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OF THE 21ST
CENTURY**

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Best archaeology of the 21st century

The past decade saw rapid growth in the quantity of archaeologists and projects in Britain, and similar growth in the quality and range of work undertaken. Spring 2011 seemed a good point to look back at some of the major achievements of this time.

One success story was community archaeology, now used across the archaeological sector (Suzie Thomas, p14) and exemplified by RCAHMS (p16), the Ben Lawers Historic Landscape Project (p38), and at Hungate, York (p34). Over the last four years 20,000 people visited this site alone and 1300 people became involved in practical work there. Management of rural archaeological sites too was at last taken seriously in the 21st century, and there are now over 8500 agreements which include historic environment options within Environmental Stewardship (Vince Holyoak, p12). Another major growth area has been marine archaeology. Archaeology is now a regular requirement of Environmental Impact Assessment for marine developments and in Doggerland (Vince Gaffney p18) archaeologists even found a whole new country beneath the sea. Battlefield archaeology was a new discipline ten years ago, and Culloden, the last battle fought on British soil, has become an international flagship and laboratory for investigation and display of battlefields (p36). Meanwhile, the Museum of London's LAARC project transformed the way that archaeology has been made accessible and interpreted over this decade (p44).

More traditionally, Jim Leary (p20) demonstrates how good the last ten years have been for British prehistory, with research at some of our most iconic sites, exceptional discoveries, new chronologies for the Neolithic period through Bayesian analysis, and

Richard Bradley and Tim Phillips' trawl of grey literature which transformed understanding. Jim's English Heritage projects at Silbury and at Marden henge were part of this enrichment, as were the Iron Age iron, bronze, glass and lead industries at Culduthel, near Inverness (Ross Murray, p22), and the Iron Age ritual focus at Hallaton, Leicestershire (p24).

For the Roman period, a research project showed just how developer-funded work is rewriting the text books on Roman Britain since PPG 16 (p26). Most commonly this is through steady accumulation of data but sometimes discoveries come with exciting speed. Colchester's Roman circus, the first in Britain (p28), was one of these, and research excavations at Roman forts at Richborough and Birdoswald, and the Chester amphitheatre (p30) also produced spectacular results. My favourite for a later period was at Inchmarnock in the Firth of Clyde, where detritus from a 7th-century school included slate fragments inscribed with scribbled script and sketches by children of primary school age – an amazing insight into the organisation behind art and literature of this period.

On a personal note, I have had ten good years with IfA and it is now time to retire. I have had a great time with *TA* and with the *Yearbook* and so, apart from thanking all IfA staff I have worked with I want to send my appreciation to our many hundreds of authors, and to Sue Cawood, who made all of them look good. I am proud that we gave many archaeologists their first taste of publication, and that so many famous names also trusted us with their stories.



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Notes to contributors

Themes and deadlines

Autumn : IfA Conference
deadline: 15 June 2011

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Celebrating success: A DECADE OF GROWTH FOR IFA



In 2010 IfA completed its first ten-year strategic plan, making this a good moment to reflect on what we have achieved. Andrea Bradley's report, which can be read on the IfA website, shows that our objectives related to achieving recognition for archaeologists and their role in society, acting as the professional voice of the whole discipline in the UK, having a high profile within and beyond the profession and overseas, ensuring that IfA membership and registration are reliable evidence of competence and professionalism, influencing policies affecting cultural heritage, and providing reliable support to our members. Andrea demonstrates that we met most of these, though some targets were hard to measure. New objectives (and some unfinished business) are included in the strategic plan for 2010–2020.

In the last ten years we have certainly grown in numbers. Membership has nearly doubled (from 1500 to 2931), and now includes 241 students. Registered Organisations have risen from 38 to 64, and the scheme is recognised as the benchmark of quality for archaeological services, with increasing interest from the wider historic environment sector and abroad. We have produced National Occupational Standards and National Vocational Qualifications, and with support from HLF, English Heritage and numerous hosts we have provided paid internships allowing early-career professionals to gain essential new skills. We have identified the roles that archaeologists undertake and the skills they need, we have developed a model for apprenticeship that provides those skills, and we have linked

demonstrated skills to professional accreditation and recognition of competence. That's a career structure in anyone's book, though in spite of several IfA initiatives financial rewards remain shamefully low.

Today's IfA is far more representative than it was. We still need to recruit better in universities and outside conventional field practice. But through the strength of our membership we now have the ability and mandate to set the self-regulatory framework of standards, guidance and CPD for those studying and caring for the historic environment. We have continued to update the *Code of conduct*, we have augmented the suite of *Standards and guidance* (with more in the pipeline), and government departments are increasingly looking to us for guidance on implementation of their heritage policies. Now packing the essential credibility of mandatory CPD, our members and Registered Organisations are recognised as dependable experts. Becoming a Chartered organisation (an objective of the previous plan, deferred while we built our numbers, reputation and infrastructure) would greatly increase the esteem of our accredited members and provide them with significant professional advantages.

Regulation covers many mechanisms for influencing professionals' behaviour. Rules, inspections and disciplinary procedures are easily recognised, but expositions of good practice shape behaviour by example. Our new journal, our professional practice papers and our ever-popular conference continue to offer such inspiration, and over the last ten years our Editor Alison Taylor has produced in *The Archaeologist* a treasure chest of reports showing archaeologists at their best, most creative and sometimes frankly weirdest. Our designer, Sue Cawood, has managed to make all of these look elegant. This is Alison's last *TA* and we're going to miss her, especially when we try to populate these pages. Thank you, Alison!

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FROM THE FINDS TRAY

Latest job figures

In April 2011 the rate of job losses in archaeology appears to have slowed, and business confidence is showing very slight signs of improvement. In the first three months of 2011 archaeologists in work increased by 0.6%. There are now estimated to be 5862 working archaeologists in the UK, 800 less than in summer 2007, and further losses in local government services are imminent. Looking back, after a serious decline in commercial archaeology in autumn 2008, there have been rises and falls but with a general downward trend. Several businesses have ceased trading, with commercial companies attached to universities being particularly vulnerable. Business confidence remains poor. Overall signs of recovery in late 2009 were reversed in the first half of 2010; there has been a slight improvement in early 2011.

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IfA Special Interest groups

Three new SIGs have just held their inaugural AGMs, bringing the total to ten, plus three Area groups. We now have Groups for Voluntary and Community Archaeology, Archives, and Forensic Archaeology. The *Archives SIG* held its inaugural AGM on 30 March and elected Duncan H Brown as Chair, Karen Averby as Secretary and Roy Stephenson as Treasurer. The *Voluntary and Community Archaeology SIG* had its AGM on 7 March, when it appointed Craig Spence as Chair, Suzie Thomas as Secretary and Rachael Hall as Treasurer. The group will provide guidance to make sure that voluntary and community archaeologists have the required competence to carry out research to high standards. The Forensic Archaeology SIG had its AGM at the IfA Conference. This group, Chaired by John Hunter, with Barrie Simpson as secretary and Caroline Sturdy Colls as Treasurer, will be working with other bodies, including Government and the Forensic Regulator, to ensure that appropriate best practice is identified and enforced.

To join any of these groups (free for IfA members), email groups@archaeologists.net, and see the SIG pages at www.archaeologists.net/groups for updates.

The Aggregates Levy Sustainability Fund (ALSF)

Another loss to archaeology this year will be the ALSF, whose funds now go straight to the Exchequer. John Mann, Labour MP for Bassetlaw, sought an explanation in the Commons, but the only response was that it was up to DEFRA (though its budget was much reduced) to support community projects and management of farm land containing archaeological sites. English Heritage alone will lose the £1.5m a year it received from this budget for research and field survey in areas affected by extraction activity.

New World Heritage Sites

March also saw the announcement of official recommendations for World Heritage Site status for Chatham Dockyard, Creswell Crags, England's Lake District, Gorham's Cave Complex (Gibraltar), the Island of St Helena, Jodrell Bank Observatory in Cheshire, Mousa, Old Scatness & Jarlshof, Shetland, the Slate Industry of North Wales, the Flow Country of Scotland, the Forth Bridge (Rail), and the Turks & Caicos Islands of the West Indies. Sites that are already being considered by UNESCO are Wearmouth-Jarrow and Darwin's Landscape Laboratory in Kent.

FROM THE FINDS TRAY

Conservation Areas

There seems to be slightly better news after all for conservation areas. Originally it looked as if new Planning guidelines would, as Birmingham Labour MP Jack Dromey argued, 'seriously reduce protection for our most important historic buildings and their settings, and for the character of conservation areas'. In response, the Minister for Decentralisation, Greg Clark, understood the 'understandable concerns' and promised that 'we will come back at a later stage with something that reflects the amendment's intention'. And in Scotland successful bids for Conservation Area Regeneration Scheme (CARS) grants will see improvements in Ayr, Rothesay, Portsoy, Anstruther, Dingwall and Irvine. The Minister, Fiona Hyslop, said 'These grants are specifically for areas that have a historic heart to them'.

Tourism policy

Tourism is recognised by Government as vital to Britain's economy, and heritage is recognised as the key driver in tourism, yet even this will not bring support. Instead, Tourism and Heritage Minister John Penrose's new strategy for attracting visitors to Britain, announced this March, is to strengthen the other areas ('the weather, value for money, natural beauty and welcome'), as heritage is described as 'a relatively narrow and potentially fragile foundation'. He may well come to be right in this, of course.

Heritage management of farmed and forested landscapes of Europe

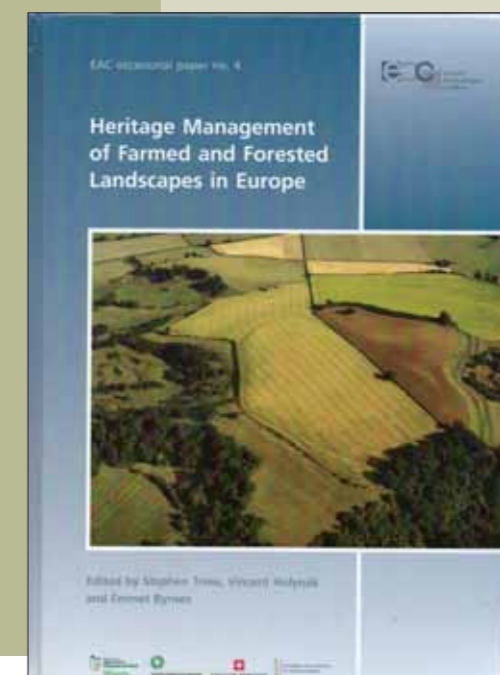
Stephen Trow, Vincent Holyoak and Emmet Byrnes (eds). EAC Occasional Paper no 4 2010 184pp, hb €30

One of the great but almost unseen archaeological advances of the last decade has been the protection of rural sites from agriculture, forestry and other damaging agencies. This has involved working with non-archaeological agencies (in England, notably Natural England and the Forestry Commission, see *TA 78*), as well as with farmers and other managers of the landscape. Thanks to the EU, greater awareness of the problems and access to funding possibilities have become a Europe-wide phenomenon. This volume (beautifully illustrated in full colour) brings together accounts from around Britain, Germany, the Netherlands, Hungary, France, the Czech Republic, Ireland, Norway and Flanders on aspects and varying solutions arising from current work. Increased understanding, both technical and academic, is a common theme, as are the increasing pressures (and it could not be a more timely moment to recognise these). The necessary combination of regulation and incentives is recognised and its effectiveness under different legislations observed. Implications for the Common Agricultural Policy are made clear.

