students and tutors





# Flint Farm Iron Age Settlement

**In partnership with the Danebury Environs Project, the results of new methods of caesium magnetometry have been confirmed by excavation, allowing more accurate understanding of the potential of this technology.**

The well known Iron Age hillfort of Danebury is located on the chalkland of rural north west Hampshire overlooking the Test valley between Andover, Salisbury and Winchester. For decades the Danebury Environs Project, led by the University of Oxford has been studying the archaeology of this area, supported both financially and through the provision of specialist expertise by English Heritage.

The environs project followed on from the publication of the major programme of excavation at Danebury hill-fort, begun in the late 1960s, and its published results are now central to our current understanding of the later prehistoric landscape of southern England from the late Bronze Age into the Roman period. The present phase of the

project is extending the previous research on how the hill-fort articulated with the surrounding landscape during the Iron Age, in order to explore how the landscape subsequently developed in the Roman period. This is being achieved by undertaking limited excavations on a range of late Iron Age and Roman settlement sites in the vicinity of Danebury. All of the sites investigated lie within an intensively farmed arable landscape and are only visible with the aid of aerial photography or by geophysical means, having long ago vanished under the plough. Despite this, the chalk landscape remains remarkably rich in archaeological sites and much can still be recovered from these through carefully targeted research leading to much greater understanding.

Danebury hillfort near  
Stockbridge in Hampshire



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The current work at Flint Farm contributes to the improvement of knowledge of the scope, value and condition of the historic environment of the Danebury region and the threats and opportunities that confront it. It has also assisted the development of more sensitive magnetometer systems for wider application.

In advance of the 2004 season of excavation the Research Department of English Heritage carried out a multidisciplinary project to examine a number of sites in the vicinity of the Flint Farm Iron Age enclosed settlement. Geophysical survey at two of the sites provided very detailed information allowing the targeting of excavations. On the Flint Farm enclosure our newly developed cart mounted array of caesium magnetometer sensors was used. This revealed evidence of several possible circular dwellings within the ditched enclosure in the form of ring-gullies and rings of post-pits defined by slight positive magnetic anomalies. In addition the survey mapped numerous internal quarry features,

pits and the ditched boundary and partitions of the enclosure itself. The interpretation and mapping of aerial photographs helped to set these enclosures in their broader landscape context, by revealing detail of the extensive surrounding field systems that were not readily apparent within the geophysical data.

The subsequent excavation of the site, by the Danebury Trust under the direction of Professor Barry Cunliffe, focused on the largest of the suspected circular ring-gullies in the enclosure – defined as weak positive magnetic anomalies and an adjacent semi-circle of very slight positive magnetic responses possibly representing the post-sockets of a round, free standing timber building. Confirmation of these anomalies through excavation has proved very valuable for assessing the effectiveness of the caesium magnetometer array at detecting traces of relatively insubstantial former post-hole structures which may be missed in data from lower sensitivity instrumentation.

