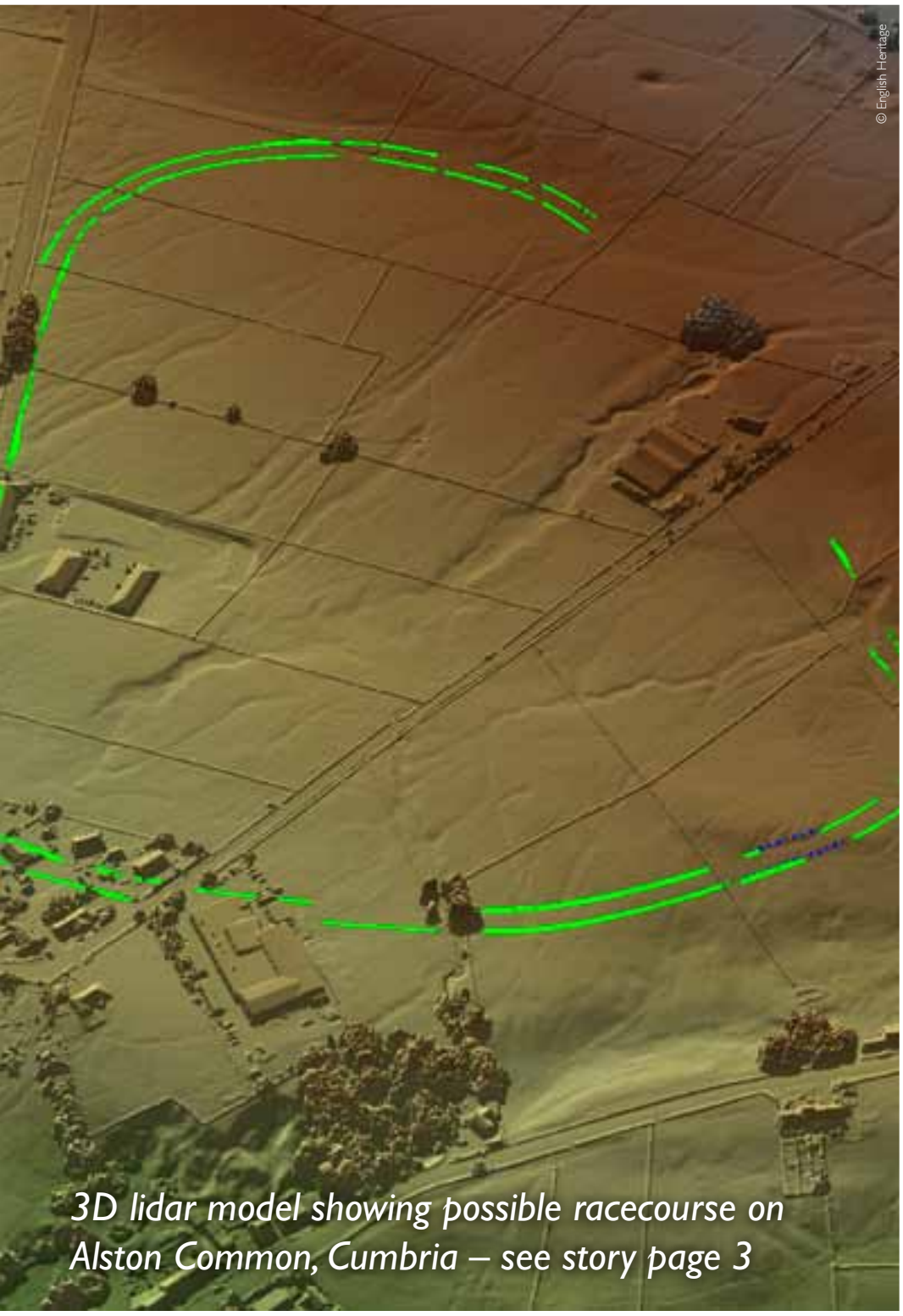
NEWSLETTER OF THE ENGLISH HERITAGE RESEARCH DEPARTMENT

RESEARCH NEWS



3D lidar model showing possible racecourse on Alston Common, Cumbria – see story page 3

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This issue of *Research News* is published soon after the Government's Comprehensive Spending Review (CSR) announcement, which for English Heritage means a cut of 32% to our grant in aid over the next four years from 1st April 2011. On a more positive note the Government sees a continuing role for English Heritage and values the independent expert advice it provides.

Research Department staff make an important contribution to the organisation's expertise. Applied research will continue to be an important part of the role of English Heritage and from April 2011 it will be integrated with our designation, planning and advice functions as part of the National Heritage Protection Plan (NHPP). The Plan, published on our website on the 7th December 2010, will focus our research effort and other activities on those heritage assets that are both significant and under threat. In response to the CSR and the NHPP *Research News* will, from 2011, be published twice rather than three times a year, and focus on reporting on the range of research activities contributing to the Plan.

In this issue Matthew Oakey reports on the discovery from aerial photography and lidar of the remains of a short-lived racecourse of late eighteenth-century date in the North Pennines AONB (see *Research News 11 and 14*). As part of another multi-disciplinary project, Jim Leary and David Field describe exciting excavations and fieldwork carried out earlier this year at Marden Henge in Wiltshire. This work resulted in the remarkable discovery of a Neolithic building on the bank of a small henge within the larger circle.

The continuing success of the English Heritage Professional Placements in Conservation (EPPIC) scheme in providing specialist training in the applied research field is illustrated by Tara-Jane Sutcliffe's article on the aerial mapping and analysis of the Roman town beneath Aldborough in North Yorkshire, while Robert Skinner, another EPPIC trainee in Aerial Survey, discusses his work on two First World War army camps near Beachy Head as part of the National Mapping Programme.

This issue also highlights important guidance documents produced in 2010, including a comprehensive guidance document on commemorative plaque schemes, and guidance on undertaking Historic Area Assessments. The latter approach has underpinned our work on the suburb of Manningham in Bradford and the resulting book that highlights the distinctive character and diversity of the area.

Finally, rising sea levels and coastal erosion represent a significant threat to the country's heritage and English Heritage is addressing this in a variety of ways. Abby Hunt reports on an internal collaborative project that investigates the likely impacts of this aspect of climate change on the sites in our guardianship. Like many of the other projects covered in this issue, the resulting evidence base will feed into the NHPP and in turn inform the protection and sustainable management of our heritage.

John Cattell
Interim Research Director
Conservation and Protection Group

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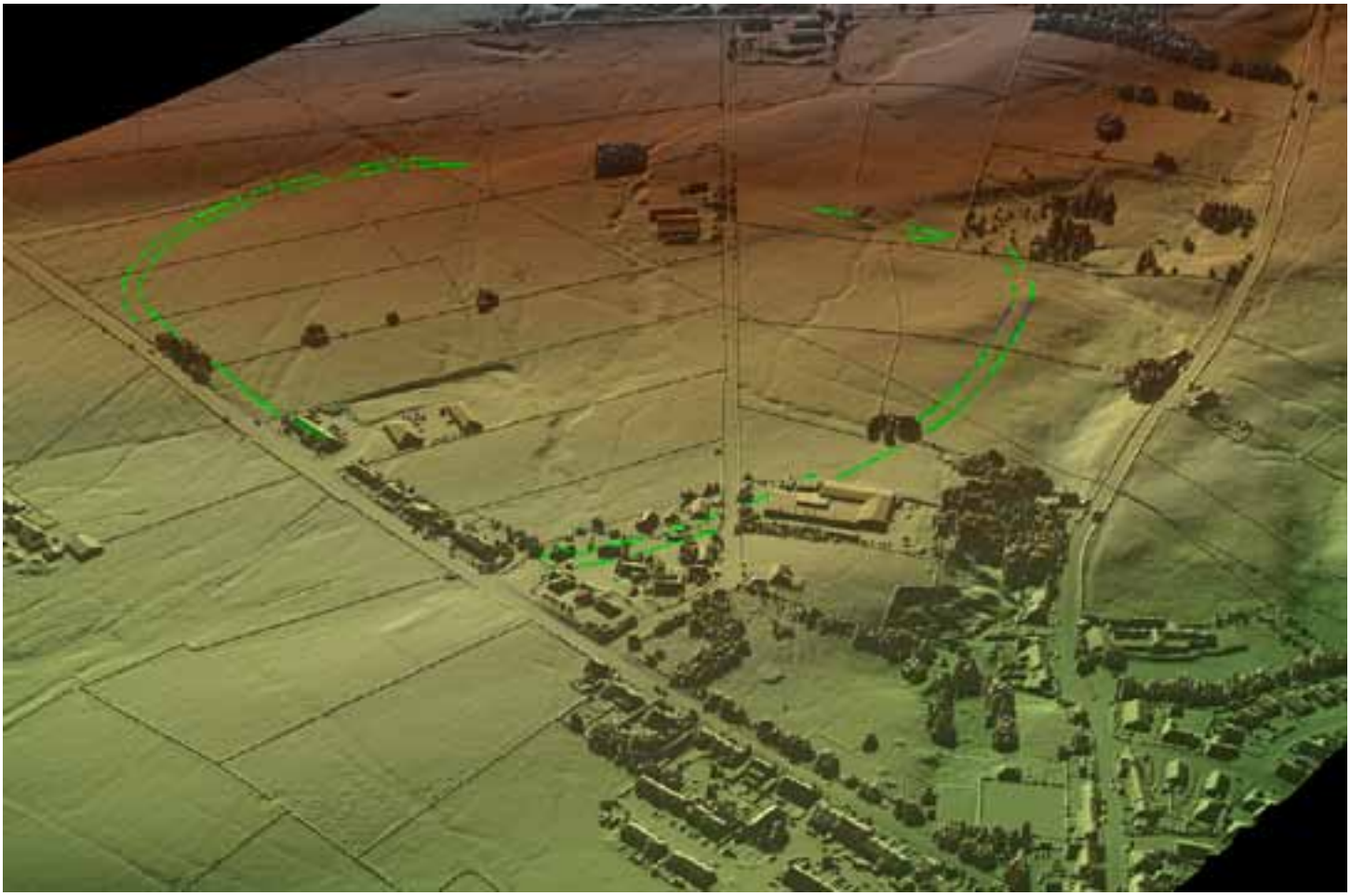
Comment should be sent to Tony Wilmott at: English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth, PO4 9LD.
Telephone: 023 9285 6700. Fax: 023 9285 6701.
Email: fort.cumberland@english-heritage.org.uk