Pioneering politics apart, this volume is valuable as an historic statement about the issues facing European states, and for heritage professionals it is an important guide and inspiration for options and for global perspectives.

Historic Wrecks

After the abolition of the Advisory Committee on Historic Wreck Sites, its functions, which include advising Government on designation and licensing of historic wrecks under the UK-wide Protection of Wrecks Act 1973, have been transferred to English Heritage in England (other administrations to make their own arrangements). English Heritage has set up a new Historic Wrecks Panel under the chairmanship of Tom Hassall, MIfA 378.



HUMAN REMAINS IN ENGLAND: *licensing and reburial issue resolved*

Sebastian Payne

In 2007, after a review of burial legislation, the Ministry of Justice for England changed the way in which it issued exhumation licenses to archaeologists. After discussion with English Heritage and other representatives of the archaeological community, including the Advisory Panel on the Archaeology of Burials in England (APABE), CBA, IfA and the British Association for Biological Anthropology and Osteoarchaeology, the Ministry issued a statement explaining the changes in 2008. This statement recognised that some elements of the changes – particularly the condition that excavated human remains should normally be reburied within two years – created problems for archaeologists, especially those working on large cemeteries. It would also lead to a disastrous situation in the future if all human remains were reburied, at a time when scientific techniques were opening up ever-new avenues for analysis. The MoJ therefore announced that it would seek an opportunity to amend the legislation in order to make it compatible with modern archaeological practices and public expectations and, in the interim, made it clear that extensions to the reburial condition would be granted where there was reasonable justification.

In the event, it has not yet been possible to find an opportunity to modernise the legislation as planned. However, we now understand that the MoJ has reconsidered the position and has come to the conclusion that the 1857 Act allows more flexibility over the reburial of excavated human remains than was thought in 2007. *It is therefore prepared to grant licences without a reburial condition where appropriate arrangements are made for the long-term retention of the remains for research or display in a museum or other appropriate institution.* In doing so, the Ministry of Justice would take into account any known objections from those with close links with the dead.

The department's application form is being redesigned for this purpose, and copies will be available by contacting the MoJ on 020 3334 6388, or coroners@justice.gsi.gov.uk.

If, as is often the case, the research potential of human remains from an excavation is unclear at the time of licence application, a licence may be issued with a time-limited reburial condition. However, when more information is available this may be varied on application at a later date to allow retention in an appropriate institution. Alternatively a licence may be issued with a condition requiring the remains, within an agreed time limit, *either* to be reburied *or* retained, subject to a specified decision-taking process (for example, in conjunction with a local authority archaeologist and museum).

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The Historic Environment (Amendment) (Scotland) Act 2011

Grainne Lennon

The Historic Environment (Amendment) (Scotland) Bill, which passed in Parliament on 20 January 2011, received Royal Assent on 23 February and is now an Act. This Act amends three pieces of primary legislation for Scotland: the Historic Buildings and Ancient Monuments Act 1953; the Ancient Monuments and Archaeological Areas Act 1979; and the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.

In Scotland, the Act will now, for example

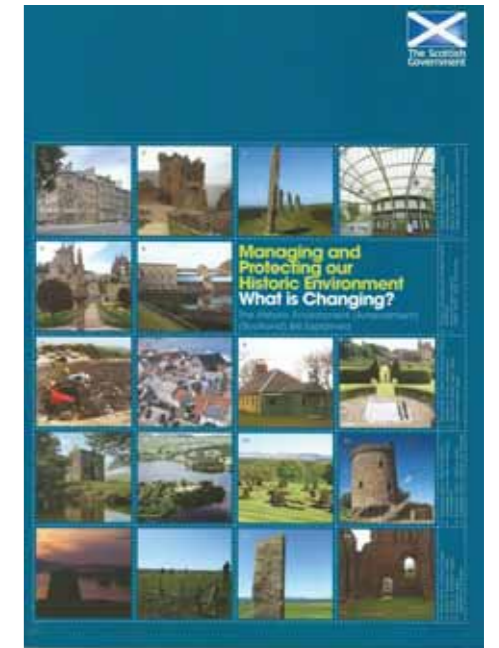
- modify the current 'defence of ignorance' in relation to unauthorised works affecting scheduled monuments, allowing lack of knowledge to only be used in defence where a person can show they took all reasonable steps to find out whether there was a scheduled monument in the area affected by unauthorised works
- increase the maximum level of fines to £50,000 on summary conviction for unauthorised works to a scheduled monument or listed building
- introduce new and enhanced enforcement powers that will allow for the reversal or amelioration of unauthorised works to scheduled monuments
- create a new power that will enable Scottish Ministers to offer any person a certificate that will guarantee that a building will not be listed during the five years from the date of the certificate
- provide a new statutory duty for Scottish Ministers to compile and maintain two new inventories of nationally important sites, ie an inventory of gardens and designed landscapes and an inventory of battlefields

The provisions of the Act will be brought into force by the Scottish Ministers on specific dates later this year; information on the precise timing will be announced in due course and will be posted on the Historic Scotland website.

Historic Scotland is developing a programme of information dissemination and awareness-raising in conjunction with key stakeholders to help facilitate implementation of the Act. As part of this process Historic Scotland has issued 'information postcards' to the owners/occupiers of 400 scheduled monuments informing them of the changes. This pilot exercise will inform the final postcard design which will be rolled out to all owners/occupiers of scheduled monuments over the summer period. Additional information on the awareness raising programme is available on the Historic Scotland website, www.historic-scotland.gov.uk/index/heritage/environmentbill.htm.

Further information on all the changes can also be found in Historic Scotland's education booklet *Managing and Protecting our Historic Environment: What is changing?* This can be accessed at: <http://www.historic-scotland.gov.uk/historicenvironment.pdf>. Other sources of information and guidance notes will be updated later this year to reflect provisions in the Act.

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SUSTAINING THE WORKPLACE LEARNING PROGRAMME

Andrea Bradley and Kate Geary

IfA has been running workplace learning placements since 2006, funded through the Heritage Lottery Fund's bursaries scheme and through the English Heritage EPPIC programme. Through both schemes, we have been able to develop an effective methodology for delivering structured workplace learning based on National Occupational Standards, aimed at either bridging the gap between academic education and the workplace or developing skills to enable career progression.

HLF funding comes to an end in March 2012 and with increasing pressure on English Heritage funds, we need to explore mechanisms for delivering structured workplace learning without external financial support. Over the coming months, we will be developing tools and support for employers, based on a workshop held in January 2011, feedback from the ATF session at IfA conference and further discussion with employers.

From our discussions already, we know that the key components of structured workplace learning are

- formal identification and review of learning goals, giving trainees a sense of progression
- support of a supervisor, and of an external body such as IfA
- accreditation through a recognised brand, whether English Heritage, IfA or through the NVQ in archaeological practice
- a balance of autonomy and supervision for trainees, with a sense of responsibility for their own work
- a focus on professional as well as technical skills

The benefits for employers lie in attracting, retaining and motivating staff, raising standards and focusing attention on new ideas and best practice, as well as saving time and money. For trainees, structured workplace learning builds confidence, identifies potential and direction and develops both technical and professional skills.

IfA believes that employers could and should be providing structured workplace learning opportunities for their staff.



Other industries engage with and support workplace learning to a level that archaeology has yet to achieve. Some barriers we have identified are low expectations of what is needed and what should be delivered in terms of structured learning, overestimation of the time, cost and difficulty of provision and a failure to cost for training, coupled with lack of demand from clients for evidence of skills or training.

IfA believes that employers could and should be providing structured workplace learning opportunities for their staff. To support this, we will develop a range of products including workplace learning packs with templates, examples and case studies for employers to adapt and use, and promote a culture change by providing training, advice and guidance in partnership with organisations such as FAME and CBA. To this end, we would welcome any feedback on the tools and support that would be most useful to you.

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Coming out of the shadows: using Digital Object Identifiers for grey literature

Catherine Hardman

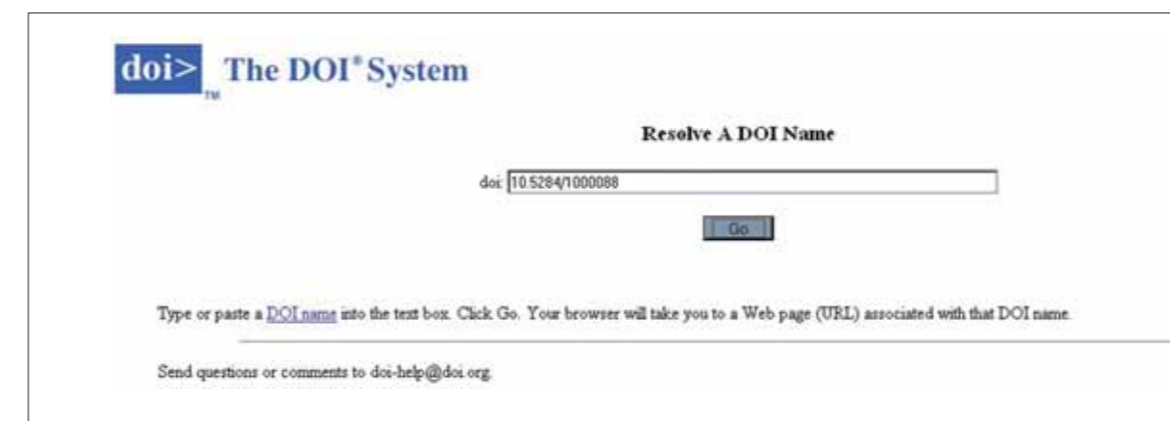
It is over six years since the Archaeology Data Service (ADS) established the Grey Literature Library as a happy bi-product of the use of OASIS. It now contains over 8500 reports, but providing a sustainable bibliographic reference for each report has been a challenge. Now, in association with the British Library, ADS has embarked on a programme to use the Digital Object Identifier (DOI) system to identify, uniquely, its digital content.

DOIs are persistent identifiers which can be used consistently and accurately to reference digital objects and content. They are used to provide current information, including where digital objects (or information about them) can be found on the Internet. Information about a digital object may change over time, including where to find it, but its DOI name will not change. These DOIs provide a way for ADS resources to be cited in a similar fashion to traditional scholarly materials. It is like using a combination of a URL and an ISBN number for reports, such as those held in the Grey Literature Library, that are difficult to reference. By allocating DOIs, grey literature reports can be consistently cited and universally located. The DOI can be resolved by using the DOI Resolver <http://dx.doi.org>, which acts as a look-up service for the current location of the digital object.

Each DOI has metadata associated with it, such as subject, location (URL), publisher, creator, etc. Some elements of this metadata, particularly the location of objects, may change, but the actual DOI name will never change. This allows for a resource's DOI to be permanent while the actual location of the resource can change. Citing a DOI is more robust and permanent than merely citing a URL, since the DOI will always resolve to the current location of the resource. By giving an ADS-allocated DOI to your report there is no change in ownership or copyright; it is simply a way to provide users with a persistent identifier to easily find and cite your work.

With the unfortunate demise of some archaeological organisations and stringent cuts in the public sector, we all need to consider ways in which we can ensure that the outcomes of our work are disseminated; we thereby have the opportunity to receive proper recognition for our efforts. By continuing to use OASIS and making the contents of the associated Grey Literature Library more accessible with the allocation of DOIs, the profession can help to provide joined up and sustainable access to its research results.