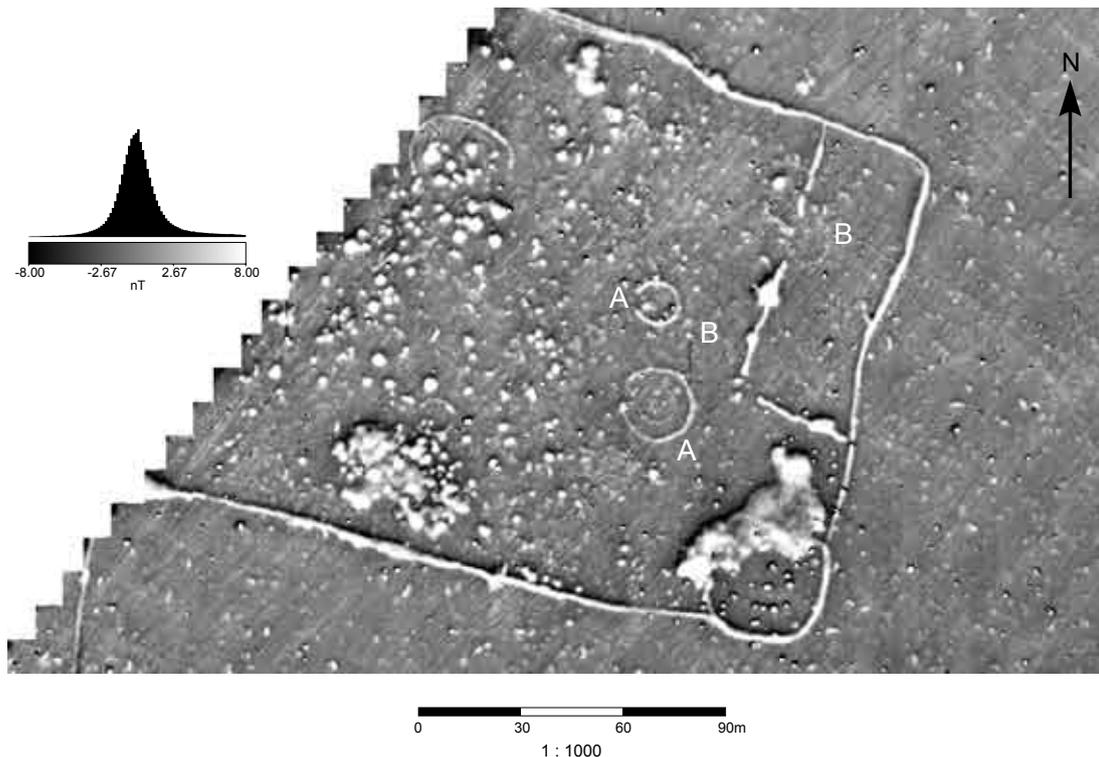
Results from the excavation demonstrated that the three concentric circular anomalies visible in the caesium magnetometer data represent an example of a substantial round-house of early Iron Age form similar to examples previously excavated at Cow Down (Longbridge Deverill), Wilts and Pimperne Down, Dorset, both of which were 15m in diameter and divided into a central



area and peripheral space, explaining the concentric wall foundation slots. The Flint Farm example is directly comparable in scale to these well known previously excavated examples.

The English Heritage cart-mounted array of caesium magnetometer sensors

The building was encircled by an outer drainage gully 20m in diameter constructed to keep the soil, in which the vertical timbers of walls were bedded, sufficiently drained to slow down their disintegration through rot. The entrance to the building was also clearly defined in the survey where two larger pits on each side of the entrance gap supported the posts of a door frame structure. The adjacent arc of discrete anomalies detected by the magnetometer was found to be a

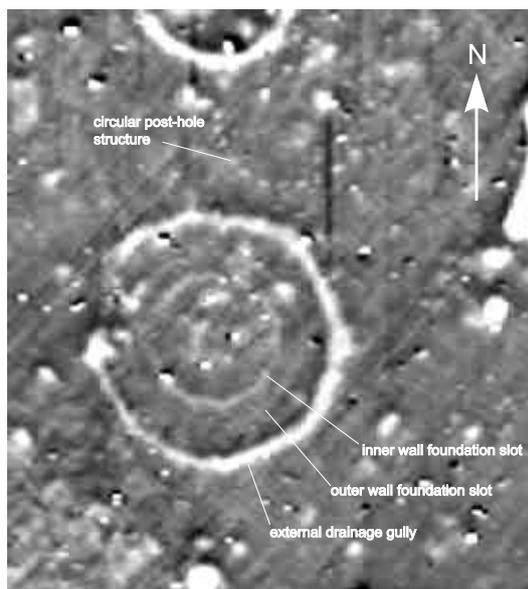


The caesium magnetometer survey of the Flint Farm enclosure. Note the ring-grooves A and the rings of post-holes B indicating the positions of circular Iron Age dwellings



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The Flint and Rowbury Farm enclosures located within a network of 'Celtic' fields mapped from aerial photographs. The ploughed out remains of the earlier field-systems surrounding the settlements on which their subsistence was presumably based are generally only resolved in the aerial photographs while the magnetometer surveys provide significantly greater detail of the enclosed settlements and the character of the occupation within them. The integrated use of the two techniques is therefore important for understanding the landscape as a whole. The features indicated in red were originally built up above ground level (e.g. field banks and the mounds of the barrows); those in green represent features that were originally cut into the ground (eg pits and ditches); the magenta lines mark the location and alignment of medieval ridge and furrow cultivation; modern boundaries are shown in grey and the geophysical survey areas have been added.