Photo finish for England's highest racecourse

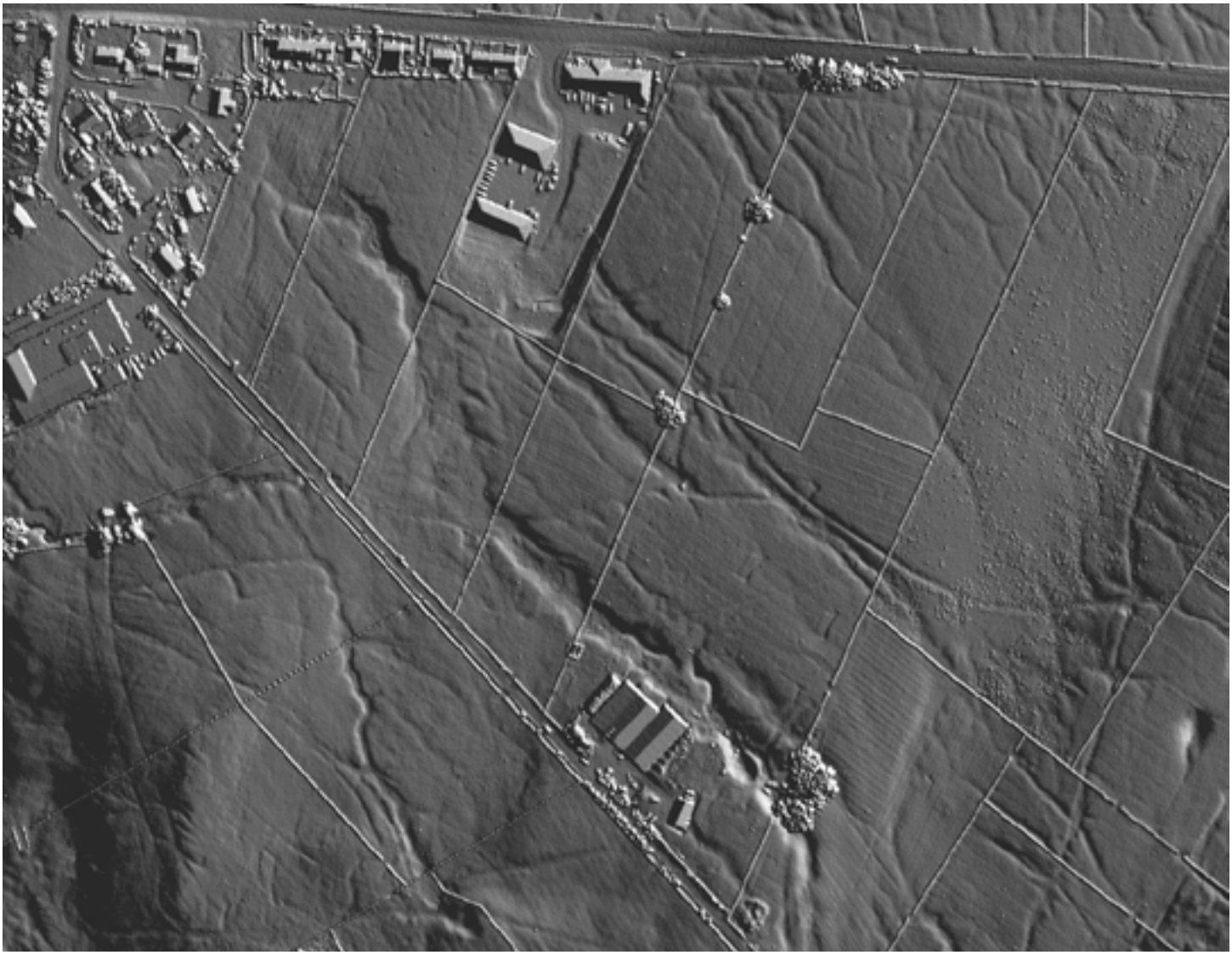
Analysis of aerial photography and now remote sensing data reveals traces of a forgotten racecourse at Alston, Cumbria.

Recent aerial survey by English Heritage's Research Department has discovered an undocumented 18th-century racecourse on Alston Common in Cumbria, the highest point of the course lying at nearly 370m above sea level. Analysis of aerial photography and 50cm resolution airborne laser scanning (lidar) commissioned for the multidisciplinary Miner-Farmer Landscapes of the North Pennines AONB Project (*Research News* 11) revealed the slight earthwork remains, which were subsequently examined on the ground.

Two sections of parallel linear ditches, 11m (12 yards) apart were intermittently visible on the lidar imagery, one section describing a gentle curve and the other partially terraced into a slope. These formed part of an irregular circuit measuring 1605m in length, equating to eight furlongs or one mile, one of the standard distances for a horse race. Mapping was enhanced by the use of 1948 RAF vertical photography which showed some sections of ditch which were not visible on the lidar imagery. Historic photography dating from 1958 was of particular value as it clearly showed a north-west corner visible in a field that was developed for housing at some point between 1958 and 1977. The course is situated to the south-east of Alston



3D lidar model looking south-east from Alston. Fair Hill is in the foreground

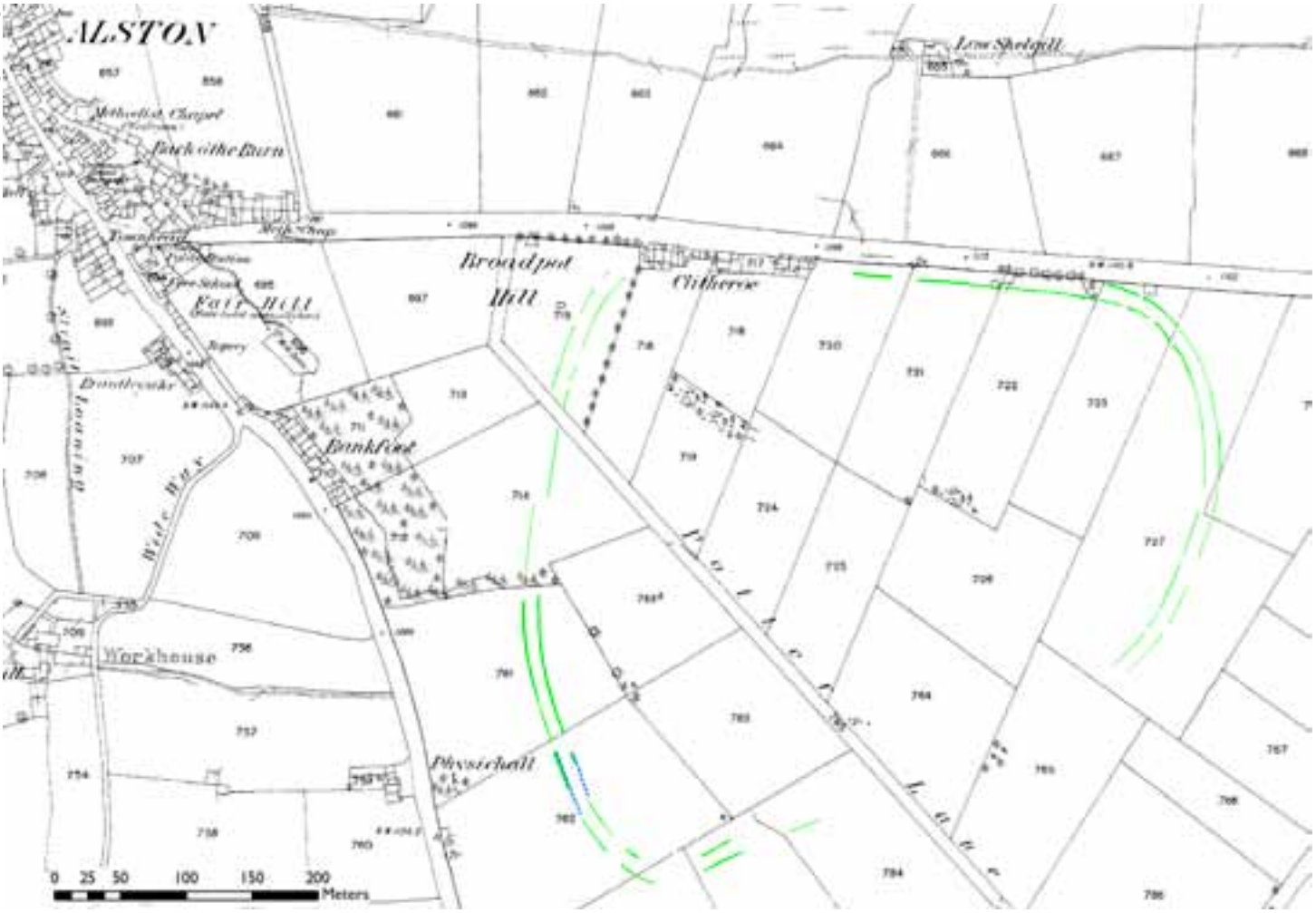


2D lidar model showing the ditches of the racecourse

and ran around the northern tip of the massif known as Alston Moor. It included several steep climbs and descents as well as a stream crossing and would have proved a very challenging ride. Examination on the ground suggests that the now waterlogged ditches helped to drain the surface of the course as well as defining it, preventing the going from being 'boggy to bad'. In places spoil from the ditches was evidently used to level the track but other sections retained a considerable camber.

Alston Moor is long known to have been common land or subject to rights of common. While horse racing is known to have taken place, and continues to do so, on many commons in England, no specific documentary reference for the Alston course has been identified, despite thorough research by Alastair Robertson of the Alston Local History Society. There is no record of the course in J Fairfax-Blakeborough's *Northern Turf History Vol. II. Extinct race meetings* (1948). Furthermore no meetings are recorded at Alston in the *Racing Calendar,* published annually from 1774. The racecourse lies immediately to the south-east of an area historically called Fair Hill and the 1861 Ordnance Survey first edition map notes 'Fair held annually here'. As in many other instances, this fair may well have provided a context for race meetings. Although an entry in the 1829 trade directory does make reference to fairs, racing and wrestling at Fair Hill, it is not clear whether this is horse racing and the archaeological evidence suggests that the course had fallen out of use by then anyway.

The date of the racecourse remains conjectural. No elements of it are depicted on the 1861 Ordnance Survey first edition map, which shows that the former common land has been enclosed by this date, criss-crossing the course with drystone walls. It is known that the date of the Act of Parliament for enclosure of Alston Moor was 1803 although the actual enclosure of lands is attested into the 1880s. The course clearly predates a small quarry which itself underlies the field walls shown on the first



The site of the racecourse against the Ordnance Survey first edition mapping

edition map. Part of the northern straight underlies a row of houses, also depicted on the Ordnance Survey map. Initial work by English Heritage's Architectural Investigation team has dated some of these properties to the late 18th or early 19th century which must indicate that the racecourse was out of use by around the start of the 19th century. In turn, the northern side appears to respect, and therefore post-date, a toll road which is thought to be of mid-18th century date. This evidence narrows down the existence of the course to a few decades in the mid- to late-18th century.