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The DOI 'resolver' interface. By inserting the DOI number you will be automatically forwarded to the current location of the resource

Much has been achieved: the Diggers Forum is now the second largest IfA Special Interest Group, with members from across the archaeological spectrum. The work of the committee has had a positive effect upon the general situation, with a greater awareness of pay and condition issues and the work of IfA among junior grades, an increase in IfA membership at student and PlfA level, and more awareness within the IfA regarding the needs and concerns of site staff.

6 YEARS ON

THE diggers forum:

Chris Clarke

The Diggers Forum (DF) is the IfA Special Interest Group committed to creating a positive, sustainable and financially viable career for professional field archaeologists at all grades and at all points in their career.

IN THE BEGINNING

It was towards the end of 2004 that the Diggers Forum was established by a small group of motivated and committed individuals who saw a much needed opportunity that required grasping. The Forum was born through a desire of IfA to engage further with the junior arm of the profession working in the field. For a long time, the perception of IfA among field staff had not been positive, for they saw it as a managers' club working for the betterment of those higher up in the profession with no direct relevance to those at the coalface. By the time the DF was established these perceptions had changed slightly, for those involved within IfA knew that more could be achieved if there was greater engagement with the diggers, communicating the constructive steps IfA was taking and giving them a voice on Council.

REPRESENTATION

Through the dedication of committee members and their willingness to give up free time much has been undertaken over the past six years. We have produced a semi-regular newsletter and written articles for *TA*, in order to inform the membership of

issues and events within the industry, and to give them an opportunity to have their say. A newsletter engaging with field staff is of vital importance since there are few reliable sources of information directed towards them. With more information, field staff have greater ability to make informed decisions which can improve their careers.

Another key role has been representation on IfA Council. In the past year we have fielded up to five individuals, allowing us to represent the views of field staff and contribute effectively on issues such as pay and conditions. DF members are on various IfA committees and working groups, as well as on Validation and Disciplinary Panels. While all this has been going we have been developing contacts within IfA and with other groups including RESCUE, Prospect, BAJR, and FAME. Engaging with such groups gives the opportunity to utilise their specialist knowledge and skills, and to establish dialogues to further the debate on pay and conditions within the industry.

CONFERENCES AND CAMPAIGNING

The Forum has also organised and contributed to events and campaigns, working towards improvements in poor levels of pay and conditions within archaeology. This has involved organising sessions at IfA conferences which focused on Development and Empowerment, and on Training, both of which saw a range of in-depth papers and a healthy attendance. A joint Diggers Forum/Prospect conference was also arranged, enhancing the pay and condition debate and looking for a way forward to create improvements on such matters.

As a direct means of improving recommended minima pay levels, IfA initiated the Benchmarking Scheme to analyse pay levels in associated industries and to calculate the pay differential to archaeology. DF was represented on the Benchmarking working party to assist in directing the process and translating the results into practical outcomes. We have also pushed the issue of campaigning. We hoped to engage with both employees and employers to reach an understanding of the realities of life in the field and the conditions diggers must put up with to participate in a job they have a passion for. This belief led to the publicity surrounding the Living Wage Campaign, which received valuable support from managers and diggers alike.

LOOKING AHEAD

Much has been achieved: the Diggers Forum is now the second largest IfA Special Interest Group, with members from across the archaeological spectrum. The work of the committee has had a positive effect upon the general situation, with a greater awareness of pay and condition issues and the work of IfA among junior grades, an increase in IfA membership at student and PlfA level, and more awareness within the IfA regarding the needs and concerns of site staff.

There is still much to do. Unfortunately, the economic crisis hit just when the results of the IfA Benchmarking Committee were to be incorporated into the IfA wage minima, with the result that pay scales have remained unaltered for the past three years. The DF is dedicated to making sure the Benchmarking recommended pay minima increases

are re-established, and that these values are regularly reviewed so that they ultimately reach values that truly reflect the skills and experience of professional archaeologists. Thanks to an influx of new and eager committee members – Chiz Harward, Sadie Watson, Geoff Morley, Phil Richardson, Gwilym Williams, Andy Towle and Mary Neale – the Forum has re-launched the newsletter and website to incorporate fresh information and ideas. To maintain our pledge to continually review all matters relating to pay and conditions, the next campaign focus is on conditions related to travel and away-work associated with field projects. No one has fully investigated how these conditions vary between organisations and the effect they have on staff, so we have established a survey to record variations in such conditions. Survey responses have now been collated and will be published shortly. We also want to move forward with plans to provide positive news and information for our members using the newsletter, a web presence and local and national meetings. This will include relevant information on our industry, on training, health and safety and welfare and other issues relating to life as a fieldworker.

The past six years has been full of commitment and hard work, combined with the belief that the Diggers Forum has contributed to improving the working conditions of archaeologists across the country. Hopefully, the next six years will see increased success, helping to create an industry of which we can all be proud. If you want to help shape this future then join us and get in touch.

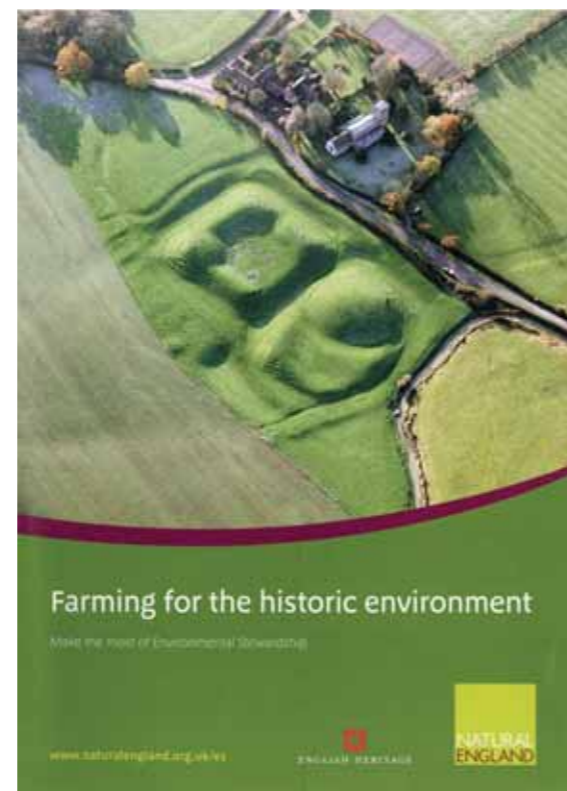
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The introduction of the Common Agricultural Policy (CAP) in 1957 was designed to increase productivity, ensure a fair standard of living for the agricultural community and stabilise markets. Arguably, it did all of these things admirably. However, by the 1980s there were increasing concerns over the extent to which the emphasis upon heavily subsidised intensive production had resulted in mountains (or lakes) of food which was neither needed nor wanted, all of which had been delivered at the expense of the environment. The result was a 'greening' of the CAP through the introduction of production quotas in 1984 and, in Britain, the 1986 Agriculture Act, requiring the Secretary of State to balance environmental issues, including heritage, with the economic health of farming. It also led in 1987 to the introduction of the Environmentally Sensitive Areas agri-environment scheme, and to the launch of Countryside Stewardship in 1991, although specific options for the protection of heritage only came with the Historic Landscapes Initiative in 1992.

ENVIRONMENTAL STEWARDSHIP AT LAST

But in the early years of the new millennium it was the legacy of foot and mouth and a renewed debate over the role of agriculture which led, through the *Policy Commission on the future of farming and food*, to a further massive step-change in policy. The Commission reported that the coverage of environment schemes was too narrow, and that many more farmers would participate if given the opportunity. The result, in 2002, was the *Strategy for sustainable farming and food*, which led in 2005 to the launch of a radically different scheme,

Environmental Stewardship. The major difference was in its coverage. It was no longer restricted to small geographic areas – now any farmer was guaranteed entry if meeting certain requirements. It was also a 'whole farm' scheme, meaning that it would no longer be acceptable to bring a Site of Special Scientific Interest (for instance) into favourable condition whilst damaging its archaeological interest. For the first time, the historic environment was also given top billing as one of the scheme's five key environmental objectives.



PROTECTION FOR ARCHAEOLOGICAL AND LANDSCAPE FEATURES

Six years from the launch there are now over 8500 agreements which include historic environment options within Environmental Stewardship. These cover 100,000ha of archaeological and landscape features, including parkland and historic buildings, and represent a financial commitment across the length of the schemes (which may be up to 10 years) in excess of £59 million. This may seem small against a total available budget for the scheme of almost £2 billion, but it is an enormous improvement over the situation before 2005. It has also achieved many demonstrable results (see Victoria Hunns, *TA 78* 2010).

Under the ESA and CSS schemes only 14% of England's agricultural land was covered. Since 2005 this has risen dramatically to almost 70%. Putting to one side those monuments or features that are now directly benefitting from payments for maintenance or restoration, this also means that all known archaeology on 70% of England's agricultural land is protected (under scheme cross-compliance rules) from destruction for the duration of the agreement. In just six years, this one condition alone has extended a basic level of protection to tens of thousands of features which could otherwise have been swept away.

There have been debates for many years over the structure and role of the Common Agricultural Policy, and this dialogue is ongoing (see Stephen Trow, *TA 78* 2010 for example). Whatever the direction these discussions take, the key to what has been achieved since 2005 has been the goodwill of the farming community, who have acted voluntarily, who by and large can see the wider benefits of the work they are doing, and who can be as passionate about heritage as any historic environment professional.

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Hunns, V 2010 'What have the farmers ever done for us? The role of land managers and agri-environment schemes', *TA 78*, 14-15

Trow, S 2010 'Heritage and agriculture: will the reformed CAP fit?' *TA 78*, 12-13



Scheduling fails to stop degradation, as seen here at Arbury Banks, Northamptonshire, where of half of a prehistoric monument is still under plough. © English Heritage



'Paradise landscapes' in newly-accessioned EU countries such as Rumania (seen here) are now at severe risk under CAP criteria for a functioning market economy. © Merker Roström 2005, Swedish National Heritage Board

COMMUNITY ARCHAEOLOGY: a decade of development

Suzie Thomas



Excavations at Binchester in County Durham include Durham County Council, the Universities of Durham and Stanford, and also local residents and members of the Architectural and Archaeological Society of Durham and Northumberland

The concept of 'community archaeology' has increasingly been used across the archaeological sector, and its growth and popularity have been one of the great archaeological success stories of the decade. Academic publications are emerging that deal with it at practical and theoretical levels, while archaeological contractors regularly include in their work projects that involve volunteers and/or specific community groups. Certainly in England PPS5, and the ongoing debates around its application, indicate that consideration of local and community-based views and wishes will be considered more fully.

Growth in projects

A great number of projects have taken place since 2000, often with grants from the Heritage Lottery Fund (notably under the Local Heritage Initiative, 2000 to 2006). Some projects have been led by professional organisations, such as Dig Manchester, directed by Greater Manchester Archaeological Unit and University of Manchester Archaeological Unit (sadly now gone), until 2007. This gained a high profile, including presentations to audiences in Parliament.

Re-enactors at English Heritage's Festival of History in Northamptonshire – one of the biggest Festival of British Archaeology events of 2010. Photograph: Cherida Plumb



Another immensely successful project, now in its fifth and final year, is Scotland's Rural Past, coordinated and led by RCAHMS, which has trained and formed an unexpectedly high number of local archaeology and history groups in archaeological survey techniques. Other projects have been more 'bottom-up' in focus, with momentum and ideas coming from communities themselves, for example St Asaph Archaeological Society, and Bath and Camerton Archaeological Society amongst hundreds of other examples.