Enlarged area of the magnetometer survey showing detail of the house structures detected within the Iron Age enclosure

second smaller circular structure with an overall diameter of 12m consisting of post-holes each around 30cm in diameter and spaced about a metre apart. The post-holes contained dark charcoal -rich fills, suggesting a free-standing wooden structure that may have been razed by fire. This process would have led in turn to the enhancement of the magnetic susceptibility of the post-hole fills improving the likelihood of detection by magnetic survey.

The largest of the reconstructed round-houses at Butser Iron Age farm provides a reasonable illustration of the appearance of the Flint Farm building both in scale and design. The large round-house at Butser is frequently used as a class-room resource for school visits to the ancient farm as it can easily accommodate a large group for





The concentric ring-grooves and outer gully of the large round house in the process of excavation in August 2004

story telling and similar sheltered activities. Its reconstruction would not have been possible without the detailed archaeological information recovered by excavation and geophysics from sites such as Flint Farm. The Danebury Environs Roman Programme is due to be published by Oxford University as a series of monographs in 2006.

reconstructed Iron Age building reproduced below. Simon Crutchley kindly provided information on the aerial photographic study of the Flint Farm area carried out by the Aerial Survey Team and the authors are grateful to Professor Barry Cunliffe (Institute of Archaeology, University of Oxford) for providing information on the excavations undertaken by the Danebury Trust.

### ACKNOWLEDGEMENTS

The staff at Butser Ancient Farm kindly granted permission to photograph the

*Andy Payne, Neil Linford,  
Paul Linford and Louise Martin*



Reconstructed Iron Age round-house at the Butser Ancient Farm, Hampshire

## DEVELOPING METHODOLOGIES

# Housing Market Renewal Initiative (Pathfinder)

**Government initiatives prompt the development of rapid assessment methodologies.**

In 2003 the Office of the Deputy Prime Minister announced ambitious plans to revitalise some of Northern and Midland England's most disadvantaged urban areas. The Housing Market Renewal Initiative, nicknamed 'Pathfinder', establishes a framework for comprehensive intervention in urban and suburban areas blighted by poor economic performance and lack of social cohesion. It proposes the removal of surplus housing (as defined by high vacancy

rates and low market value), improvements to existing housing, infrastructure and the public realm, and selective new building to engineer sustainable communities. If the Initiative runs its full course it will have brought about the most extensive change to the historic built environment since the slum clearance programmes of the 1960s.

HMRI Partnerships have been set up in parts of Merseyside, Manchester and Salford, East

Anfield is known around the world for the football stadium of Liverpool FC (foreground, with Everton's ground, Goodison Park, beyond), but the surrounding area, the subject of a Pathfinder Initiative, was until recently little known and poorly understood



David MacLeod © English Heritage



A closer look at the streets of Anfield reveals the quality of many of the surviving buildings, and the coherence, in many places, of the late 19th-century suburban landscape

Lancashire, Oldham and Rochdale, North Staffordshire (the Potteries), Birmingham and Sandwell, South Yorkshire, Hull and East Riding, and Newcastle and Gateshead. The case for government action will not be doubted by those who are familiar with some of the areas targeted, where it is apparent that previous efforts have generally failed to tackle the deeper-seated economic and demographic causes of decline. English Heritage's response has involved staff in Research and Standards, Planning and Development and Policy and Communications, working together to ensure that the actual and potential value of the historic environment is weighed adequately in the implementation of change. In R&S much of the work has fallen to the York-based Architectural Investigation Team.

The pressing timescale and potentially momentous impact of HMRI have demanded a rapid and effective response. An initial difficulty was the magnitude of the areas concerned and the clear deficit of historical and architectural understanding. These difficulties were met by developing and promulgating two levels of assessment – a 'whirlwind' level capable of dealing summarily with the whole of the affected areas and a rapid level delivering more detailed, but still timely, understanding of areas of demonstrable historic interest or heritage value. Area Assessment methodologies aim not only to gather the raw data which enables us to identify and date individual buildings and to plot the main lines of development in a town or suburb, but to capture something of the

spirit of the place, and to understand it as a complex, continuously evolving system of architectural, functional and spatial relationships. Such an approach helps to unlock the wider potential of the historic environment, addressing the post-*Power of Place* agenda to harness local distinctiveness in the service of regeneration.