The wider social context for the racecourse is also of interest. This period saw an increase in prosperity and the rapid development of the lead mining industry of Alston Moor. Analysis of surviving buildings in Alston shows that many were built or dramatically improved from the 1780s onwards, testifying to a sudden increase in wealth and population as a result of lead exploitation. This is also a period that saw racing become a professional sport and the foundations of some of the Classic races being laid. Yet the lack of any documentary reference to horse racing at Alston seems to indicate that the meetings were little more than informal local affairs. However, the semi-formalised nature of the course may suggest that racing was a more established affair at Alston or, at least, was planned to be. It may be that Alston racecourse reached the stage of being laid out but never came to fruition.

Racecourse historian Chris Pitt suggests that the course's omission from the *Racing* Calendar could have been because it was an unlicensed 'flapping' meeting and therefore not recognised by the Jockey Club. Many races in this period were not regulated and were therefore susceptible to cheating and corruption. Conditions imposed by the Jockey Club in order for meetings to be recognised by them led to the closure of a number of courses so may have instigated the closure of Alston.

Matthew Oakey

Aldborough in focus: air photographic analysis and mapping of the Roman town of *Isurium Brigantium*

Parching during a hot 2001 highlighted the potential of historic aerial photography to aid understanding of a Roman town.

Aldborough has a long history of photography from the air dating back at least to 1928 and continuing to the present day with the work of the English Heritage Aerial Survey and Investigation team. Aerial reconnaissance has targeted this sleepy North Yorkshire village for what lies beneath: *Isurium Brigantium*, the former Roman *civitas* capital of the Brigantes.

The location of the Roman town has never been lost, recorded for posterity in Ptolemy's *Geography* and in the *Antonine Itinerary* of the late 2nd century. However, during the post-Roman period the town declined from the urban centre of government, administration and culture that had been *Isurium Brigantium,* to the contracted rural village of today. It is surprising therefore that although well-known and comparatively unencumbered by later development, that the Roman town has received only limited and piecemeal archaeological investigation.

Excavations up to the early twentieth century were both thematically and spatially biased, focusing largely upon the town defences

The landscape context of Aldborough, bounded by the River Ure to the north

and those lands within the possession of the Lawson-Tancred family. Located to the south-west of the town, the latter forms the basis of the English Heritage Museum. Here an upstanding portion of the town wall some 2.6m wide and built from local sandstone can be seen. The museum collection also includes two exquisite mosaic pavements which, otherwise scarce in northern England, suggest a certain concentration of wealth and expertise. The significance of the town as a historic asset is recognised in designation as a Scheduled Ancient Monument, yet relatively little is known about the character and chronological development of *Isurium Brigantium*.

In 2001, an extended period of dry hot weather produced dramatic parching in the fields in and around Aldborough, revealing the lines of the town defences, parts of the internal street layout, and elements of a field system to the south. Aerial photography taken in July as part of routine reconnaissance by English Heritage recorded this detailed information and highlighted the potential of historic aerial photography to develop our understanding of the town.

In 2010 an air photographic analysis and mapping project was undertaken by the author to explore this potential. The aim of the project was largely exploratory but also didactic, completed as the culmination of a one year English Heritage Professional Placement in Conservation (EPPIC) in Aerial Survey and Investigation.

The aerial survey comprised digital transcription, interpretation and recording of all archaeological features visible on the available aerial photographs to the standard developed for the National Mapping Programme. A digital map at a nominal scale of 1:2500 was created, accompanied by meta-data comprising period, monument type, evidence and photographic reference.

The main source of aerial photography was the National Monuments Record, supplemented by the archives of the Cambridge University Collection of Air Photographs and by the North Yorkshire County Council Historic Environment Record, which provided a database of over 250 prints. Further reconnaissance was undertaken by the author in February 2010, in order to ascertain the latest condition of the site.

T J Sutcliffe. © English Heritage

The project comprised a total area of 4.5 sq km, with focus directed not only at the enclosed town but also its immediate hinterland. Analysis of the historic aerial photography allowed elements of the intramural street layout and portions of the defensive circuit, defined by a bank

Above: Upstanding portion of the town wall some 2.6m wide and built from local sandstone

Below: One of the exquisite mosaic pavements on view at Aldborough Museum

T J Sutcliffe. © English Heritage

NMR 20982/31 11-FEB-2010 © English Heritage

A section of the town's defensive circuit (photo centre to bottom left), located to the south-east

with external ditch, to be mapped. This contrasts with air photographic analyses conducted at other Roman towns such as *Calleva Atrebatum* (Silchester), *Cataractonium* (Catterick) and *Viroconium Cornoviorum* (Wroxeter), where insulae, bath houses, fora, wells and other structural features indicative of town life have been identified.

In part the paucity of evidence at Aldborough is a result of the geology, consisting of glacial boulder clay with river terrace alluvium and peat towards the River Ure; as a result, crop and parch marks are only evident when soil moisture deficit levels are at their highest.

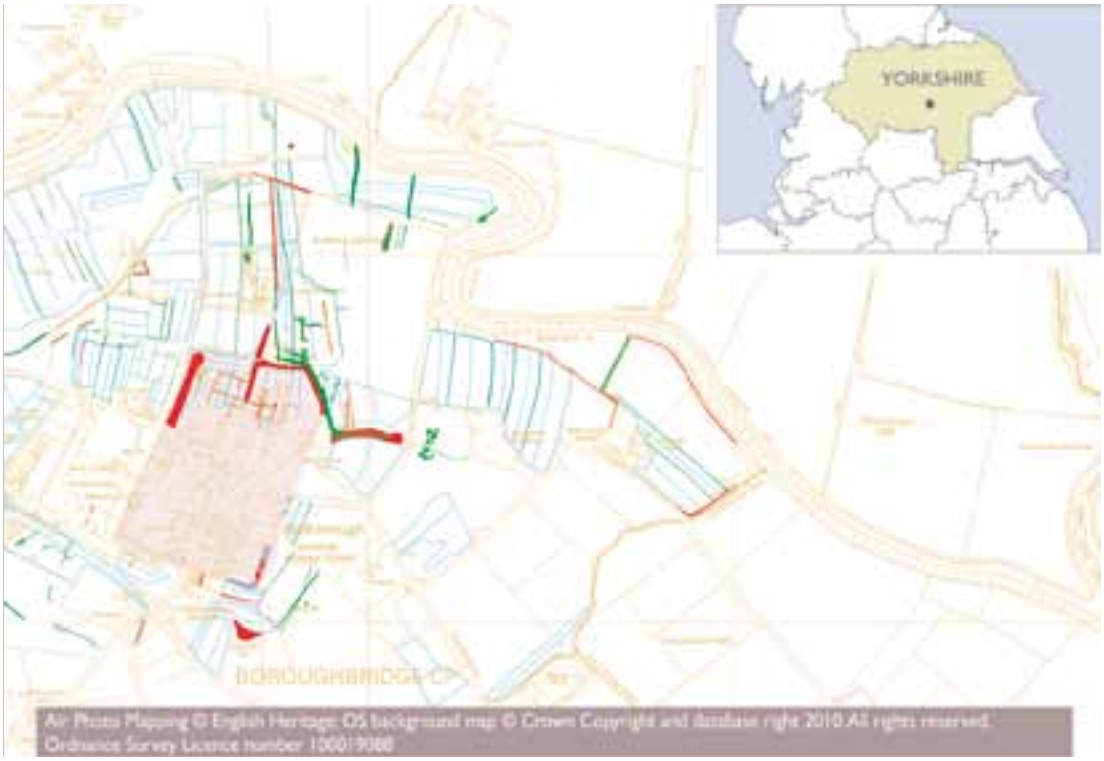
Historic land use has also been a factor; although not heavily developed, photography from 1928 demonstrates intense horticultural activity in the gardens and fields within the town during the early twentieth century. In combination with medieval cultivation, evidenced by broad ridge and furrow, this has resulted in considerable ground disturbance within the town.

Nevertheless, the undeveloped pasture and arable land surrounding the village proved particularly fruitful in yielding evidence of extra-mural activity potentially associated with the town. Crop and parch marks revealed portions of an Iron Age/ Roman rectilinear field system to the south as well as a large curvilinear enclosure that appears to abut the northern circuit of the town defences. Potential kilns were also identified to the east, corroborating field-walking finds that had previously suggested their presence in the vicinity.

In 2009, Cambridge University – under the direction of Rose Ferraby and Professor Martin Millet – commenced a programme of geophysical survey at Aldborough. The results are already revealing very detailed information about the street layout and location of potential buildings within the town. Collaboration between the two projects will allow future work to target the extra-mural features identified from aerial photography, thereby furthering our understanding of the former Roman town of *Isurium Brigantium* within its landscape setting.

Parch marks to the north of the town (photo bottom) reveal the buried road surfaces of the former Roman town of *Isurium Brigantium*

NMR SE 4066/31 17638/19 30-JUL-2001 © English Heritage



Air Photo Mapping © English Heritage

Air photographic mapping and analysis at Aldborough, North Yorkshire

Acknowledgments

I am indebted to the Aerial Survey & Investigation team in York, for providing opportunity to train as an air photo interpreter. In particular, I am grateful to Yvonne Boutwood, Senior Investigator, and Dave MacLeod, team leader, for sharing their expertise and enthusiasm through supervision of the Aldborough Environs Project. The EPPIC has provided the skills and knowledge with which to secure employment as an air photo interpreter with Archaeological Research Services Ltd, contributing to the North Yorkshire Moors National Park National Mapping Programme.

NMR 20724/5 26-JUN-2009 © English Heritage

EPPIC Tara-Jane Sutcliffe, setting out to reconnoitre Aldborough

Tara-Jane Sutcliffe

NMR SE4066/38 20563/12 30-JUL-2001 © English Heritage

Cropmarks to the north of the town reveal a curvilinear enclosure defined by parallel ditches that appear to abut the town defences

Recent work at Marden Henge, Wiltshire

New research sheds light on one of Britain's largest prehistoric monuments, and reveals a well-preserved Neolithic building.

Marden Henge is one of the largest Neolithic henge monuments in the British Isles, and given its location between the two elements of the contemporary World Heritage Site of Stonehenge and Avebury, it is rather surprising that it has escaped major archaeological attention for so long.

Concern in recent years over management and conservation led, in 2007, the then Inspector of Ancient Monuments to request the provision of modern plans, interpretations and other data on which to base decisions concerning the future of the site. In response, a multi-disciplinary project was developed. This comprised EH staff from Archaeological Survey and Investigation (David Field), Aerial Survey (Helen Winton), Geophysics (Louise Martin), Environmental Studies (Matt Canti), and Archaeological Projects (Jim Leary).

Unlike the two more famous sites of Stonehenge and Avebury henge, Marden does not have any surviving stone settings. Historically, however, near the centre, a large conical mound said to be the second largest in Wiltshire after Silbury Hill is known to have existed. Known as the Hatfield Barrow, some estimates put it as much as 15m high.