Growth in groups

There has been a significant increase in the number of voluntary groups and societies that are involved with archaeological heritage. In research carried out by CBA in 2009 and 2010 (www.britarch.ac.uk/community/research), the majority of voluntary groups responding to the community archaeology survey had been founded in the past decade. There are now upward of 2200 different voluntary groups engaging with archaeology, compared with just over 400 in 1987.

And young people

There are also clear signs that engagement with young people in particular has grown over the past ten years. Membership of the UK-wide Young Archaeologists' Club (YAC) continues to grow, with YAC-UK members benefiting this year from free or discounted entry to over 180 independent sites and museums; the YAC Pass also contains offers with UK heritage bodies, such as English Heritage, as well as deals with organisations such as the British Museum Press. YAC Branches, the regional youth groups led entirely by volunteers, have increased from 55 in 2001 to 70 branches in 2011, with the number of volunteers involved doubling in that time; YAC volunteers contribute a staggering 37,000 hours of volunteer time every year across the Branch network. The volunteers that participate in YAC also buck the usual trend for voluntary sector activity, with many coming from younger demographics.

More festivals

Another interesting indicator over the past decade is the growth of the CBA Festival of British Archaeology (www.archaeologyfestival.org.uk). Starting in 1990 with ten events for its first outing, the Festival was known as National Archaeology Day, later extending to a whole weekend (National Archaeology Days). After a period known as National Archaeology Week, the event extended to a fortnight in 2009 and was renamed the Festival of British Archaeology. Ten years ago, there were 149 events; in 2010, 760 events were registered. Around 200,000 people participated in the 2010 Festival, including around 35,000 volunteer hours given to organising and delivering events. Some 42% of events were run by voluntary organisations, and 78% by non-voluntary organisations used volunteers.

Research and teaching

In 2010, Bishop Grosseteste University College Lincoln launched the UK's first MA in Community Archaeology, and many other institutions, through both archaeology and heritage studies courses, are increasingly looking at community archaeology as an area of research and as a theme to be taught. IfA too is responding, with the drive to encourage voluntary archaeologists to join, either as corporate or affiliate members. 2011 saw the relaunch of the Voluntary and Community Archaeology Special Interest Group (www.archaeologists.net/groups/voluntary).

Membership of this group is open to any interested IfA member, and also to non-members for a small fee.

And training

The recent Heritage Lottery Fund grant awarded to the CBA to manage the Community Archaeology Bursaries Project (www.britarch.ac.uk/community/bursaries), with support from English Heritage, Cadw and the Welsh Archaeological Trusts, is another great opportunity. In the coming years the project will equip archaeological workers with the skills and experience to engage more effectively in community-led and community-based projects, whether as bespoke 'community archaeologists' or simply as archaeologists with a greater awareness of the importance of and sensitivities around community engagement. Placements are underway for Year 1 in England, Wales and Scotland, with the hosts for Year 2 to be decided in the coming months. The Community Archaeology Bursaries Project is timely in that it recognises not only the importance of the voluntary sector but also the potential for such work to increase in significance over the coming years. This is especially relevant alongside the spectre of redundancies and funding cuts in other areas of archaeological work and also the Government's current agenda of 'localism'.

These are therefore opportunities to raise serious awareness and to celebrate community archaeology, at the same time highlighting the professional support that is needed for community archaeology activities.

Suzie Thomas MIfA

Community Archaeology Support Officer
Council for British Archaeology



Volunteers in a defensive ditch at Buckton Castle, run by the Centre for Applied Archaeology at the University of Salford, one of the Year 1 bursary host organisations

Treasured Places: RCAHMS meets its public

How does a century-old heritage institution make a step change in its relationship with its public? This was the question we asked ourselves at the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) as we approached our Centenary in 2008, and the project that emerged, *Treasured Places*, became for us the most significant of all those we have undertaken in the last decade. As Secretary Diana Murray reflected in these pages in *TA 66* (2007), RCAHMS has been the memory keeper of the nation's built environment since 1908, and our anniversary celebrations provided an opportunity to reach beyond our traditional academic and professional audience and to listen to what the public thought about our work, our collections, and, crucially, their personal connections to their own local historic environment.



The inspiring Tomb of the Eagles, Isbister, Orkney. Crown copyright: RCAHMS

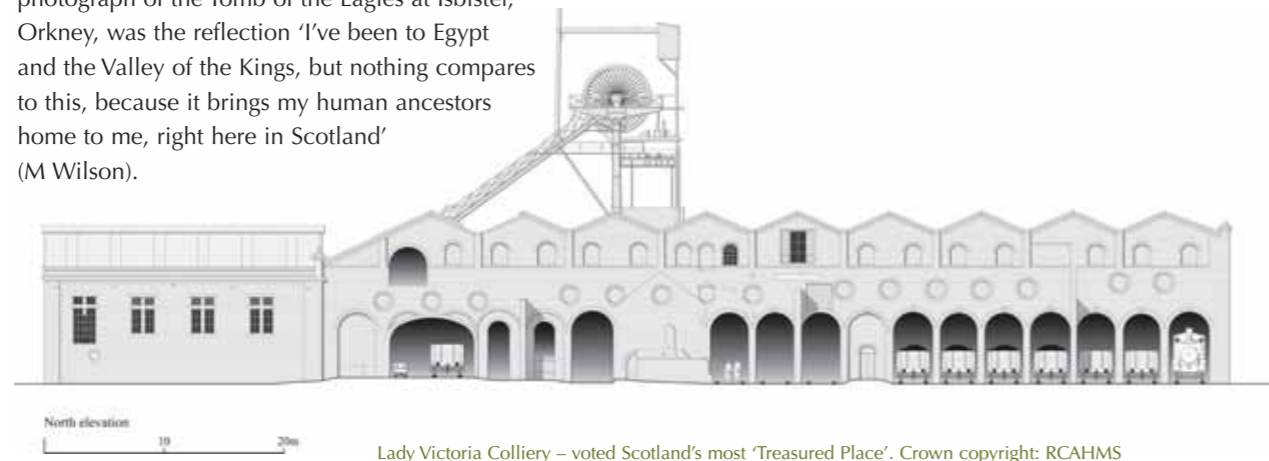
Access to ancestors

With generous support from the Heritage Lottery Fund, we pulled these ideas together into a two-year project (www.treasuredplaces.org.uk) that aimed to highlight our archive and encourage the public to respond to it. We selected a hundred key photographs and drawings from our collections and mounted them on a website where the public were invited to vote for their favourites and to explain this choice. One typical example, inspired by an aerial photograph of the Tomb of the Eagles at Isbister, Orkney, was the reflection 'I've been to Egypt and the Valley of the Kings, but nothing compares to this, because it brings my human ancestors home to me, right here in Scotland' (M Wilson).

Following a newspaper, broadcast and online media campaign, over 20,000 votes were cast and around 500 comments posted. The comments were mostly of a personal, emotive nature, and the eventual winner was a survey drawing of the industrial archaeology museum Lady Victoria Colliery in Midlothian, a place of high social and personal significance for a community still passionate about the loss of a way of life. As one supporter explained

'The Lady is a magnificent monument to what was the life blood of this village. I am very proud to come from nine generations of miners, and I am glad that Newtongrange was chosen to represent the brave men from all over Scotland, who slaved in sometimes dreadful conditions, to put a 'heat in oor hearth' (J Duncan).

As part of the project we guaranteed that items voted into the top ten would have a central place within a major exhibition held at Edinburgh City Art Centre. The exhibition text was complemented by commentary from the public as expressed through the vote. Public reaction to the exhibition was extremely positive, no more so than from one commentator: 'I felt a personal democratic connection with my choice... I was really looking forward to the exhibition ... and I have to admit to laughing in pleasure when I saw my quote on the wall.'



Lady Victoria Colliery – voted Scotland's most 'Treasured Place'. Crown copyright: RCAHMS



Rebecca M Bailey

Treasured Places exhibition, Edinburgh City Art Centre. Artwork created at Orkney workshop. Crown copyright: RCAHMS

Creative Connections

Beyond Edinburgh, the project involved cross-cultural creative workshops the length and breadth of Scotland, bringing material from our collections that related to issues of contemporary significance to the relevant community. To 'unlock' an engagement with the archive material and the issue at hand, each workshop was headed up by an RCAHMS specialist and an external artist and led to a creative output which was showcased in the touring exhibition *Creative Connections*, which had a footfall in excess of 1.2m people. Workshops ranged from Brownies in Elgin investigating Pictish stones and creating an interpretative leaflet, to Orkney where local people learnt about the physical remains of military activity of the Second World War and created paintings inspired by them. As one visitor remarked, '[it is] very evocative of the local issues that would have affected people in the past – this is what I like – history that is tangible and lives.'

The last component of the project, and effectively its legacy, was creation of *My Canmore*, a new social media facility encouraging the public to upload information and images to be viewed and valued alongside our own and other professional material, as part of the National Collection knowledge hub. At the time of writing, our most prolific contributor has just topped 1000 image contributions, and we are delighted to go forward in the belief that this is just the tip of the iceberg.

National knowledge hub

Engagement with social media and online social networks are becoming a significant focus for our work. Our initiatives are being analysed by an Arts and Humanities Research Council Collaborative Doctoral Award student, and are being shared and taken forward through workshops funded by the Royal Society of Edinburgh. Both initiatives are partnerships with the University of Edinburgh. This new approach is changing the way we look at our collection, our data and our engagement with users and potential users. In years to come we expect to be moving away from traditional methods of content creation and towards a user-centered community that contributes to a national knowledge hub in a new and exciting way.

There is no doubt that *Treasured Places* changed us as an organisation. It made us more relaxed, more open, and more adventurous in our relationships with the public. It also told us that people across Scotland, of all ages and backgrounds, feel strong personal connections with their local historic environment, and that we have an important role to play in helping and supporting them to access, enjoy and learn about the treasures in their own back yards.

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'I felt a personal democratic connection with my choice ... and I have to admit to laughing in pleasure when I saw my quote on the wall.'

'... this is what I like – history that is tangible and lives.'

Not Waving but Drowning: the lands that Europe lost

Archaeologists have found many new sites over the last decade, but only once has a whole new country been revealed. The revelation had a long lead-in, for the suspicions of insightful archaeologists could not be substantiated until the right technology was available, in the 21st century. Once this became available, through Petroleum Geo-Services, VISTA (Visual and Spatial Technology Centre at the University of Birmingham) acted fast.



A submerged forest, recorded by Clement Reid, 1913

Few are aware that the North Sea covers a prehistoric landscape that stretched from England to the Danish coast. Yet, between 18,000 and 5500 BC, global warming raised sea levels to the extent that water engulfed a plain larger than the UK. An entire country disappeared under water, preserving its physical remains forever but being lost to memory. A real human tragedy lies behind the disappearance of this immense landscape – loss may have been slow overall, but terrifyingly fast at times.

Curious finds on the Dogger Bank

Rediscovery of these lands began in 1913 when Clement Reid, a geologist retired from the British Geological Survey, published *Submerged Forests*. Reid spent years studying and quantifying fossil plant remains and was interested in chronological and climatic change. One bit of evidence captured his imagination. Around the British coasts are found trees preserved as stumps well below sea level. Known as 'Noah's Woods', evidence of the biblical flood, Reid recognised them as evidence for past sea level rise and linked this evidence with finds in fishing nets on the Dogger Bank, where Reid identified bear, wolf, hyena, bison, horse, woolly rhino, mammoth, beaver, walrus, elk and various species of deer. Reid made an exciting leap: evidence for fossil land surfaces and submerged forests could be extrapolated across the whole North Sea, and he proposed a recreation of the submerged plain on the basis of bathymetry – the

Vince Gaffney

depth of the seabed below sea level, interpreting the seabed above about 36m as dry land while forests were growing.