The whirlwind and rapid approaches, the former trialled across affected parts of Merseyside, the latter undertaken in the Anfield and Breckfield district of Liverpool and augmented by a methodological appendix, have been offered as models to all the HMRI Partnerships alongside advice on the need to build understanding into the planning process and on the means by which this can be achieved. Some Partnerships have already commissioned consultants' reports along similar lines and we are supporting this process both through local liaison and by delivering, through the Professional Training in the Historic Environment Programme hosted by Oxford University Department of Continuing Education, a one-day course in Area Assessment methodologies (to be repeated in November 2006).

HMRI is a high-profile area of government policy which has attracted considerable media attention. Our efforts have won recognition from ODPM that the value of the historic environment needs to be adequately assessed at the outset of such projects.

**Adam Menuge**

# NOTES & NEWS

**A round-up of activities and developments showing some of the scope and variety of projects that are ongoing in the Research Department.**

## **BEDFORD'S WAR BOOTY REVEALED**

English Heritage photographers have recently discovered the remains of a 1930s German wind tunnel. A specialist was also commissioned to report on the site prior to its demolition.

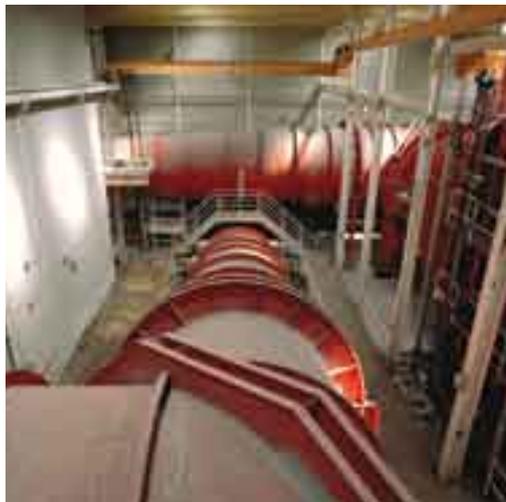
At the end of the Second World War as allied forces advanced into Nazi Germany British scientists discovered with envious amazement her well-equipped military research establishments. However, under the terms agreed at the July 1945 Potsdam Conference, Germany was to be permanently disarmed and her war making capability removed. Often in rivalry with one another the Allies were also keen to exploit German wartime technology for their own purposes.

They eagerly recruited German scientists and some research establishments remained open. By 1947, Britain was coming under pressure to dismantle the research centres in her occupation zone. One was a state-of-the-art aeronautical centre, the Herman Goering Institute at Volkenrode. Here the high-speed wind tunnels were of particular interest.

The most complex parts of a number were carefully dismantled, crated and shipped back to England for use at the new Royal Aircraft Establishment research centre being constructed at Thurleigh, Bedfordshire. The seized equipment remained in use until the 1990s.

*Wayne Cocroft, Steve Cole and Alun Bull*

German machine name plates reveal the origins of this wind tunnel from the Royal Aircraft Establishment research centre at Thurleigh, Bedfordshire



## BLANSBY PARK <sup>A</sup> <sup>D</sup>

Aerial Survey and Investigation have recently facilitated a small air photo interpretation survey of Blansby Park, North Yorkshire for Dr Andrew 'Bone' Jones of Bradford University and York Archaeological Trust. The work was carried out collaboratively by Emma Pickford (Sheffield University) and Colin Sheppard (volunteer, Blansby Project) under AerS&I supervision in the English Heritage York office. The photograph shows a site that has sparked considerable interest. The three large circular features (the third is only seen in this image as a short arc in the field corner upper left) up to 50m in diameter, and the adjacent square barrows, were first photographed 40 years ago by Professor J K St Joseph, but received no attention. It is now hoped that they will be the subject of geophysical survey and other field investigations as an add-on to the work on Blansby Park. News just in says that Emma who worked up a report on the survey for her MA thesis has been awarded an excellent pass!