Aerial view of the earthworks of the Marden Henge taken in December 2006

© English Heritage

A public visit to the Marden excavations

There is also another notable feature within the henge, a 'Southern Circle' first noted during site reconnaissance, set hard against the southern boundary. This is a large well-preserved circular feature which we now know to be another, internal, henge.

The aim of the project was to analyse the site by utilising and comparing fresh data obtained by different survey techniques. Understanding the Hatfield Barrow and the 'Southern Circle' were particular priorities, as was the chronology of this important but relatively unknown site, and its relationship with the prehistoric monuments within the Avebury and Stonehenge World Heritage Site such as Silbury Hill, Avebury, Stonehenge and Durrington Walls.

There are few early references to the site, however clearly the Hatfield Barrow was a prominent landmark, much more so perhaps than the earthworks of the henge enclosure, for it alone was depicted on the map surveyed in 1724 by Robert Speakman and subsequently on the much smaller scale Map of Wiltshire prepared by Andrews and Dury in 1773. The former depicts a high mound of bell or pear-shaped profile, surrounded by a ditch and with what appears to be a tree or bush growing on the summit. The mound was visited by James Norris, a local naturalist, in 1798, who described the huge ditch that surrounded the mound as forming "a sort of moat, which does not become dry even in the midst of summer".

Gough's edition of Camden's Britannia published in 1806 incorporated a sketch of the site that had been sent to the Society of Antiquaries. This depicted the henge enclosure as circular, with entrances at the north-west and south-west. The ditch was then described as being about 15 yards (13.7m) wide and the whole feature as enclosing about 30 acres. The site subsequently came to notice as part of Richard Colt Hoare's monumental work *Ancient Wiltshire*. It was included in the second of his volumes published in 1821.

In 1807 Hoare, along with William Cunnington, organised an investigation of the site, concentrating on the "large mound of earth, vulgarly called Hatfield Barrow". He described it as circular with a height of 22.5ft (6.7m) although he suspected that the effects of cultivation had taken their toll and reduced the height by several feet. Hoare's team sunk a shaft from the top to the bottom and found numerous animal bones as well as "two small parcels of burned human bones". According to Hoare the men working in the

Section through the enclosure ditch

© English Heritage

© English Heritage

Above: The midden area under excavation

shaft "providently escaped an untimely end by having been called off from their work by Mr Cunnington at a time when the soil of the barrow appeared sound, but proved otherwise, by falling in very shortly after the men had quitted their labours."

Middle: One of the fine flint arrowheads

© English Heritage

Hoare's team had evidently recognised the Southern Circle and some attempt was made at examining it. This was also described as circular, of 198ft (60.4m) diameter. "In digging within the area, we found a few bits of old pottery and a little charred wood, but no marks of any interment. Its elegant form has been much defaced by tillage and soon will probably be entirely lost." The drive for intensive cultivation in the area evidently led directly to demolition of the Hatfield Barrow for Hoare noted that "On revisiting this ground in the autumn of 1818, I had the unexpected mortification to find that the great barrow had been completely levelled to the ground, and no signs remained of its previous existence."

Below: Overall view of the Marden building

© English Heritage

Little further activity is recorded at the site until Geoffrey Wainwright carried out some exploratory excavations in 1969 in order to compare the site with the recently excavated Durrington Walls henge and to ascertain whether wooden structures similar to those at Durrington existed at Marden. He focused on the northern of two entrances and recovered material that confirmed the Neolithic nature of the site. Trenches placed at the terminals revealed that the ditch was originally some 2m deep and 13.5m wide. A considerable amount of Grooved Ware pottery along with antler picks and lithic material was recovered from these trenches. A skeleton of a young female was also recovered. Just within the north-east entrance lay a possible circular timber structure.

The recent multidisciplinary survey has introduced a considerable amount of fresh evidence, clarified certain points and provided the basic data for new interpretations. The result revealed by separate methods is, in each case, a response to slightly different criteria but there is a surprising degree of correlation and agreement between each and features identified by them complement and contribute to the establishment of a satisfactory overall picture. Detail of the henge enclosure itself has revealed a possible new entrance in the south-east and questioned one that had been proposed in the east. The structure itself is now considered to be a series of separate but conjoined lengths of earthwork rather than a monument of formal plan. The ditch of the Hatfield Barrow was located by all surveys which provided accurate position within the enclosure. On plan, the Southern Circle matched the Hatfield Barrow for overall size and the surviving earthwork is probably one of the more dramatic features on site resembling in some ways an amphitheatre.

The location of the Hatfield Barrow was confirmed by excavation of a trench placed from its centre to the lip of its surrounding ditch. Dateable remains were recovered from the remnants of the mound itself, whilst features were recorded beneath it, including a central posthole and evidence for an episode of tree clearance. Burnt material was recovered from the old ground surface below the mound and should provide good radiocarbon samples.

A section was excavated through the henge enclosure ditch terminal next to a proposed south-east entrance. The nature of this was confirmed and the ditch revealed as being originally 2m deep, and a considerable amount of prehistoric pottery, along with numerous antler picks and flint tools were recovered from it. Good organic preservation was also recorded from the lower levels of the ditch.

A thick deposit of deliberately laid gravel was recorded on the top of the causeway between the opposing ditch ends. This gravel was sitting within a shallow cut, possibly an earlier hollow way. This may well be a similar feature to the gravel roadway recorded at Durrington Walls, which led from the henge down to the River Avon. Preliminary coring outside the henge at Marden and along any likely route to the river indicates that the gravel continues and therefore supports the suggestion that it is part of a Neolithic gravel roadway leading from the henge to the River Avon.

The most remarkable part of the whole excavation, however, was in the southern part of the monument which revealed that the Southern Circle is itself a henge monument. On the bank of this smaller henge was an extraordinarily well-preserved Neolithic building, formed of a chalk surface, the central part of which was slightly sunken into the ground by about 20cms. This sunken area measured about 3m x 4m, and was dominated by a large hearth, which was surrounded by a gully, presumably representing some sort of fireguard. On the floor were flint flakes still lying untouched in the position in which they had been left. Just outside the building were spreads of midden debris, and artefacts such as bone needles and awls and flint tools were found within it. In another area just outside the building were a large number of pig bones clearly representing feasting debris; mixed in with this were well-preserved fragments of highly decorated Grooved Ware pottery. Two beautifully made ripple flaked flint arrowheads were also recovered from around the building.

Detail of the Marden building showing the central hearth and surrounding gully

Only one quarter of the internal surface of the building was exposed during this season of work and the possibility remains that the location of furniture and other internal building elements may be evident from the unexcavated area. Another season of work would elucidate this.

The structure is undoubtedly the best preserved Neolithic building in Britain outside of the Orkneys, but its nature remains to be explained, while its location on top of a henge bank now questions the very nature of such earthwork banks and the degree to which similar structures might be incorporated both at this site and elsewhere.

Jim Leary and David Field

Bone pin

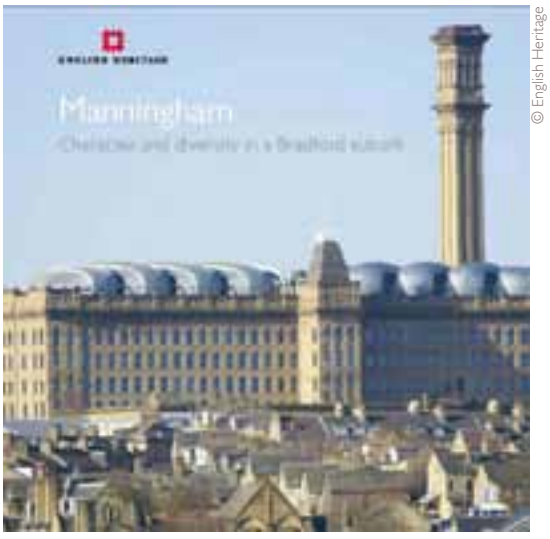
Complete bone pin

Manningham: an historic area assessment of a Bradford suburb

Historic area assessment and *Informed Conservation* publication unravel one of England's finest 19th century city suburbs.

May 2010 saw the publication of *Manningham: Character and Diversity in a Bradford Suburb*, and its accompanying DVD *Tales and Trails of Manningham*, by Simon Taylor and Kathryn Gibson, a new title in English Heritage's *Informed Conservation* series of books. Drawing on new research, the book and DVD tell the story, through its buildings, landscape and people, of Manningham's development from the early 17th century to the present day.

For much of the second half of the 19th century Manningham was Bradford's most fashionable suburb, mainly middle-class and full of self-assurance, civic pride and high-quality architecture, mostly the work of talented local architects and executed in gorgeously coloured local sandstone. But for centuries prior to the mushroom growth of Bradford, Manningham was an unremarkable rural township and the least populous of the four which constituted the parish of Bradford. By the end of the 18th century domestic textile manufacture (of worsted cloth) had become a significant supplement to Manningham's otherwise mainly agrarian economy and a number of rows of two-storeyed domestic textile workers' cottages were built in isolated pockets throughout the township. These still survive, dwarfed and surrounded by later, larger and denser 19th-century development, and represent the first glimmerings of the wholesale changes that were to follow.



The cover of *Manningham: Character and Diversity in a Bradford Suburb*, published in English Heritage's *Informed Conservation* series in May 2010

By 1800 factory-based industry had reached Bradford and six textile mills had been built by 1810, a process of change and expansion which accelerated in the succeeding decades. Bradford was transformed from a rural market town into an industrial boom town, prompting a number of the wealthiest mill owners to abandon their urban residences and seek refuge in the surrounding countryside. One of these was John Garnett Horsfall who probably built the first villa in Manningham in about 1832. Other manufacturers and later merchants followed suit and a large number of houses were built – not just by individuals and private speculators but by building clubs, societies and the local co-operative society. The first to be built were villas (detached and later semi-detached), then came splendid terraced houses built in secluded rows with private carriage drives and around irregular but equally private 'squares'. The gaps and fringes were then filled with back-to-back houses. Many of the merchants who lived in Manningham were of German Jewish origin and German was said to be almost as commonly spoken in Manningham as English.