In 1931, debris in fishing nets 25 miles from Britain included a prehistoric barbed (Leman and Ower) bone point. The skipper took it home and eventually it came into the possession of the Castle Museum in Norwich where it attracted the interest of a young Grahame Clark, and Harry and Margaret Godwin, two dynamic botanists. They concluded that the evidence pointed to a great plain, inhabited by hunters, 10,000 years ago. Archaeological material, bones and stone tools, continued to be recovered in the next few decades, and in 1998 Bryony Coles produced a series of speculative maps of the area, which she called 'Doggerland'.

Seismic data and a lost world

Then, in 2001, during a VISTA annual seminar on the Mesolithic, a slide of the Leman and Ower bone point was shown as evidence for an ancient landscape that archaeologists, frustratingly, could do nothing with. The thought occurred that seismic data generated by the oil and gas industry for mapping mineral deposits might provide useful. One student, Simon Fitch, declared an interest in a PhD on the topic. With advice from Ken Thomson, an expert in the use of seismic data in the School of Geography, Earth and Environmental Sciences at Birmingham, who approached Huw Edwards, Managing Director of PGS (Petroleum Geo-Services), they were given access to 6000 km² of seismic data from the Dogger Bank for a pilot study. Before long, the dim outline of an unknown river emerged on computer screens at Birmingham. This single image offered Europe the opportunity to explore a real lost world at a scale never previously attempted.

Climate change

English Heritage provided a grant from the Marine Aggregates Levy Sustainability Fund, and a further 23,000 km² of seismic data were donated by PGS. The study area was now the size of Wales. A lake, more than 100kms in length emerged at the centre of the new land, surrounded by extensive plains and great river systems. Massive estuaries marked their entry into the lake, marshlands formed at the edge, and low hills, valleys and even individual hillocks could be discerned within the seismic images. However, the climate was changing and these lands

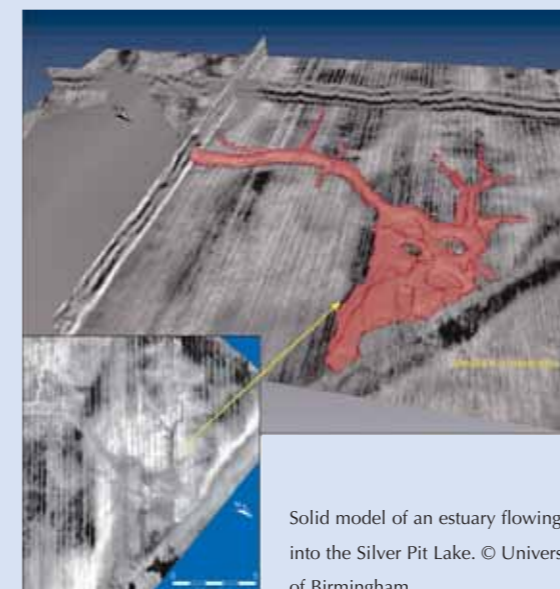
were doomed. As the waters rose the estuaries of the rivers became wider and marshes extended, the sea broke into the great lake and it became a tidal estuary with fearsome rip tides. People fled the plain and there is evidence that the inhabitants of the Britain became increasingly territorial and protective.

Other lost lands

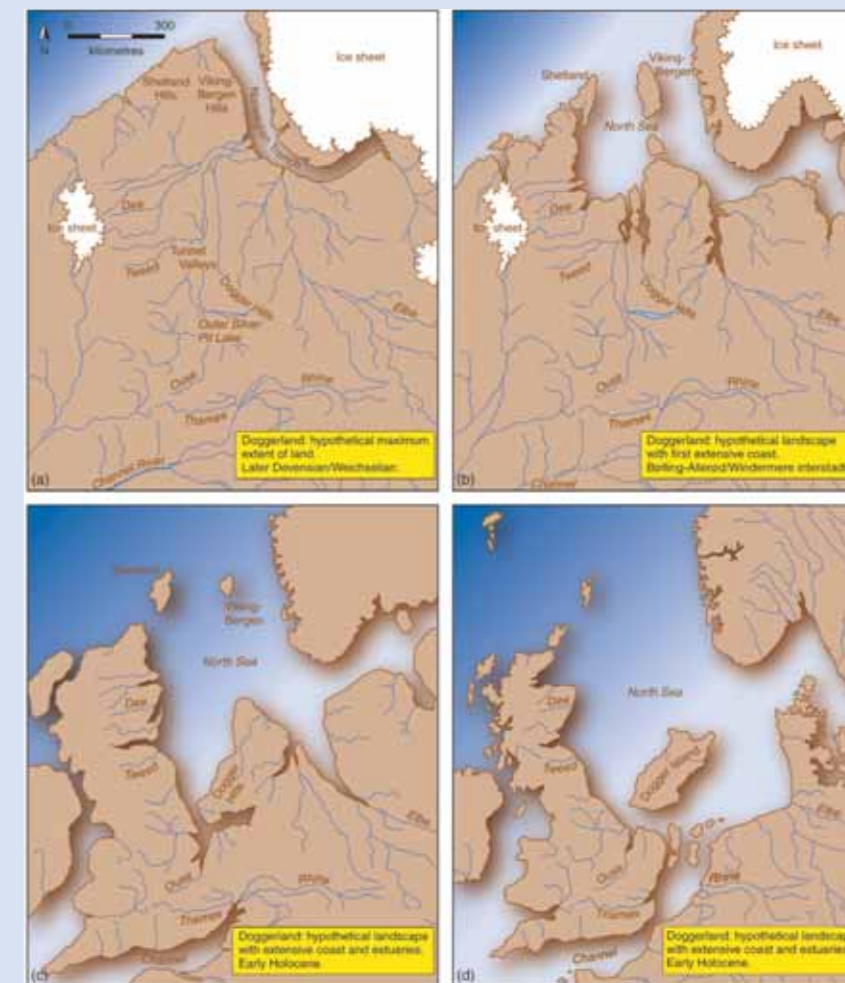
The North Sea Palaeolandscapes project has now been published in two volumes, a technical report and the archaeological context. The American National Oceanographic and Atmospheric Agency funded mapping of another 25,000km² of data, linking English data with the Dutch coast and also work on similar landscapes in the Arabian Gulf. Doggerland was not unique: two larger 'countries' which were lost following the last Ice Age were Beringia, which linked Alaska to Asia across the Bering Straits and the Chukji Sea, and Sundaland, almost the size of India, centered on the Sunda Straits. These vast landscapes are now available for archaeologists to map and explore. There is another point worth emphasising. The current work has only explored the later landscape of the North Sea. North of Doggerland are lands that are older and which were lost to the sea during the later Palaeolithic. These were also inhabited and remain to be mapped. There are even older lands which lie buried deeper and which may contain the evidence for human occupation which we frequently miss on dry land. Much remains to be done.

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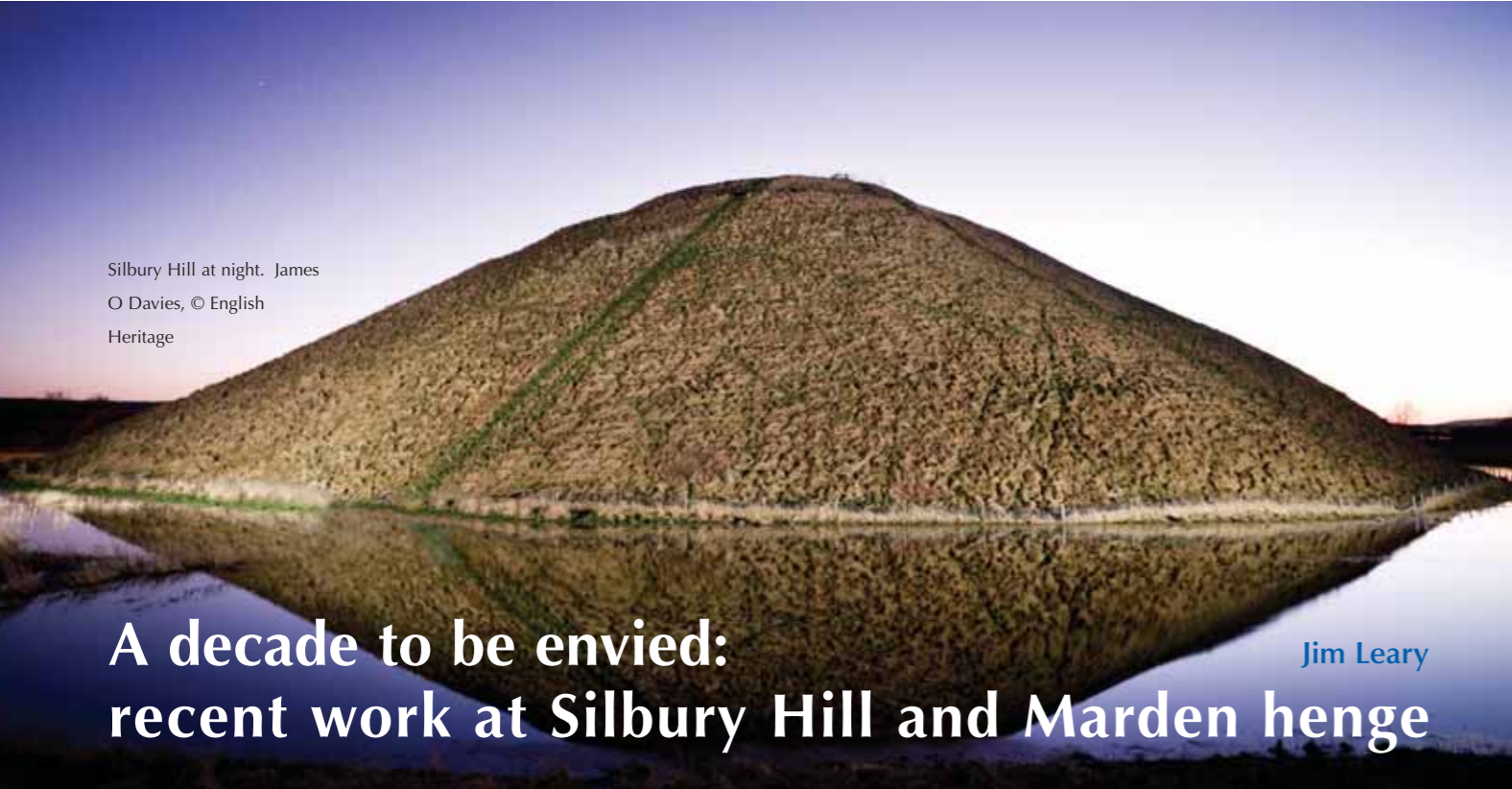
Solid model of an estuary flowing into the Silver Pit Lake. © University of Birmingham



Doggerland, after Bryony Coles



Model of seismic data illustrating Holocene rivers and streams (cerise and blue), depressions or marshlands (green) overlying an earlier tunnel valley (gold). © University of Birmingham



Silbury Hill at night. James O Davies, © English Heritage

A decade to be envied: recent work at Silbury Hill and Marden henge

Jim Leary

The last ten years have been some of the best ever for British prehistory. We have witnessed research at some of our most iconic sites and seen truly exceptional discoveries elsewhere. Thanks to work at Happisburgh in Norfolk Britain now has the earliest evidence for human occupation in northern Europe, extending back almost a million years; we have seen renewed fieldwork at the Mesolithic site of Star Carr; pioneering analysis has revealed the Holocene topography of the North Sea Plain (p18); the modelling of radiocarbon dates in a Bayesian framework have provided new chronologies for the Neolithic period; whilst various surveys and excavations in and around Stonehenge have revealed much that is new about this well-trod landscape. Meanwhile, Richard Bradley and Tim Phillips trowled grey literature for new evidence that transformed our understanding of prehistoric life in many respects. These are just a few of the important prehistoric projects conducted since 2000, and it is not

hyperbole to say that our understanding of prehistory is being revolutionised by them. These have been exciting times.