**Dave MacLeod**

## CHESTER ROMAN AMPHITHEATRE <sup>A</sup> <sup>B</sup> <sup>D</sup>

The Chester amphitheatre project is a partnership between English Heritage and Chester City Council. The project has two main strands; excavation, undertaken by the author for English Heritage Archaeological Projects team and Dan Garner for Chester Archaeology, and a major non-invasive landscape survey, which is co-ordinated by Stewart Ainsworth of English Heritage's Archaeology and Survey team at York. During the summer of 2005, the second four month season of excavation took place, drawing in a huge number of visitors. Public interest was fostered by the specially constructed viewing platform, updated information panels, newsletters and a website featuring a webcam ([www.chestramphitheatre.co.uk](http://www.chestramphitheatre.co.uk)). A popular booklet, *Chester Amphitheatre, from Gladiators to Gardens*, was also produced. The work produced spectacular new information on the structure, date, and use of the two amphitheatres in the Roman period, and the history of the site and its environs up to modern times, and this will feature in a future issue of *Research News*. One intriguing



Aerial Photograph of Blansby Park N Yorks

find lay in the very centre of the Roman arena. This was a large, heavy stone block with an iron fitting which had been attached to the centre using molten lead. It is possible that the ironwork was a ring or staple to which animal or human victims of the arena were tied during events. A parallel is provided in a mosaic at Bignor Roman villa, West Sussex, where two gladiators are shown fighting across just such a block.

**Tony Wilmott**



Excavation in the arena. The stone block is in the foreground. The excavator is recording one post hole of an early post-Roman building.

Gladiator mosaic at Bignor Roman Villa, West Sussex, showing a stone like that discovered at Chester (reproduced by kind permission of the Tupper family)





© Christopher Dunn, English Heritage

The clock tower on the south-east side of the saltpetre refinery, Lowwood Gunpowder Works, Cumbria

## THE CUMBRIAN GUNPOWDER INDUSTRY PROJECT

The Archaeological Survey and Investigation, Architectural Investigation, and the Imaging, Graphics and Survey teams at York are examining and recording the remains of the Cumbrian Gunpowder Industry centred on the historic counties of Westmorland and the Furness area of Lancashire. Gunpowder was produced at seven manufactories in Cumbria from the late eighteenth century, with production finally ceasing in 1936 when the last of these works, Gatebeck, closed. These

manufactories were not all in use at the same time and were located in three areas: south of Kendal (Old Sedgwick, Basingill, New Sedgwick, and Gatebeck), near Haverthwaite (Blackbeck and Lowwood) and at Elterwater.

English Heritage's Cumbrian Gunpowder Industry Project has developed out of the survey recommendations of the Monuments Protection Programme for the gunpowder industry. Research on the Cumbrian sites has previously concentrated on documentary evidence, with little formal examination or detailed recording of the physical remains. The project is designed to rectify this omission and will aid the conservation management of those gunpowder works which are designated sites of special interest. The inclusion of all the sites, irrespective of their current level of designation, will also enhance our overall understanding of what was once an important regional industry.

*Christopher Dunn and Ian Goodall*

## HERITAGE3D

Laser scanning is being rapidly adopted around the world as a tool for capturing three-dimensional survey data across a wide variety of applications. Whether from an



Heritage3D logo



Home page of the website

aerial, terrestrial or close-range source, both data providers and clients are becoming increasingly interested in ensuring scanning data is both fit for purpose and provides value for money. There is thus an urgent need for guidance and the development of an appropriate set of standards.

The two year Heritage3D project, funded through the Historic Environment Enabling Programme (HEEP), commenced in September 2004. It aims to develop and support best practice in laser scanning for archaeology and architecture. Under the management of Dr David Barber from the School of Civil Engineering and Geosciences at the University of Newcastle upon Tyne, the project's central dissemination hub is through a dedicated website. This provides on-line access to activity reports, case studies and draft guidance whilst providing links to other useful websites, recognising the efforts of the 64 project associates. In association with other international organisations and academic institutions we are also investigating the issue of archiving scanned data through the potential development of a non-proprietary data format. The final results of the project, including the developed guidance, will all be presented at a two day workshop in Newcastle, from 29th–30th June 2006. Further details can be found at the Heritage3D website, [www.heritage3d.org](http://www.heritage3d.org).