Industry was also present in the township and industrial corridors developed alongside, the Bradford Beck – the small river which loops through Bradford centre and forms

Domestic textile workers' cottages, Cross Street

Manningham's south and east boundaries. At the northern end of the township was the colossal bulk of Manningham Mills, the district's most famous landmark. The first Manningham Mill was built in 1838 by Ellis Cunliffe Lister but the present structure dates from the 1870s and 80s and was built by Ellis Cunliffe's son, Samuel Cunliffe Lister. When complete the new Manningham Mills formed the largest silk-spinning and weaving mill in Great Britain and employed as many as 11,000 at its height. Samuel Cunliffe Lister was one of Manningham's greatest benefactors and, apart from the Mills, his most important legacy is Lister Park, formerly the grounds of his house, Manningham Hall. In 1870 Lister sold the house and land to the Bradford Corporation for use as a public park and also financed the construction of the Edmund Cartwright Memorial Hall (completed in 1904), a new museum and art gallery for the city of Bradford, designed by Simpson and Allen, on the former site of Manningham Hall. In May

Back-to-back houses of the 1880s on Victor Terrace

Mount Royd, a private development of semi-detached houses close to Lister Park

1904 the new Hall and Lister Park were the focal point of the six-month City of Bradford Exhibition, a fitting tribute to the status enjoyed by Manningham at the beginning of the 20th century which, like its predecessor, was to be a century of great change. At the time of the Exhibition the Bradford textile trade had already, but imperceptibly, entered a decline. Fortunes revived during the First World War, although the strong German presence and influence unsurprisingly faded away, but then the inter-war depression hit hard. Textile manufacture continued in the city nevertheless and after the Second World War provided employment for a diverse range of refugees and economic migrants from Europe and from the Commonwealth, the descendants of whom now make up a large proportion of modern Manningham's population.

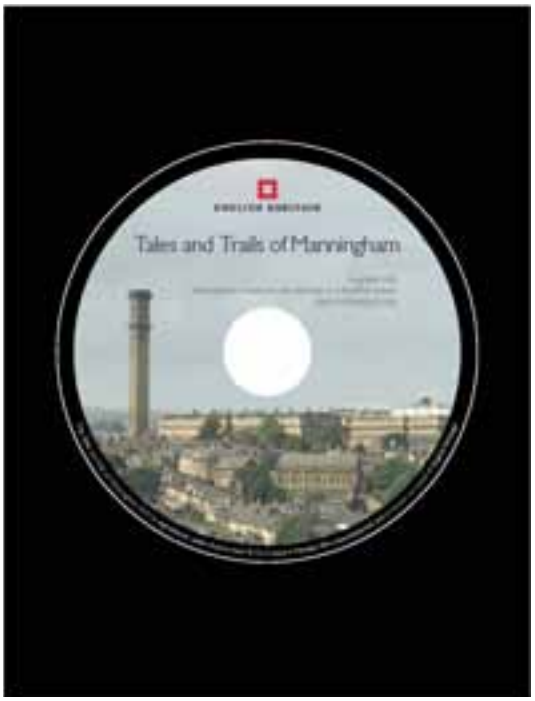
Manningham Mills (1872-88) during restoration and conversion by Urban Splash

The main driver of the work by English Heritage's Architectural Investigation team in Manningham was the high-profile acquisition and conversion to residential use of Manningham Mills, which enjoy II* Listed status but which had fallen into decay since closure, by Urban Splash since 2001. With the rebirth of Manningham Mills would come the incentive for regeneration elsewhere in Manningham and the project was intended to inform the process of renewal through a better understanding of the historic character of the area. Publication of the *Informed Conservation* book, in partnership with the local authority and regeneration agencies, will help to achieve this. It should also serve to change general perceptions of the area by raising awareness of the quality of Manningham's built environment and open spaces, and of the quality of life there – Manningham is often perceived in a negative light by outsiders, better known for racial tension and crime than for its outstanding architecture, park and the strength of its communities.

Manningham is a diverse place, both in terms of its landscape and its inhabitants and it always has been. This project has shown that Manningham in the 19th century was not a single suburb planned as a whole with a consistent character, but a patchwork of areas whose distinctiveness was determined by the date and mechanism of development, intended function and social composition. It would be wrong to think of Manningham as one place then and it would be now. Manningham has also seen differing waves of incomers, both from other parts of Britain and from abroad, since it first began to develop as a suburb and in many ways they led different lives in different worlds even though they lived shoulder to shoulder in Manningham's villas, streets and squares. For this reason input from Manningham's present inhabitants was important and a highlight of the project was the collaboration with English Heritage's Outreach team led by Helen Keighley to produce *Tales and Trails of Manningham*, a DVD which is distributed free with the book and which consists of a series of interviews and walks with Manningham residents of different ages and backgrounds during which they talk about their memories of the past, their perceptions of the present, and hopes for the future.

Simon Taylor

Above: The Edmund Cartwright Memorial Hall, 1904, Lister Park



Left: Tails and Trails of Manningham, the DVD distributed free with the *Informed Conservation* book

English Heritage Coastal Estate Risk Assessment

Assessing immediate and longer term risks to English Heritage's coastal properties from erosion and flooding.

Coastal areas face many threats, but the most pressing is, perhaps, rising sea level resulting from climate change. Coastal change itself is nothing new, but it is an increasing *rate* of sea level change which poses a growing problem: global sea level has risen at a mean rate of 1.8mm per year since 1955, with a higher mean rate of 3mm per year from 1992 onwards. Climate change models also point to increased frequency and severity of extreme weather events, such as storms and associated flooding. The implications of these projections impact right across the historic environment and without an appropriate response to this threat, irreparable damage to many historic assets is almost inevitable.

Whilst the Rapid Coastal Zone Assessment Surveys (RCZAS) undertaken along most of England's coastline (with completion by 2014) have highlighted coastal heritage assets, a detailed study and risk assessment of all these sites and monuments would be an immense task. In order to develop an approach to the assessment of erosion and flood risk to historic environment assets, and thus address the potential threats in the coming century, a more manageable group of assets needed to be selected for study. The English Heritage Coastal Estate offers the diversity of site types and locations for such a study. In this instance, the 'coastal estate' is defined as English Heritage guardianship properties within or intersecting the Coastal Zone (ie areas of marsh or mudflat, or elsewhere a 200m band inland of mean high water, as defined by Natural England).

Tintagel Castle, Cornwall, one of the 80 'coastal' properties in the care of English Heritage

Of the 411 properties for which English Heritage is responsible, an initial interrogation of the corporate GIS system returned 80 sites within, or intersecting, the Coastal Zone. This list of properties was then subject to further screening, primarily removing those clearly not at risk from erosion or flooding; this has left 54 properties spread across most English Heritage regions, with the exception of London and the West Midlands, to be included in the study.

The project is primarily GIS-based, allowing the extents of the properties and their infrastructure to be viewed on a map and compared against datasets and predictive models from external agencies. The main source of data will come from the Environment Agency's Flood Risk and National Coastal Erosion Risk Maps. These maps show the extent of possible flooding scenarios and projected short-, medium- and long-term coastal erosion over the next 100 years. This information will allow general future flooding and erosion trends across the English Heritage coastal estate to be identified and regional variations to be analysed. In addition, a set of questions aimed at recording the current perceptions of erosion and flood issues at the various sites is being sent out to staff who work regularly at the sites. Looking at these sources of evidence together will enable the identification of sites which have particular erosion/flood issues. These will then be looked at in more depth, using pre-existing surveys (both archaeological and topographical), other research work and site visits to develop a small number of case studies, allowing a more detailed assessment of risk and suggestion of potential mitigation strategies.

New repairs to an area of erosion on the Garrison Walls, Isles of Scilly

The project is currently in its early stages, but an initial interrogation of the Flood Risk Mapping indicates that 31 of the 54 properties in the study may potentially be affected by flooding. At the time of writing, the Environment Agency coastal erosion data had not been released, however, a basic analysis of another source of predicted coastal change indicates that at least 13 of the 54 properties in the study are in areas where significant coastal erosion is likely to occur, thus potentially impacting upon parts of the English Heritage estate.

This study is being undertaken as a collaboration between Archaeological Survey and Investigation and the Maritime Archaeology Team, and is due to report in 2011, when the results will be published in a report and on the English Heritage website.

Abby Hunt

Portchester Castle, Hampshire, a low-lying property potentially vulnerable to flooding, given rising sea levels

Understanding Place

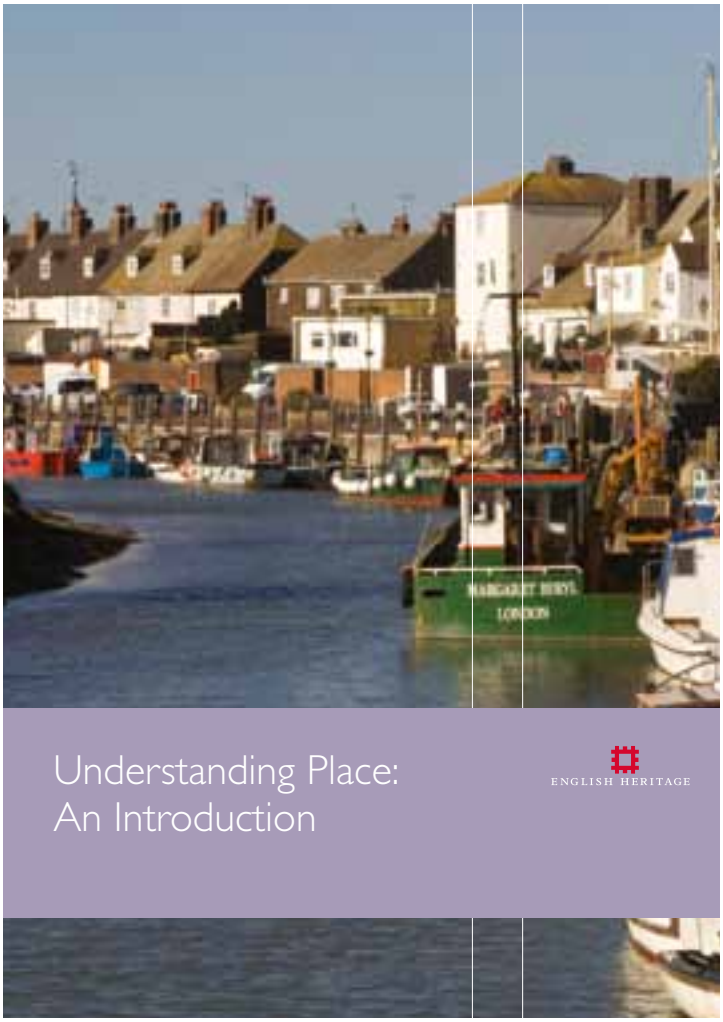
A suite of English Heritage guidance documents provides new methods for assessing and protecting historic places and areas.