An upturned pudding bowl

To take one example, Silbury Hill in the Avebury World Heritage Site in Wiltshire, has got to be one of our strangest Neolithic monuments – a vast heap of chalk and earth 31m high, best described as a huge upturned pudding bowl. Archaeologists have long been intrigued by its unusual form and as early as 1743 William Stukeley realised that it must be pre-Roman, since the Roman road swerves to avoid it. In 1776 a shaft was excavated from the summit to the base, and in 1849 a tunnel was dug from the side through to the centre. This tunnel was re-opened and enlarged between 1968 and 1970 by Richard Atkinson as part of a BBC-sponsored project.

Grass, moss and insects

On May Bank Holiday in 2000 a hole appeared on top of Silbury Hill, for few of these investigations were suitably backfilled. Similar collapses had occurred in the 1920s and '30s. A major project commenced to conserve the Hill, culminating in 2007 with re-opening the 1968 tunnel. The aim was to fill all known voids to stabilise the mound, and this provided a unique opportunity to instigate a parallel archaeological project to record the tunnel sides and take samples. During the investigation an exhaustive environmental sampling programme was undertaken, revealing grass and moss still green, and insects in an incredible state of preservation. An in-depth dating programme showed that the Hill was

completed by the late 24th or early 23rd centuries BC, taking four or so generations.

New interpretation

Atkinson's work noted three main construction phases, but our research showed many more. In fact, Silbury developed, mutated and evolved. This has considerable implications for its interpretation. Previous thinking has focused on the final form, as if the builders had some sort of blueprint; instead we propose that Silbury was not a single construction project but the focus for an array of activities – activities that may well have taken quite different forms. Those who began it cannot possibly have known how the final manifestation of the monument would appear, or what could be seen from the summit as it reached any particular height.

Marden henge

Marden henge, a few kilometres south of Silbury, is another important monument that has seen refreshed interest lately – it has also had its fair share of antiquarian damage. Richard Colt Hoare and William Cunnington focused on a large mound known as the Hatfield Barrow in the middle of the henge in 1806. It was said to be the second largest in Wiltshire after Silbury, and they excavated a shaft from the top to bottom. Collapse ensued and within a few years the mound was entirely levelled. Geoffrey Wainwright carried out the only recent work within the henge prior to ours – in 1969, the same time that Richard Atkinson was digging into Silbury.

Neolithic building

Following concern for future management and conservation, a project was developed that involved topographical, geophysical and aerial surveys, as well as excavations to resolve questions raised during these surveys. The work showed that Marden, like Silbury, developed organically over many phases and not to any overall plan. To the south of the henge we found a wonderfully well-preserved inner henge, and on the bank of this was the floor of a Neolithic building. The surface was rectangular, with the central part sunken and dominated by a large hearth. Just outside and on either side of the building were two large spreads of cultural debris containing pottery, bone needles, pins, awls and flint tools. The floor surface represents one of the best preserved Neolithic buildings in England – we never imagined that we would find anything like that.

In the last ten years Silbury Hill and Marden henge have, like many nationally and internationally important sites, undergone comprehensive archaeological review. But looking forward it is difficult to know what the next ten will hold. With the worst recession since the 1930s and extensive government cuts, few archaeologists will escape the impact. Museums, university departments, and other organisations are shrinking, and funding bodies have had their budgets significantly pinched. Time will tell how much research will continue, and what the impact on conservation and management of our monuments will be. Perhaps we will come to look back on the opening decade of the 21st century enviously, as a golden age of archaeological investigation.

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Marden henge from the air. Damian Grady, © English Heritage

Working inside Silbury tunnel, 2007, showing how closely the miners, engineers and archaeologists worked. Duncan Stirk, © English Heritage



BEADS, BROOCHES AND BLACKSMITHS: THE IRON AGE CRAFTSMEN OF CULDUTHEL

Growth of Inverness over the past decade has led to many discoveries, the greatest of which was at Culduthel Farm on the southern outskirts of Inverness in advance of a housing development for Tulloch Homes Ltd. Here, an astonishingly well-preserved Iron Age settlement contained evidence of iron, bronze, glass and lead industries, on a scale not previously seen in mainland Scotland.

Exceptional preservation

The settlement was on a terrace commanding the valley at the top of the Great Glen, dominating the surrounding landscape. Seventeen roundhouses were excavated, several preserved to an exceptional degree due to hillwash sealing the Iron Age ground surface and sparing it from plough damage. All were constructed with an internal post-ring and most had an entrance porch facing north-east, away from bitter prevailing winds. All were large but two in particular stood out for their size and complexity. They both had exceptionally thick posts in their internal post-ring, and evidence for dry stone walling and wooden decking. The larger house measured 19.5m in diameter, one of the largest found in Scotland. It had three phases, each grander than the last. In its final phase it had an elaborate turf and stone façade, giving an almost monumental appearance from the front. An enclosed space within this structure to the side of the entrance may have formed a stable or chariot shed. All this suggests the occupier was of great importance, a fact backed up by the quality of artefacts recovered, some deliberately deposited during construction and destruction of the house.

IRONWORKING CENTRE

One reason for this profligacy became clear when we realised that not all the roundhouses had a domestic function. We discovered the most complete Iron Age iron-smelting furnace on the Scottish mainland in one roundhouse, constructed with large edge-set stones fused together with a crust of iron slag, the remains of the last firing still inside. There were a further seven furnaces, some with part of a clay superstructure adhering to the top. Waste from this process littered the site. Over 250kg was collected, with each furnace containing up to 10kg – Culduthel must have been a significant centre for ironworking.

FROM ORE TO ARTEFACT

The artefacts form one of the most significant Iron Age assemblages in Scotland and work on them, coordinated by the National Museums Scotland, has been ongoing for three years. There were over 150 iron finds, including tools (especially for metal-working), weaponry (two daggers and a spearhead) and an unusual linch pin, while offcuts and unfinished items give a vivid picture of the blacksmithing process. In conjunction with slag and furnace evidence, it gives an all-too-rare picture of the iron-working cycle, from ore to artefact. Metallographic examination has shown the iron to be of notably high quality. Analysis of bloom fragments showed these were consistently medium or hyper-eutectoid steels.

Ross Murray

BRONZE MANUFACTURING

Though iron seems to have been the main industrial focus, the site also produced a large non-ferrous metalworking assemblage, including crucibles and mould fragments. There were also several high-status copper alloy artefacts including an intricate cruciform strap mount with relief decoration, broadly dated to the 1st-2nd century AD, a Romano-British bow-and-fantail brooch decorated with inlaid rings of blue, red and yellow enamel and a decorated sword hilt guard. One curious find was an ingot mould made from a reused rotary quern. Into one side had been carved fairly typical bar and dish moulds, on the other was a mould shaped like a fish or vase for casting an as yet unknown object.

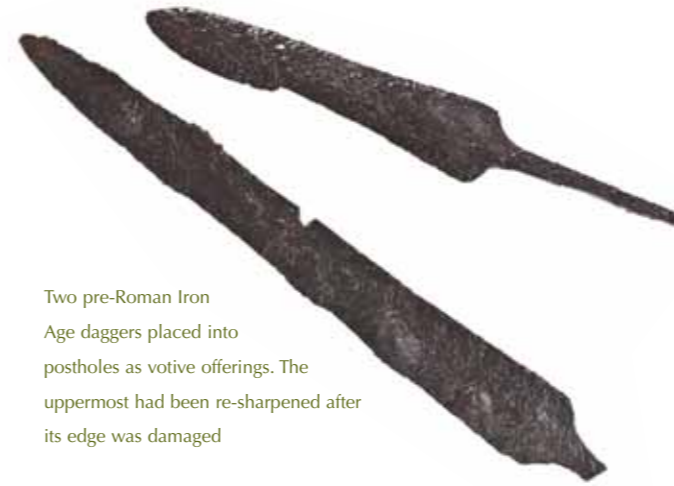
GLASS BEADS

There was evidence for production of glass in close association with the non-ferrous metalworking, suggesting the work of the same person or two specialists working closely together. The glass-working debris includes offcuts from glass rods and molten waste resulting from production of glass beads and enamel for decorating metal objects – the first secure evidence of Iron Age glass-working from a Scottish site and only the fourth from all Britain. Radiocarbon dates and artefactual evidence indicate that the bulk of the industrial activity at Culduthel was in the late centuries BC and just into the first century AD, and though there is evidence of contact with the Roman world the industrial technology is distinctly pre-Roman.

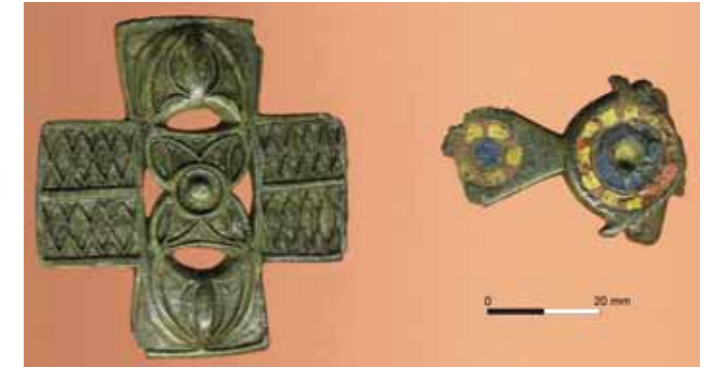
Superlatives abound when discussing Culduthel. It will be a key reference point for future study into many aspects of Iron Age society, some poorly represented in the archaeological record. The site is proof that with some luck and an understanding client, developer-funded archaeology can hold its own with research archaeology in terms of new discoveries and important new work.

Ross Murray AlFA

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Two pre-Roman Iron Age daggers placed into postholes as votive offerings. The uppermost had been re-sharpened after its edge was damaged



A rare cruciform harness strap-mount typical of British Celtic art of the first two centuries AD (left) and a Roman-influenced disc and fantail brooch, both manufactured on-site



Post-excavation view of the grandest roundhouse at Culduthel, located at the heart of the industrial area



Iron-smelting furnaces in a single workshop, dated between 180BC and AD120



Excavations at Culduthel from the air. © The Trustees of the National Museums Scotland

Rituals, hoards and helmets:

Very occasionally a single discovery comes along that alters our perception and understanding of a particular period of the past. The late Iron Age ritual focus at Hallaton, Leicestershire, is such a site. Even in an era where large-scale, developer-funded excavation has become the norm, there can be little doubt that its discovery and investigation will rank as one of the most important and instructive archaeological projects carried out in Britain at the start of the 21st century.