**Paul Bryan**

## MOUNT PLEASANT

Routine analysis of English Heritage aerial photography taken in June 2003 and September 2004 has led to the re-appraisal of earlier photography of the well-known Neolithic henge monument at Mount Pleasant, Dorset, excavated by Geoffrey Wainwright in the early 1970s.

'New' discoveries include a fifth entrance, an outer ditch, indications that at least part of the henge bank was heightened at some point in its history, and several ring ditches outside the henge to the southeast. Of particular importance was a series of aerial photographs taken in the 1990s by a Dorset-based independent aerial photographer, Francesca Radcliffe – some of the cropmark features are only visible on her photographs. However, it is also clear that many of these features can

be seen on aerial photographs in the NMR collections at Swindon which date from the 1930s and 1940s, including the fifth entrance, the henge's internal palisade, and several ring ditches. Remarkably, it seems that none of the fieldwork in the area had ever led to a systematic appraisal of aerial photographs.

One result of the new interpretative mapping was the diversion of a planned pipeline, something of an improvement on the situation nearly 20 years ago when an earlier pipeline was laid south of the henge. Appraisal of the aerial photographs clearly shows that this previous pipe runs across the centre of one of the unnoticed ring ditches. Thus Mount Pleasant shows yet again the value of air photo interpretation on even very well known scheduled sites.

A summary of the main results can be found in the *Proceedings of the Dorset Natural History and Archaeology Society* vol. 126, 2004, pp7-14.

**Martyn Barber**

Aerial photograph of the Mount Pleasant henge, Dorset





Muncaster Castle, Cumbria

## MUNCASTER CASTLE, CUMBRIA

Architectural and archaeological fieldwork is about to commence (January 2006) at Muncaster Castle, a large country house with medieval origins situated on the west coast of Cumbria. Muncaster Castle is an increasingly important visitor attraction in an area of Cumbria too often overlooked by visitors to the Lake District and disadvantaged by the decline of traditional industrial employment. Our work, funded by a Local Heritage Initiative grant, will place the understanding of the Castle and its landscape on a firm footing, with major benefits for the long-term management and presentation of the site. It will also involve local people in the process of understanding and valuing heritage assets through an outreach programme of work-in-progress presentations and an introduction to architectural and archaeological field survey skills. A further element of our work will involve developing links with the Historic Houses Association, whose members are responsible for many of the nation's most important houses open to the public. Through collaboration of this kind we will promote our common aim of presenting properties in the light of high-quality, up-to-date investigation, survey and research.

Leonie Pett, a student placement from Exeter University, recording the new stone setting on Shoulsbarrow Common with differential GPS equipment.

**Adam Menuge and Ian Goodall**

## A NEW 'MINILITHIC' SITE ON EXMOOR

The impressive earthwork remains of the late-prehistoric multivallate hill-fort at Shoulsbury Castle lie towards the western edge of Exmoor National Park, Devon. A large scale survey of the site was undertaken by the Exeter team of the Archaeological Survey and Investigation section, at the request of the Exmoor National Park Authority. The hill-fort comprises a rampart and ditch with an outer rampart and ditch on three sides, the earthwork remains of which suggest the hillfort was left unfinished. Shoulsbury Castle became public access land under the CRoW 2000 Act and the survey was undertaken to assist the National Park historic environment team and access officers manage access to the site. The survey work formed part of the Exeter team's ongoing programme of training for the tertiary education sector. A student from Exeter University worked with the survey team as part of her MA in Landscape Archaeology. During reconnaissance work a previously unrecorded stone setting was discovered on Shoulsbarrow Common, approximately 300m north-west of the hill-fort. The setting comprises two upright and four fallen stones set in a roughly rectangular pattern. These monuments are currently thought to be unique to Exmoor and are seen as part of the late Neolithic/early Bronze Age ceremonial landscape of the moor.

**Elaine Jamieson**



## SURVEY OF LONDON TO GO ONLINE

English Heritage is funding a 4-year project to digitize all 45 of the *Survey of London* 'parish' volumes published to date, making them freely available online via the Institute of Historical Research's British History Online website at [www.british-history.ac.uk/surveyoflondon](http://www.british-history.ac.uk/surveyoflondon).