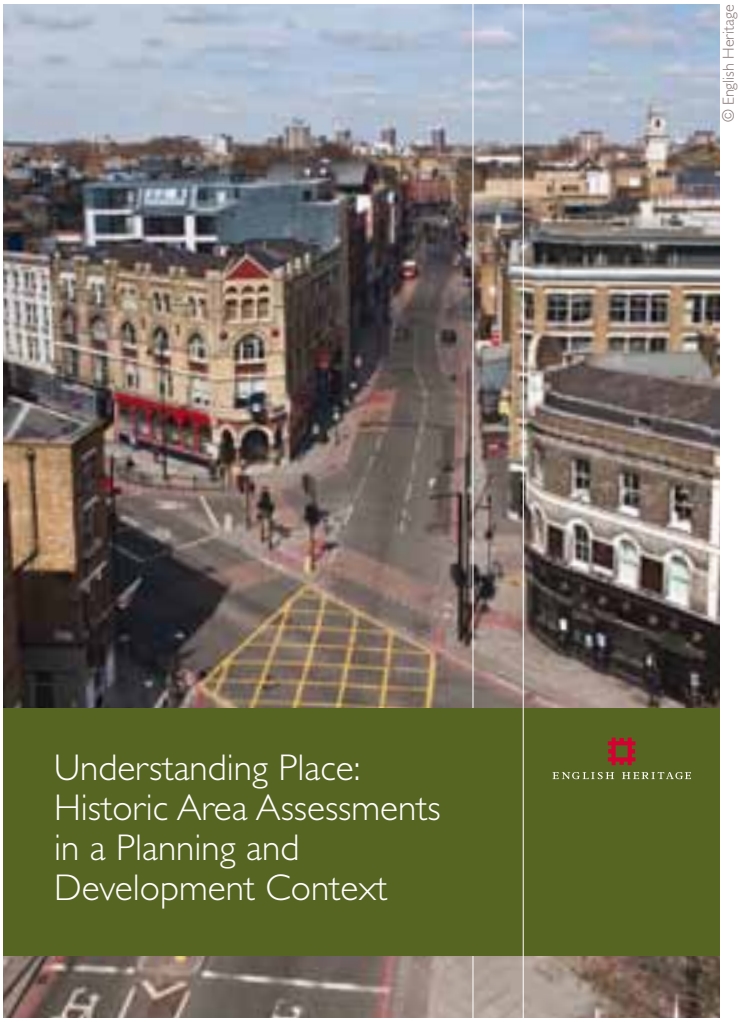
Why do you like living where you do? Perhaps it is because it is in a catchment area for good schools, or close to shops, restaurants, entertainment and leisure centres, or has good transport links. Perhaps it is the appearance of the streets and houses that is attractive, whether urban, suburban or rural, high-rise and high-density, or sprawling and low-lying; within reach of an historic town centre, or a huge state-of-the-art shopping mall. Whatever the reason, you will have a sense what makes that place special and distinctive.

But how do you define that all-important sense of place? How do you assess the considerable contribution that the historic environment makes to it? Over the last ten years English Heritage has taken up the challenge thrown down in *Power of Place* to seek ways of assessing and retaining 'local distinctiveness'. With the publication this June of three documents under the Understanding Place banner it has provided important guidance for local authorities, community groups, landowners and developers on how to assess the historic character of an area prior to formulating proposals for change. These documents will help to meet the government's objectives under the spatial planning system for sustainable well-designed settlements that

Below left: Cover of *Understanding Place: An Introduction*

Below right: Cover of *Understanding Place: Historic Area Assessments in a Planning and Development Context*

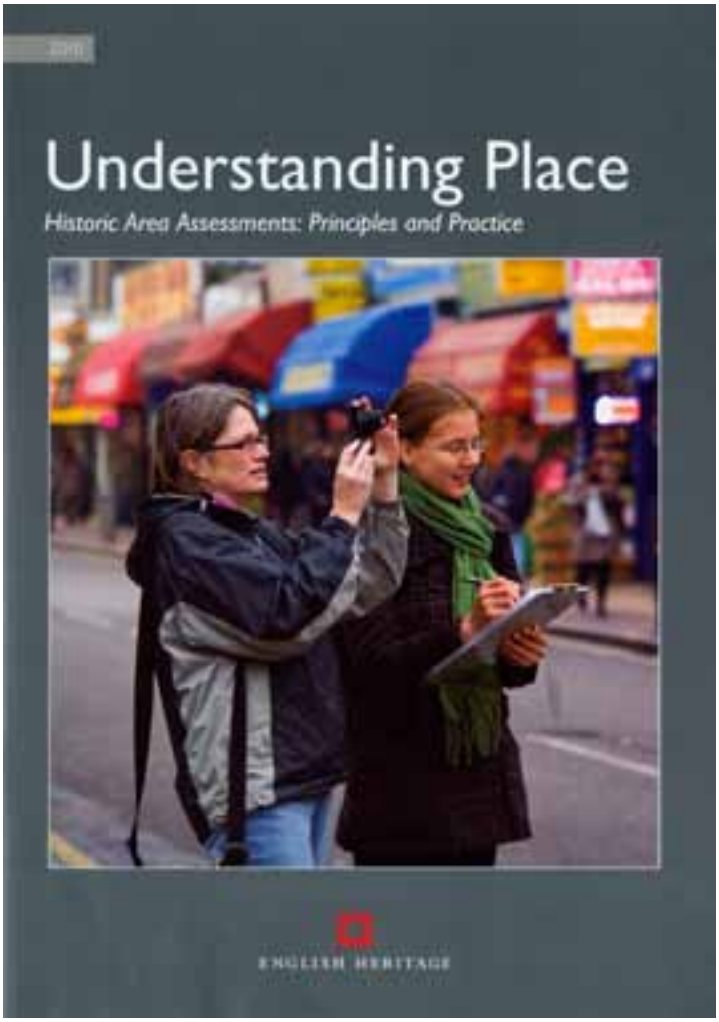




bring economic security and build stable communities as set out in PPS1, PPS3 PPS4 and in particular PPS5 *Planning for the Historic Environment*.

The first document, *Understanding Place: An Introduction*, introduces the concepts and practice of historic characterisation and its application in managing change in the historic environment. It sets out some of the ways in which historic characterisation can help local authorities to establish the heritage values and significance of a place for different stakeholders and community neighbourhood aspirations, as well as how to manage and target resources. The document usefully sets out a summary of current approaches to characterisation, clarifying the similarities and more importantly the differences between Historic Landscape Characterisation, Historic Seascape Characterisation, Historic Characterisation in Towns including Extensive Urban Survey, Conservation Area Appraisals, Conservation Management Plans and Historic Area Assessments.

The next two documents focus on the use of historic area assessments and they complement one another. *Understanding Place: Historic Area Assessments in a Planning and Development Context* summarises the role and methods of historic areas assessments for time-poor and cash-strapped local authorities, as well as providing guidance to developers. Readers requiring more information, especially practitioners and local authority staff hoping to carry out or write briefs for historic area assessments, are directed to a full account of the approach in the companion document, *Understanding Place: Historic Area Assessment - Principles and Practice*. This is the result of English Heritage Research Department work in recent years studying areas for a variety of purposes – usually related to regeneration and redevelopment – and distilling the experience to provide guidance to others embarking on similar types of work. It defines the purpose of a historic area assessment – broadly, to understand the historic development of an area and the influences that have shaped it and to assess the significance of what remains. Then, in greater detail, it sets out where to start, how to do the fieldwork, research and analysis of the results and how to evaluate significance. Most importantly, the guidance shows how to apply the findings – points that are helpfully brought out with a number of case studies showing how assessments can be tailored to meet particular needs.



Cover of *Understanding Place: Historic Area Assessment - Principles and Practice*

All three documents are available on the HELM website: www.helm.co.uk and via the Customers Services Department: Telephone: 0870 333 1181 or email: customers@english-heritage.org.uk.

Susie Barson and Adam Menuge

Celebrating People & Place: guidance on commemorative plaques

English Heritage advice on commemorative plaque schemes has been widely welcomed.

Commemorative plaques, which can be found on buildings of all styles and dates, are one of the most effective and visible means of celebrating history and the historic environment. Today, there are around 300 plaque schemes across the country, as well as countless individual plaques. While many schemes are long-established, such those in Birmingham, Liverpool, Newcastle and Manchester, new plaque initiatives are being launched all the time. English Heritage – which has run the London-wide plaque scheme since 1986 – is active in providing advice to all those interested in putting up commemorative plaques and each year responds to hundreds of enquiries regarding plaques across the UK and beyond.

In May 2010, English Heritage produced a guidance document, *Celebrating People & Place: Guidance on Commemorative Plaques & Plaque Schemes*, which offers practical and detailed guidance on every aspect of plaque work, including design, historical research and the gaining of consents. The document draws on English Heritage's experience of managing the London-wide scheme and on the advice and information provided by administrators of other plaque schemes, many of whom attended a two-day conference on commemorative plaques held in London in February 2010. Local authorities, civic societies, history groups and other bodies and individuals involved in plaques have been consulted on the document, which is available to download on the English Heritage website, www.english-heritage.org.uk/plaquesguidance

The popularity of plaques as a means of connecting us with our past is undoubted, but their simplicity can be deceptive. In order to achieve a successful plaque and plaque scheme, much thought and preparation is needed and every effort needs to be taken to ensure that plaques are adornments to the historic environment, that they are interesting and meaningful, and that, especially in terms of their inscription and positioning, they are accurate, clear and legible. These issues are fully discussed in *Celebrating People & Place* and further advice is available from the Blue Plaques Team.

Cover of *Celebrating People & Place: Guidance on Commemorative Plaques & Plaque Schemes*

Since its publication, the guidance document has been widely circulated across the country and has been welcomed by local authorities and voluntary groups alike. Described by the Lancaster Civic Society as 'a gold mine of useful information', it has already helped a number of organisations bring their plaque projects to fruition, such as the Melton Mowbray and District Civic Society. In order to further strengthen the links between all those involved with commemorative plaques, the Blue Plaques Team is in the process of carrying out an audit of existing schemes. It is hoped that, in due course, the information about such initiatives will be placed on the English Heritage website.

Susan Skedd

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.

ENGLAND'S SCHOOLS 1962-88: A CALL FOR SCHOOLS!

Geraint Franklin, Elain Harwood and Simon Taylor of Architectural Investigation are currently researching this national thematic project, which continues the reseach on schools conducted by the Post-war Steering Group. The study responds to the various school renewal capital programmes currently in operation, such as BSF. We would like to invite suggestions for schools of this period which may be worthy of further investigation. Whether examples of innovatory planning, unusual contructional techniques or materials, or the work of a notable local architect we would like to hear from you! Please email geraint.franklin@english-heritage.org.uk or write to him at Architectural Investigation, English Heritage, 1 Waterhouse Square, London EC1N 2ST.

Geraint Franklin

ZOOARCHAEOLOGISTS MAKE PRESENTATION TO INTERNATIONAL AUDIENCE

In August 2010, English Heritage zooarchaeologists Drs. Polydora Baker and Fay Worley attended the International Council for Archaeozoology (ICAZ) Conference in Paris to present work from several recent projects. This high profile four-yearly meeting attracted an audience of more than seven hundred animal bone specialists from around the globe. Results from the ongoing *Sheep Project* were presented by former project Research Assistant Dr Peter Popkin, who highlighted issues influencing the determination of age and sex of sheep from their bones through measurements and bone fusion. The paper was well received and sparked interest from specialists as far apart as China, Australia and Yorkshire and may lead to new research collaborations.