Discovery

The site was discovered by a local fieldwork group, one of many set up over the last 30 years by Leicestershire County Council to encourage people to become involved in finding out more about Leicestershire's past. After a fieldwalking session in November 2000 which produced Roman and late Iron Age pottery and animal bone, Ken Wallace, who is also an amateur metal detectorist, recovered more than 200 coins from the field, identified by the British Museum as late Iron Age, along with contemporary Roman denarii. Under the 1996 Treasure Act the discovery was reported to the coroner. With more coins in the ground the site was in danger from illegal metal detecting once word got out, and so

English Heritage agreed to fund excavations and the University of Leicester Archaeological Services (ULAS) started work in 2001. Further seasons were funded by ULAS, the British Museum Townley group and the BBC. Post-excavation and publication was partially funded by English Heritage, the Society of Antiquaries of London and the Leicestershire Archaeological and Historical Society. Over five seasons of fieldwork produced evidence for ritual, with numerous special deposits of animal bone and metalwork dating to around the time of the Roman invasion.

Gold coins and cavalry helmet

Hallaton does not fit easily into the tradition of late Iron Age shrines in southern Britain. It is a large open air site on the edge of a hill, marked by a polygonal boundary ditch with an eastern entrance guarded by ritually-bound dogs. Although ritual activity may have begun in the 1st century BC with a hoard of gold coins, the main activity occurred during the early to mid-1st century AD. Ritual deposits of over 5000 coins in 17 separate hoards, and silver metalwork including a 1st-century AD Roman cavalry helmet, had been carefully positioned in specific zones. Remarkably in a plough zone, discrete hoards had retained their integrity. Although such wealthy offerings and an entranceway to restrict access to the interior suggest use by elite individuals, a large group of pig bones opposite the entranceway and the implication that individual hoards comprised a



Mid-1st-century silver bowl, deliberately placed within a boundary ditch



1st-century Roman helmet and associated Iron Age and Roman coins under investigation at the British Museum conservation laboratory

Conquest-period rituals at Hallaton, Leicestershire

mixture of coins from contemporary groups in the region strongly suggest that this was a communal site for particular ceremonies. Analysis of 6921 animal bones by Jennifer Browning indicates that 97% were pigs killed before they were 18 months old. While all anatomical elements were present there was a clear absence of right forelimbs, which perhaps were deliberately separated and buried elsewhere. The conclusion is that this is evidence of offerings and feasting, for pigs are associated in Celtic myth with feasting and the underworld, and sacrifice and/or feasting on young animals of a selected species appear to be a particular feature of shrines. An Iron Age bronze tankard handle from topsoil above the pits provides further evidence for ceremonial feasting.

Community Archaeology network

Discovery and investigation of the site owes much to the success Leicestershire's Community Archaeology network and shows how successful co-operation between professional archaeological organisations and local fieldwork groups can produce remarkable

results. With the help of an HLF grant an exhibition on the discoveries is currently on display at the Harborough Museum and publication of the work is imminent.

This is the first scientifically excavated hoard site of this period ever undertaken, and without excavation the archaeological context could easily have been misinterpreted as a single dispersed hoard. The wealth of information retrieved raises questions about the interpretation of other metalwork deposits which have not had the advantage of several seasons of excavation and a persistent local fieldwork group.

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The hoard of Iron Age and Roman republican coins under excavation

Commercial archaeology and Roman Britain: *what have we learnt since 1990?*

Michael Fulford and Neil Holbrook

Commercial archaeology, by responding to the archaeological implications of development, is concerned with the steady accumulation of knowledge from what may appear to be unexciting locations. A new research project, looking at the totality of what we have learnt about Roman Britain from developer-funded work since PPG 16, is showing how this work, when considered in aggregate, can rewrite the text books.

Around 90% of archaeological fieldwork in Britain over the last 20 years has been prompted by the planning process. Many of these investigations are small, such as evaluations and watching briefs, but there have been some enormous investigations associated with major infrastructure schemes, mineral extraction and residential development. While the results of substantive mitigation work may be published in monographs and journals, pre-determination projects or small-scale mitigation work are normally documented as grey literature; these are in theory publicly accessible, but in reality local communities and academic researchers alike find them unfamiliar and make comparatively little use of them. The need to make the results of developer-funded work more accessible has been recognised by English Heritage and others in the archaeological



Commercial archaeology has generated much new data about areas of the UK which were little studied 20 years ago. At this quarry archaeological investigation revealed a previously unsuspected Romano-British landscape on the Warwickshire claylands, where little previous work has occurred and which is not particularly susceptible to aerial or geophysical survey. Photograph: AerialCam

community for some time now, and the OASIS website has been a positive development. Interest in using commercial data to inform fresh accounts and new perspectives on the past has also increased over the last few years, and Richard Bradley has recently concluded that syntheses of British prehistory based purely upon conventionally published evidence contain serious lacunae in important areas.

Reflecting knowledge?

We have been working with English Heritage since 2007 to assess the research potential of grey literature in the study of Roman period in England, working as a partnership between academia and the commercial sector. Michael Fulford has been directing Silchester excavations since 1997, while Neil Holbrook has overseen the work of one of the UK's larger contracting organisations for the last 20 years. Our main aim was to investigate how the results of commercial archaeology have informed regional and national synthesis. Do the latest accounts of Roman Britain reflect knowledge gained in the last 20 years, especially where this nuances, or even contradicts, established theories derived from earlier 'classic' excavations?

6600 interventions

We assessed the number of investigations which encountered Roman remains and the proportion that reached conventional publication, and then assessed in more detail the research potential of grey literature in four pilot areas, to act as a springboard for grant applications to roll the project out nationally. A paper summarising our main conclusions will be published in the autumn, and assessments of the contribution to knowledge of commercial archaeology in the pilot areas will appear in county journals for Essex, Somerset, Warwickshire and Yorkshire. We estimate that around 6600 interventions encountered Roman remains in England between 1990 and 2004, and that 30% of these involved excavation, a scale of archaeological work greatly exceeding anything that had gone before. There was a marked concentration of Roman evidence in the south and east, due to more development in these areas, ease of dating to the Roman period there, and underlying differences in the density of activity.

Rural sites

The contribution of developer-funded Roman archaeology is without question greatest for rural settlements. With the exception of London, where interventions continue to shed important new light, there have been few major interventions in town centres compared with the 1960s to 1980s, recent work in Canterbury and Leicester being notable exceptions. However, there have been major

developments in our knowledge of the use of suburban space of both large and small towns. Spectacular discoveries are occasionally made, such as Britain's first circus in Colchester (p28), but more routine knowledge of cemeteries and mortuary practice has increased significantly. New approaches to the analysis of accompanying grave goods in relation to ethnic origin, as well as research on bone chemistry, are advancing knowledge of both diet and the origins of urban populations.

Settlement and landscape data

In the countryside the scale and volume of investigation has generated an increase in knowledge of several orders of magnitude, almost entirely due to PPG 16/ PPS5. Work on non-villa settlements, ranging from single farmsteads through to nucleated villages, has formed a vital counterbalance to the focus of earlier work on villas. It is these farmsteads which would have been home to 95% or more of the rural population of Roman Britain; there were vastly more roundhouses than villa houses in the province. Large-scale developments have also allowed us to gain an understanding of the development of field systems and trackways. After 21 years we have an enormous and challenging quantity of settlement and landscape data to synthesise, and we urgently need to review our research aims in relation to the agricultural economy of Roman Britain.

Commercial archaeology has its supporters and detractors, and the latter certainly gain support from the occasional own goal. Nonetheless our research shows that the vast quantity of new data does have value, although the quality is variable. Commercial archaeology should be about knowledge creation, and it would seem that we are only just beginning to realise how much we have learnt since 1990.

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Cotswold Archaeology 2008. 'Assessing the research potential of grey literature in the study of Roman England', *Archaeology Data Service*, http://ads.ahds.ac.uk/catalogue/adldata/arch-811-1/preservation_dissemination/pdf/2205_Roman_Grey_Lit_Stage_1_Report_Jan_08_PDF.pdf (31 Dec 2010)

Fulford, MG and Holbrook, N 2011 forthcoming. 'Assessing the contribution of commercial archaeology to the study of the Roman period in England, 1990-2004', *Antiquaries Jnl* 91



Roman rural burial tradition is one area where knowledge has increased dramatically as a result of developer work. It used to be thought that rural cemeteries hardly existed in Britain. Thanks to exploration of the periphery of settlements we now have far more information, and it is routine to find a scattering of burials in the landscape. This example is of a rare tradition known as bustum burial where bodies were burnt on pyres above open graves. © Cotswold Archaeology



The majority of people in Roman Britain lived in roundhouses rather than in towns or villas. The prevalence of these houses, both geographically and chronologically, has led to changing views on the social organisation and structure of rural communities in Roman Britain. Photograph: AerialCam

Developer archaeology always has the potential to turn up unique discoveries. This glass bottle accompanied the body of a young woman in Gloucester. It was made near Cologne and is first example to be found in Britain. Advances in bone chemistry now present real opportunities to investigate origins and mobility in ancient populations. Might the woman have come from Germany? © Cotswold Archaeology

A CIRCUS COMES TO COLCHESTER

Philip Crummy

It had been a long preliminary meeting with RMPA Services, but there was a lot at stake. The redevelopment of Colchester Garrison was to cost (literally) billions of pounds and the place was full of archaeological remains. Much was discussed but we all knew what this was about. The chairman eventually asked 'What is the *worst* thing you could find – the very worst thing?' There could be no doubt – 'An amphitheatre' I confidently declared. 'A Roman amphitheatre'.

I was wrong by about a quarter of a mile. The fabled amphitheatre remains elusive but, amazingly, we found a Roman circus instead, the only one as yet known in Britain. This is certainly not something a client will want to hear, but fortunately this story has a happy ending. The implications for the development could have been devastating, so it was crucial to establish as soon as possible if we really had found a circus and where exactly it had stood. There was much public interest and the developers were thinking about contingency plans. We had said we had found a circus, so we had to prove it. Sets of robber trenches over 300m apart looked suspiciously similar and had led to a fantastic eureka moment when we realised what we might be dealing. To prove it, we needed to dig small trenches outside the development area. Small sums of money were obtained from external sources, trenches were dug in key positions and, over the next few months, a plan of the whole building emerged.

Largest entertainment building

Chariot racing was the oldest and most popular sport in the Roman world. Circus games originally consisted of chariot racing and boxing, with athletics and wrestling added in the 2nd century BC. The circus was the largest of all entertainment buildings in the Roman world and comprised

an elongated oval track flanked by tiers of seating (*cavea*) with a low barrier (*spina* or *euripus*) running down the centre to prevent collisions. Turning posts (*metae*) were placed at either end of the central barrier, and an obelisk (in some cases from Egypt) might be erected in the centre. The open, slightly-curved end contained a row of starting gates (*carceres*). The Circus Maximus, the largest and most monumental of these structures, had space for at least 250,000 spectators.

Glass and pottery vessels decorated with scenes from chariot races already found in Colchester showed that people knew about circuses, but nothing structural had previously been found. Our circus proved to be about 450m long and 71.1–74.2m wide (excluding buttresses), comparable with circuses known throughout the Roman world. Almost all that survives of its walls are foundations, and most of these were robbed, probably in the early medieval period. Dating evidence is still limited and imprecise, but as far as can be judged, construction did not start before around AD 125 and perhaps lasted for no more than about 150 years.