Quick, free-text searches will open up the Survey to a whole new readership, as well as revolutionizing access to its wealth of information for existing users. Digitization also provides an opportunity to make corrections and insert important new material which has come to light since the volumes were published. In addition to the text, the web-pages will include all the line drawings and (subject to copyright clearance) plate pages.

Phase 1 will be launched at the end of February 2006, with 8 post-war volumes, on the St James's, Soho and Mayfair districts. Completion of the whole project is planned for September 2008.

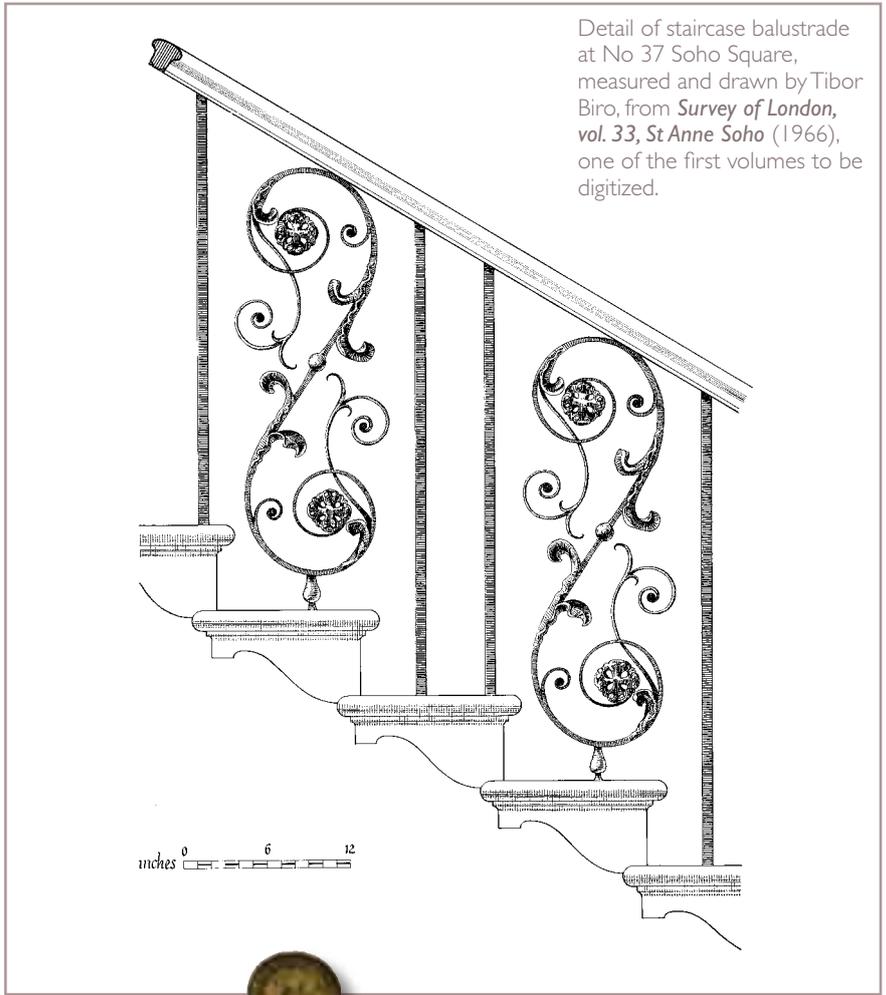
Colin Thom

## ROMAN BROOCHES IN BRITAIN

This publication (details p.42) shows some of the benefits of combining scientific examination and analysis of finds with conventional typological studies. Chemical analyses of the metal showed strong correlations with brooch type. New groupings of Romano-British brooches were suggested when metal composition was combined with technical study of enamelled decoration, and significant differences between them and Continental examples were also found. The compositional consistency of early-mid 1st century types (top block in graph) is in marked contrast to later brooches – which tend to have more mixed compositions and a higher proportion of examples that do not conform to the normal pattern – perhaps as a result of less-centralised manufacturing.