Through further collaboration with Museum of London Archaeology (Dr. James Morris) and the Universities of Nottingham (Dr. Naomi Sykes) and Bournemouth (Mr Mark Maltby), Poly and Fay co-organised the session '*Influencing, Supporting and Maintaining our Profession; past, present and future'*, which was presented to a full auditorium and stimulated an interesting debate. Amongst the 12 papers and posters was an oral presentation on the Professional Zooarchaeology Group, an initiative promoting communication and continued professional development amongst working zooarchaeologists in the UK, started in 2005 by staff from English Heritage, the University of Nottingham (then Southampton) and Wessex Archaeology.

Fay also presented the results of research into cremation practices in first millennium AD Britain, started as part of a backlog project to publish Brougham Roman cemetery, and a study of Neolithic antler picks centred around Serjeantson's research on the assemblages from Stonehenge and Barrow Hills and Worley's work for the Silbury Hill Conservation Project and Marden Henge excavations. It is hoped that all papers and the session's proceedings will be published in due course.

Fay Worley

2ND EDITION PUBLISHED

The second edition of '*The Archaeology of Human Bones'* by Simon Mays was published by Routledge in April 2010. It is an updating of the previous 1998 edition, and contains new chapters on DNA, stable isotopes, and the ethical aspects of dealing with human remains. It is an introductory text aimed at university students and at professional archaeologists who are not specialists on human osteology.

Simon Mays

Antler pick from Marden Henge

Cover of *The Archaeology of Human Bones*

Cover of '*The Story of Silbury Hill*'

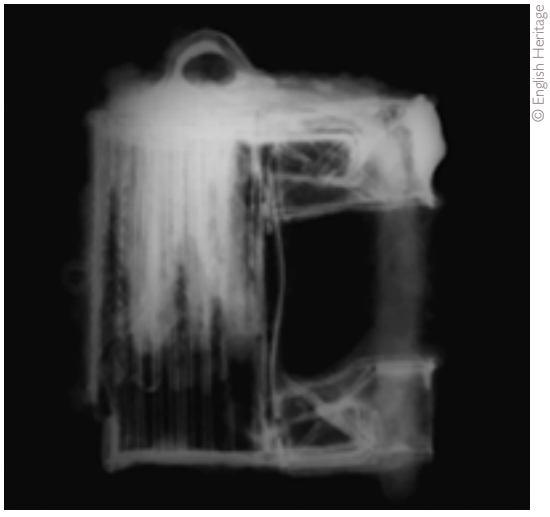
SILBURY HILL BOOK PUBLISHED

Silbury Hill is an iconic monument within the Stonehenge and Avebury World Heritage Site, and the largest prehistoric mound in Europe. Written by two authors (Jim Leary and David Field) with unrivalled information and knowledge of the Hill and combining scholarly research and readable narrative, *'The Story of Silbury Hill'* tells the story of the early recognition of its importance and of the later antiquarian and archaeological investigations. Each is described and set within its own historical and political context alongside the extraordinary characters of the time. For the first time, the results of the recent work – the collapse of the summit in 2000 leading to the re-opening of the famous tunnel in 2007 – are set out from first-hand knowledge, and the origins of the monument and the construction techniques fully outlined. The book also describes how the mound was seen and used by later communities and considers what Silbury means to people today.

Jim Leary

COMPUTED RADIOGRAPHY

English Heritage has recently purchased a new Computed Radiography (CR) system for the Archaeological Science team. CR replaces the traditional photographic X-ray film with re-usable phosphor film plates that are scanned to produce digital X-ray images. CR improves the efficiency of image capture and enables us to make another part of the archaeological archive easily available to other researchers and the public.



X-radiograph of medieval barrel padlock from Carisbrooke

These X-ray images are interrogated by the wide range of archaeological specialists who use X-rays to interpret material including conservators, material scientists, environmental scientists, finds specialists and illustrators. The CR image shows an entirely corroded medieval barrel padlock excavated from a 12th- to 13th-century gully at Carisbrooke Castle. The X-radiograph clearly shows the barrel body on the left and the spring locking mechanism and shackle leg on the right. The white edge suggests a non-ferrous surface coating.

Karla Graham

NEW GEOPHYSICAL SURVEY AT STONEHENGE

As part of the wider Analytical Landscape Survey at the Stonehenge World Heritage Site, the Geophysics Team spent a week at the site during September to conduct high resolution caesium magnetometer and ground penetrating radar (GPR) surveys. The main aim of the field work was to investigate a number of questions raised by the recent earthwork survey within the henge itself, primarily through the use of GPR to complement the existing magnetic and earth resistance data collected by the team in the mid-1990s. Rather than targeting smaller, individual areas with "key-hole" surveys we decided to use our new multi-channel towed GPR array to conduct a more complete survey covering an area of 1.5ha encompassing the majority of the monument. This proved to be no mean feat given the desired sample interval of 0.075m x 0.075m across this sizeable area and the requirement to collect all of the survey data outside of the normal visitor hours between 9.30am to 6pm. The photograph shows the survey in progress using a low impact all terrain vehicle (ATV) to tow the GPR array. Positional data was recorded from a GPS receiver attached to the radar antenna and unique software, developed in house, was used to provide "live" data processing for assessing the results directly in the field.

Following our early morning data collection sessions, and several cups of strong coffee, we turned our attention during the rest of the day towards a number of known barrows both within the monument field and immediately northwest of Stonehenge

closer to the cursus. These barrows had all been covered either by our original fluxgate magnetometer survey or by the highly publicised work conducted by the Ludwig Boltzmann Institute earlier in the summer. The results of the latter survey campaign, particularly over the Amesbury 51 Barrow, demonstrated the value of collecting high spatial resolution data sets and we felt this might be further enhanced by the application of our high-sensitivity caesium magnetometer system together with the GPR array.

We are currently busy analysing the huge quantity of recorded data and hope to share the results in due course. In the mean time we would like to take this opportunity to thank all of the staff at Stonehenge for the help they provided whilst we were on site, particularly those who volunteered to help us collect data beyond their working hours.

Neil Linford

BLOOD, SWEAT AND BEERS: A FESTIVAL OF FAMILY FUN IN PORTSMOUTH

Over 2000 people poured into Fort Cumberland on the weekend of 31 July and 1 August for this year's Festival of British Archaeology. Once through the gate, the lucky visitors were treated to a mixture of archaeology, history and slaughter. Our star re-enactors this year were the amazing Britannia, Ridley Scott's very own gladiators who treated us to a show that was as historically accurate as it was entertaining and gory, joined at one point by the Fort's own mystery Gladiator, who did us proud!

The majority of our visitors attended for the chance to become an 'Archaeologist for a Day' and follow our famous archaeological trail from excavation to publication. However, there were a wealth of other have-a-go activities as well as demonstrations such as brewing, cobbling, stain-glass painting, felt making, floral tributes, bronze casting and bee-skep making.

All in all, it was a weekend filled with discovery; little wonder so many people come back every year!

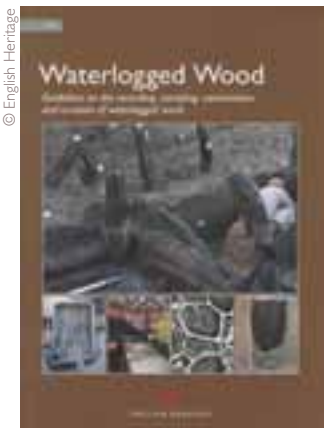
Kirsty Stonell Walker

The multi-channel GPR antenna array crossing the southern entrance to Stonehenge during the recent geophysical survey of the monument

NEW ENGLISH HERITAGE GUIDELINES

English Heritage has just published the third edition of Waterlogged Wood Guidelines. Wood has been used for structures, objects and fuel throughout most of human existence. Its discovery in waterlogged archaeological deposits provides an exciting opportunity to contribute to our understanding of past societies. Waterlogged sites are usually more complex to investigate than dry sites. These guidelines provide advice on the planning, excavation, recording, sampling, conservation and curation of waterlogged wood. This edition of the guidelines includes enhanced sections on new recording techniques such as laser scanning as well as advice on preservation *in situ* and reburial. They are available as either a download from the EH website or as a hard copy from EH Customer Services by quoting the product code **51578** (Tel: 0870 333 1181 or customers@english-heritage.org.uk)

Karla Graham



Above: Waterlogged Wood guidelines cover

Below: 'Prehistoric wall painting' activity at the Festival of British Archaeology, Fort Cumberland

KITCHENER'S CAMPS AT SEAFORD: AN AERIAL SURVEY OF A WWI LANDSCAPE

The earthwork remains of two First World War army camps have been identified during the National Mapping Programme (NMP) project on the coastal area between Peacehaven and Beachy Head. The project will enhance our understanding of the archaeology of this part of the newly created South Downs National Park. The results will also feed into the South East Rapid Coastal Zone Assessment (SERCZA). The camps were mostly transcribed from high quality 1951 RAF aerial photographs, which reveal considerable detail in the layout of the two camps and their component buildings. The importance of this discovery prompted a small project to further analyse the camps. This was established as training for the English Heritage Professional Placement in Conservation (EPPIC) in the Aerial Survey and Investigation team.

RAF Aerial Photograph from 1951 showing the southwest corner of South Camp the location of the extant earthworks

Diagram showing the location of the two Seaford camps. The red circles indicate places where training trenches have been noted from aerial photography

The camps were created in 1914 for Kitchener's Third Army, one of the vast volunteer forces that were raised in the early days of the conflict. The camps were designed to accommodate a division of fifteen battalions of roughly 20,000 men. Each battalion was organised around a parade ground overlooked by officer's quarters and other HQ buildings. There were separate areas for transport and equipment and forty barrack huts and amenities for the enlisted men. The identical barrack huts conform to the design principles of Major Armstrong laid down as a standard camp design in 1914. Unique buildings were identified on the aerial photographs, such as the camp cinema and YMCA welfare huts. The camps were considerably down sized in 1919 and from the mid 1950s most of the remains were built or ploughed over. This only spared a group of earthworks located on Seaford Head, within the bounds of the National Park. Therefore the aerial photographs are an important record of the original extent of the camps. Amongst the surviving remains there is a complex of practice trenches that the NMP transcription and analysis has helped to interpret. The aerial photographs show the trenches in open land whereas now they are mostly obscured by impenetrable scrub making them hard to interpret on the ground. The original works seem to date from the First World War with further trenches, which cut across First World War features, dug at a later date, probably in the run up to World War Two. Hopefully a complete picture of the phasing of this site can be achieved through future work.

The existence of the extant earthworks has come to the attention of the Sussex Archaeological Society. Volunteers led by Luke Barber have conducted survey and excavation work at First World War training sites in the Cuckmere valley and are compiling a body of work on the Seaford camps. The NMP mapping contributes to their work and in turn they have collated invaluable documentary sources and images of the camp in use. William Foot (Foot, 2005, 7) records that only four out of 128 known First World War camps in the UK possess upstanding remains and did not include the earthworks at Seaford. Therefore the Seaford camps are a rare and remarkable survival. Research at this interesting site reveals information on the environment and experiences of the men who were stationed here, the often overlooked day to day social history of people who lived and fought in the Great War.

Robert Skinner

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83. Martin, L, 'Bromholm Priory, Norfolk: Report On Geophysical Surveys, November 2005 and March 2006'
90. Barrett, K and Bowden, M, 'Stonehenge World Heritage Site: Normanton Down'
91. White, H, 'Grange Road, Bermondsey, London: Scientific Examination of the Cupels'

NEW PUBLICATIONS

Ainsworth, S 2010 Miner-Farmer landscapes of the North Pennines AONB: new research on Alston Moor and the South Tyne valley. *Archaeology in Northumberland* 2009, **19**, 14-15

Barber, M, Winton, H, Stoertz, C, Carpenter, E and Martin, L 2010 'The Brood of Silbury? A Remote Look at Some Other Sizeable Wessex Mounds' *in* Leary, J, Darvill, T and Field, D (eds), *Round Mounds and Monumentality in the British Neolithic and Beyond* (Neolithic Studies Group Seminar Papers 10). Oxford: Oxbow Books, 153-173

Brewer-La Porta, M, Field D & Burke A (eds) *Prehistoric Mines and Quarries: A Trans-Atlantic Perspective*. Oxford. Oxbow Books

Brodie A 2010 'Save our Seaside – Hastings Pier, East Sussex'. *Coast*, 68-9

Brodie, A 2010 'Save our Seaside – Open-air pool, Tarlair, Scotland'. *Coast*, 30-1

Brodie A 2010 'Save our Seaside – The Lease Lift, Folkestone, Kent'. *Coast*, 70-1

Brodie A 2010 'Save our Seaside – Hastings Pier, East Sussex'. *Coast*, 68-9

Brewer-La Porta, M, Field D & Burke A (eds) *Prehistoric Mines and Quarries: A Trans-Atlantic Perspective*. Oxford. Oxbow Books

Campbell, G and Robinson, M 2010 'The environmental evidence' in Chapman, A *West Cotton, Raunds: a study of medieval settlement dynamics AD450-1450*, Oxford: Oxbow books, 427-515

Clarke, J 2010 'South Lodge Estate, Oakwood, London Borough of Enfield' in Cherry, B and Robey, A eds 2010 Rediscovered Utopias: Saving London's Suburbs. Ipswich: Greenshoots Print & Direct Mail/SAVE Britain's Heritage, 150-58.

Crutchley, S and Crow, P 2010 *The Light Fantastic: Using airborne laser scanning in archaeological survey*. English Heritage

English Heritage 2010 *Understanding Place: Historic Area Assessments – Principles and Practice*

English Heritage 2010 *Understanding Place: Historic Area Assessments in a Planning and Development Context*

English Heritage 2010 *Celebrating People and Place: guidance on commemorative plaques & plaque schemes*

Field, D, 2010, 'Design, geometry and the metamorphosis of monuments' in J Leary, T Darvill, and D Field (eds), *Round Mounds and Monumentality in the British Neolithic and Beyond* (Neolithic Studies Group Seminar Papers **10**, 1-9). Oxford: Oxbow Books

Gibson, A, and Bayliss, A, with Heard, H, Mainland, I, Ogden, A R, Bronk Ramsey, C, Cook, G, van der Plicht, H, and Marshall, P 2010 'Recent research at Duggleby Howe, North Yorkshire'. *Archaeological Journal* **166**, 39-78

Gibson, A, and Bayliss, A, 2010 'Recent work on the Neolithic round barrows of the upper Great Wold Valley, Yorkshire' in J Leary, T Darvill, and D Field (eds) *Round Mounds and Monumentality in the British Neolithic and Beyond (*Neolithic Studies Group Seminar Papers **10**, 72–107, Oxford (Oxbow)

Graham, K & Crow, P 2010 'A Woodland burial study: developing methodologies for monitoring and modelling the burial environment' in E Williams & C Peachey (eds) *Conservation of Archaeological Materials – current trends and future directions*. BAR International Series 2116

Guillery, P (ed) 2010 *Built from Below: British Architecture and the Vernacular,* Abingdon: Routledge

Guillery, P 2010 'Plan form: some comparative thoughts from London', in C Casey (ed) *The eighteenth-century Dublin townhouse*, Dublin: Four Courts Press, 249-257

Leary, J, Darvill, T and Field, D (eds), 2010, *Round Mounds and Monumentality in the British Neolithic and Beyond* (Neolithic Studies Group Seminar Papers **10**). Oxford: Oxbow Books

Leary, J 2010 'Silbury Hill: a monument in motion' in J Leary, T Darvill and D Field (eds), *Round Mounds and Monumentality in the British Neolithic and Beyond* (Neolithic Studies Group Seminar Papers **10**). Oxford: Oxbow Books, 139-152

Leary, J and Field, D 2010 *The Story of Silbury Hill*. English Heritage, Swindon.

Linford, N, Linford, P, Martin, L and Payne, A 2010 'Stepped-frequency GPR survey with a multi-element array antenna: Results from field application on archaeological sites'. *Archaeological Prospection* **17** (3):187-198

Mays, S 2010 *The Archaeology of Human Bones* (2nd edition). London: Routledge

Mays, S 2010 'Archaeological Skeletons Support a North-West European Origin for Paget's Disease of Bone'. *Journal of Bone & Mineral Research* **25**: 1839-1841

McParland, L C, Collinson M E, Campbell, G, and Veal, R 2010 'Is vitrification in charcoal a result of high temperature burning of wood?' *J Archaeol Sci* **37**, 2679-87

McOmish, D, Field, D, and Brown, G 2010 'The Late Bronze Age and Early Iron Age Midden Site at East Chisenbury, Wiltshire'. *Wiltshire Archaeological & Natural History Magazine* **103**, 35-101

Minnis, J 2010 'Practical yet Artistic: The Motor House 1895-1914' in G Brandwood (ed) *Living, Leisure and Law*. Spire Books, Reading, 73-88

Oswald, A and Ainsworth, S 2010 'The Rock Art Recording Project in Northumberland and Durham: some observations on the landscape context and 'taphonomy' of rock art, and recommendations for future projects' in T Barnett and K Sharpe (eds) *Carving a Future for British Rock Art: New Directions for Research, Management and Presentation*. Oxford: Oxbow

Sala, J and Linford, N 2010 'Processing stepped frequency continuous wave GPR systems to obtain maximum value from archaeological data sets' in L Crocco, L Orlando, R Persico and M Pieraccini (eds) *Proceedings of the XIII International Conference on Ground Penetrating Radar Lecce* (Italy), 21-25 June 2010 (Lecce): IEEE

Sheridan, A, Field, D, Pailler, Y, Petrequin, P, Errera, M and Cassen, S 2010 'The Breamore jadeitite axehead and other Neolithic axeheads of Alpine rock from central southern England'. *Wiltshire Archaeological & Natural History Society Magazine* **103**, 16-34

Smith, J 2010 'Pinner Hill Estate and Pinnerwood Park Estate, Pinner, London Borough of Harrow' in Cherry, B and Robey, A eds 2010 *Rediscovered Utopias: Saving London's Suburbs*. Ipswich: Greenshoots Print & Direct Mail/SAVE Britain's Heritage, 141-49.

Smith, P 2010 'William Clere: Master Joiner'. *Georgian Group Journal* vol **XVIII**, 8-30

Spencer, H 2010 Article on Moseley Road swimming baths in Birmingham. *Beautiful Britain*

Spencer, H 2010 Article on Moseley Road swimming baths in Birmingham. *Beautiful Britain*

Spencer H 2010 Article on the 'Ride and Stride' sponsored event to raise funds for historic churches. *Beautiful Britain*

Stoertz C 2010 US7GR LOC 349 3041 'One Saturday afternoon on the Home Front' in D Cowley, R Standring, & M J Abicht (eds) *Landscapes Through the Lens Aerial Photographs and the Historic Environment*. Occasional Publication of the Aerial Archaeology Research Group No. **2** Oxford: Oxbow Books, 247-252

Taylor S, and Gibson, K 2010 *Manningham: Character and Diversity in a Bradford Suburb.* English Heritage *Informed Conservation* Series

Topping, P 2010 'Neolithic axe factories and flint mines: Towards an ethnography of prehistoric extraction' in M Brewer-La Porta, D Field & A Burke (eds) *Prehistoric Mines and Quarries: A Trans-Atlantic Perspective*, 23-32. Oxford. Oxbow Books

Topping, P 2010 'Native American Mound Building Traditions' in J Leary, T Darvill & D Field (eds) *Round Mounds and Monumentality in the British Neolithic and Beyond*. Oxford. Oxbow Books, 219-252

Wickstead, H and Barber, M 2010 'A newly recorded hilltop enclosure at Myncen Farm, Minchington'. *Proceedings of the Dorset Natural History and Archaeological Society* **131**, 103-112

Wilmott, T 2010 *Birdoswald Roman Fort*, English Heritage Guidebook, 2nd, revised edition

Winton H and Horne P 2010 'National archives for national survey programmes: NMP and the English Heritage aerial photograph collection' in D Cowley, R Standring, & M J Abicht (eds) *Landscapes Through the Lens Aerial Photographs and the Historic Environment*. Occasional Publication of the Aerial Archaeology Research Group No. **2** Oxford: Oxbow Books, 7-18

Worley F, Kitsch J, Cox G, and Evans E-J, 2010 'Animal Bone' in T Allen, K Cramp, H Lamdin-Whymark, and L Webley *Castle Hill and its Landscape; Archaeological Investigations at the Wittenhams, Oxfordshire*: Oxford Archaeology Mongoraph **9**: Oxford, Oxford Archaeology, 80-89

Worley F, Kitsch J, and Nicholson R, 2010 'Animal Bone' in T Allen, K Cramp, H Lamdin-Whymark, and L Webley *Castle Hill and its Landscape; Archaeological Investigations at the Wittenhams, Oxfordshire*: Oxford Archaeology Monograph **9**: Oxford, Oxford Archaeology, 184-194

Worley F, 2010 'Animal Bone' in T Allen, K Cramp, H Lamdin-Whymark, and L Webley *Castle Hill and its Landscape; Archaeological Investigations at the Wittenhams, Oxfordshire*: Oxford Archaeology Mongoraph **9**: Oxford, Oxford Archaeology, 234-7