Justine Bayley

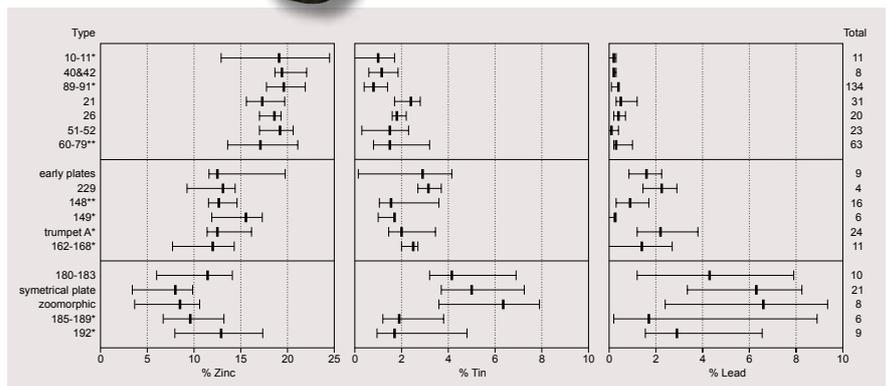
Right: Photographs of Continental millefiore (left) and British simple enamelling (right). The graph shows brass (copper+zinc) was used for many brooches, with the early types (top) having higher zinc levels than the less pure later ones (bottom)



Detail of staircase balustrade at No 37 Soho Square, measured and drawn by Tibor Biro, from *Survey of London*, vol. 33, *St Anne Soho* (1966), one of the first volumes to be digitized.



brooches shown at 1/2 times actual size



# NEW PUBLICATIONS

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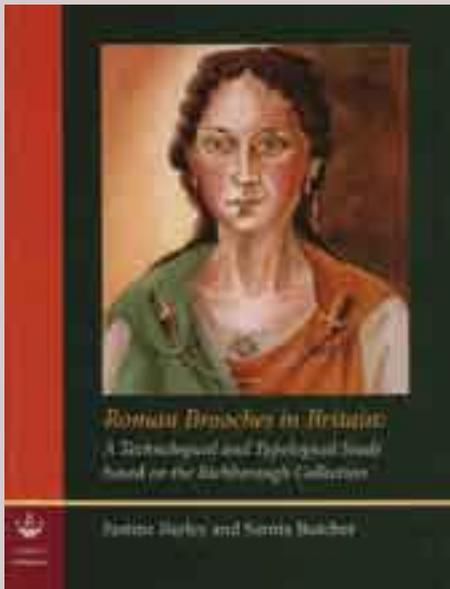
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Cover illustration by Judith Doble © English Heritage

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# TRAINING & OUTREACH

## DIARY

### *28 February 2006*

Metals technology for conservators, part of the West Dean College diploma in the Conservation-Restoration of fine metalwork (no external places)

### *7 March*

Architecture for Archaeologists Part 1, Professional Training in the Historic Environment, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

### *20-21 March*

Analysis and Recording of Buildings, forming a module of the Oxford Brookes MSc in Historic Conservation (no external places)

### *3-6 April*

Analysis and Recording of Buildings, Courtauld Institute (no external places)

### *12 April*

Architecture for Archaeologists Part 2, Professional Training in the Historic Environment, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

### *May (date to be confirmed)*

Medieval and later metal and glass working, part of the Architectural Association Building Conservation course (no external places)

### *1-5 May*

Archaeology Survey Week: Analysing and recording Historic Landscapes, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

### *29 May – 2 June*

Building Survey Week, Professional Training in the Historic Environment, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

### *1-9 July*

Archaeological Aerial Survey. The acquisition and use of aerial photographs in heritage management, Cirencester, Culture 2000 (contact [aerialsurvey@english-heritage.org.uk](mailto:aerialsurvey@english-heritage.org.uk))

### *22-23 July*

National Archaeology Week event, Fort Cumberland, Portsmouth, Hampshire

### *12-13 August*

Festival of History, Kelmarsh Hall, Northamptonshire

### *10 November*

Area Assessments of the Historic Environment, Professional Training in the Historic Environment, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

### *4-5 December*

Aerial Photography: Mapping and Interpretation, OUDCE (contact [alison.macdonald@conted.ox.ac.uk](mailto:alison.macdonald@conted.ox.ac.uk))

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