Marvellous opportunity

The Roman circus was indeed 'worse' than an amphitheatre but its presence does not seem to have caused the developers any serious problems – instead it became a marvellous opportunity for all concerned. The public open spaces were reconfigured to leave the footprint of the circus clear of new building works and the numbers of houses was unaffected. The developers (Taylor Wimpey) have

been very supportive and, hopefully, we have helped make it easy for them too. The same is true of the Army and RMPA Services Ltd, the company behind the redevelopment of the whole Garrison. Public interest has been immense. We are working towards setting up an interpretation centre on the site and a scheme is being devised in conjunction with Taylor Wimpey and Colchester Borough Council whereby the complete circuit of the building will be marked out on the ground. A public appeal for the centre raised almost a quarter of a million pounds. But there is a long way to go before the centre is complete and the circus remains are interpreted for all to see. Please follow progress on our website at www.thecolchesterarchaeologist.co.uk and pay us a visit in a few years' time when, hopefully, everything will be up and running.

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Published summaries (by P Crummy):

2005 'The circus at Colchester (*Colonia Victricensis*)', *Journ Roman Arch*, 18 (2005), 267–77

2006 The Circus comes to Britain, *Current Archaeology*, 201, 468–75

2008a 'The Roman circus at Colchester', *Britannia*, 39 (2008), 15–31

2008b 'An update on the excavations (2005–7) on the site of the Roman circus at Colchester', *Journ Roman Arch*, 21 (2008), 336–9

2009 The Roman circus at Colchester, England, in Nelis-Clément, J, & J-M Roddaz (ed), *Le cirque romain et son image*, Actes du Colloque international tenu à Bordeaux du 19 au 21 octobre 2006



Excavating part of the semi-circular end of the circus

RMPA Services Ltd built and now manages the new Colchester Garrison. Taylor Wimpey is the main developer of the alienated land for the Colchester Garrison project. The excavations have been carried out on behalf of both companies by the Colchester Archaeological Trust. Overall archaeological management for the project is by consultants RPS. For a detailed report see <http://cat.essex.ac.uk/summaries/CAT-0412.html>.

The circus superimposed on modern Colchester



Reconstruction of the Colchester circus by Peter Froste

Roman monuments in guardianship: revealing a fuller picture



This piece of apparent standing wall at Richborough had fallen from the east wall of the Saxon Shore fort as a block, executed a complete roll, and come to rest in the mud upright, with its outer face facing inwards!

Research excavations by the Archaeology Projects Department of English Heritage in the last decade have included three major Roman sites where new information was vital for modern presentation and interpretation. These sites were Roman forts at Richborough in Kent and Birdoswald on Hadrian's Wall, and the Chester amphitheatre.

Richborough and its afterlife

Richborough, where investigations were initiated with Martin Millett, then at the University of Southampton, is known as a military site because of its Conquest and Saxon Shore periods, its intervening use as a port and town being poorly understood. The only clue was a huge triumphal quadrifons arch that marked the gateway to the province of Britain and stood at the heart of the town. Geophysical survey revolutionised our understanding of the extent of the town, revealing a settlement of some 21ha, and we were then able to investigate the relationship between the town and the silted Wantsum Channel, the context and date of a Roman temple, evidence for various prehistoric features, and the morphology of Second World War defences. Work around the collapsed east wall of the Saxon Shore fort showed that silting of the Channel was followed by colluviation, followed by collapse of the fort wall. The surprise was that, following the wall's collapse, it was used as a small dock in the 15th century, a period when the site was thought to be totally disused. This reuse provided a TPQ for the sequence of natural processes and the wall collapse.

Understanding Chester amphitheatre

2003 saw much debate over the future of Chester amphitheatre. Discovered in 1929, saved in the 1930s, the site was extensively excavated in the 1960s and 70s by FH Thompson, and its northern half laid out for public display. Debate was fuelled by construction of a new Civil Court building, whose car park impinged on the amphitheatre. Small-scale excavation by Keith Matthews re-opened serious questions about the preservation and interpretation of the building, but there was insufficient evidence to inform future management. Local pressure to excavate and display the whole amphitheatre, involving demolition of Dee House, an 18th-century building overlying the south *cavea*, was strong. Chester City Council (which owns the site) and English Heritage (which manages it in guardianship) jointly resourced a project to understand the archaeology of the amphitheatre, including post-Roman deposits which had been machined away in previous work, and the effects of the amphitheatre on the medieval and later townscape. The result would be a holistic data-set on which to base decisions.

The excavation produced spectacular results, overturning the conclusions of earlier excavators. Totally unexpected was a late Iron Age landscape beneath the *cavea*. A round house and four-post structure were excavated, and, extraordinarily, a field system including the earthworks of Iron Age cord rig agriculture was perfectly preserved. Contrary to Thompson's conclusions, the first amphitheatre, probably built in the AD 70s, had stone arena and outer walls, with an earthen bank *cavea*. Around AD 100, timber-framed seating was inserted, based on prefabricated nailed frames which were preserved in mineralised condition. External stairs affording access to the upper seating were found. Around the amphitheatre were dumps of sand, raked from the arena after events, interleaved with the postholes and floors of temporary stalls. This unique evidence for activity outside an amphitheatre was preserved within the walls of a second amphitheatre, probably dating to the mid 2nd century. This was a major public building, with *vomitoria* entrances and a pilastered façade – by far the most impressive amphitheatre in Britain. In the centre of the arena was a stone block with an iron fitting secured with lead, probably an iron ring to tether animal victims of the spectacles. The arena surface had also been cut away by phases of post-Roman timber buildings and pits; evidence for occupation at the time when several entrances

were blocked. It may be that the 7th-century church of St John was built to serve this settlement.

The amphitheatre walls were robbed in the 11th century, almost certainly for stone for conversion of St John's into Chester's first cathedral. The amphitheatre then disappeared, though it was probably part of the precinct of St John's until the Dissolution. Evidence for feasting in the Tudor period, the siege of Chester in the English Civil War, and 18th-century gardens attached to mansions, including Dee House, brought the site's story up to the present. After all this work, we were able to invest in well-informed modern presentation of the site for the public.

Military cemetery

Birdoswald, a fort on Hadrian's Wall, has been the subject of much excavation in the last two decades. In 2008 the river cliff on which the fort cemetery is located slipped, part of a continuing process of erosion, and rescue excavation was needed to create an archaeology-free area 12m deep along the cliff edge. The work, mounted in collaboration with Ian Haynes of the University of Newcastle and including training opportunities for students, was the first controlled excavation of any cemetery on Hadrian's Wall. It revealed a road from the *vicus* with an enclosure on one side which contained many different types of cut features, some stone-lined, some formal cists, some containing complete pots, others simple holes. All contained charcoal and cremated bone, and pending full analysis these are referred to as 'commemorative deposits'. In the entrance to the enclosure were two inhumations dating to the late 4th century or later that were perhaps deliberately placed to 'seal' the entrance.

Management and presentation on these major monuments, together with public engagement in the processes of excavation and decision making, has benefited greatly from this research. Our understanding, not only of these sites but of the effects of Roman rule in Britain as a whole, has also moved on immensely and can be appreciated by visitors and scholars alike.

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Excavating Chester amphitheatre in 2004, at the moment all post-Roman archaeology had been removed and only amphitheatre stratigraphy remained



Exposing mineralised timber frames of amphitheatre seating at Chester



Computer reconstruction of the first (above) and second amphitheatre at Chester, by Julian Baum



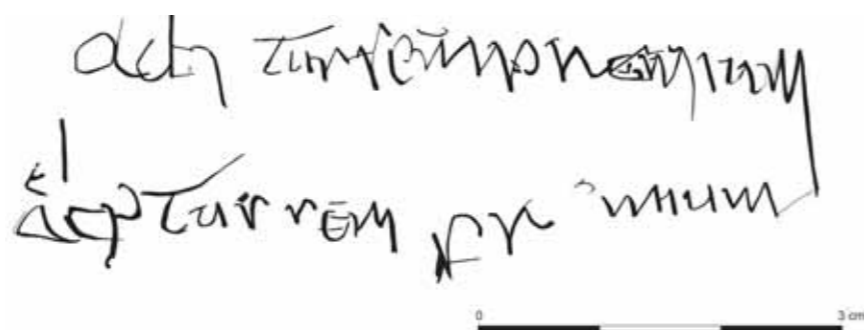
The Adeptus fragment

Literacy and learning: children at school in the early Historic period

Christopher Lowe

Iconic images, Latin, Gaelic and ogham inscriptions, carved stone crosses and more gaming boards than you could shake a stick at – these were just some of the highlights of Headland Archaeology's Inchmarnock project.

Inchmarnock is a small island off the west coast of Bute in the Firth of Clyde. Between 2000 and 2004 a programme of survey and excavation of multiple sites throughout the island was undertaken as part of a wider environmental audit on behalf of its new owner. Among sites investigated was a rock shelter with late Iron Age and early medieval occupation deposits, medieval corn-drying kilns, and a building platform on which a 17th-century turf longhouse was erected, masking medieval and early medieval activity. But the key site to understanding the island's history is the 12th-century church whose robbed-out foundations were left partially exposed after local excavations in the 1970s. The Early Christian origins of the site have long been recognised through discoveries of early cross slabs; now radiocarbon dates indicate activity from at least the third quarter of the 1st millennium AD. A late medieval literate presence, possibly associated with regulation of pilgrimage activity on the island, is also clearly evidenced.



Script and scribbles by primary school children

The 2000–2004 excavations have not only identified a probable earlier stone church but also a much earlier monastic settlement, specifically the detritus associated with a school-house where novices were taught to read and write, as well as compass-work and instruction in elementary design and decoration. This marks a major breakthrough in our understanding of how education was organised at this time. Incised and inscribed slate fragments from Inchmarnock form the largest assemblage of such material from the British Isles. It includes examples of script, sketches of boats, buildings, animals and people, as well as geometric motifs, doodles and scribbles. It is of particular importance for its implications for monastic schooling and design, as well as providing an insight into the age of the scholars whose handiwork we now have. The sketch drawings would be consistent with the work of children of primary school age, about 7 to 11. This also provides an insight into the practice of fostering,

a familiar feature of early Irish secular society that was quickly seized upon by the early Irish Church as a means of providing income and extending influence.

Ogham and Latin

Epigraphic evidence suggests that some inscriptions could date to the early 7th century. One of the earliest pieces, from the monastic enclosure ditch, is a rough water-worn slate cobble, possibly a prayer-stone, on which the name Ernán has been written no less than three times. Ernán is the saint commemorated in the name Marnock, from the Gaelic familiar form of Mo-Ernán. Meanwhile, from the metal-working area near the church came a fragment of an incised slate board datable to around 750. On one side was a curvilinear cross-motif, set beside an ogham alphabet; on the other were two lines of almost identical Latin text, identifiable as a line of octosyllabic Hiberno-Latin verse: *adeptus sanctum praemium*, 'having reached the holy reward'. This is a unique survival, a line of verse from a hymn that formed part of the *Antiphony of Bangor*, a late 7th-century liturgical commonplace book and obviously on the 'Inchmarnock curriculum'. The same stone also gives our first evidence for informal, non-monumental use of ogham alongside Latin, and provides evidence of training and instruction in both.

Abduction scene

But perhaps the most iconic image is the so-called 'Hostage Stone', found as two conjoining pieces, roughly 4m apart. The stone appears to depict three armoured warriors leading a fourth figure to their boat. The warriors are marked out by chain-mail armour, weapons and their generally wild appearance; the fourth figure is dressed differently and holds in front of him what may be a house-shaped reliquary shrine or silk reliquary purse. Presumably the reliquary defines the figure's ecclesiastical office, as military characteristics define his abductors. The image speaks volumes for the dangers ever-present to island-dwellers in the Firth of Clyde in the late 1st millennium AD.

This is a key site, and the inscribed slate assemblage is nationally important for what it can tell us about the chronology of inscriptions and also the cultural connections of Ernán's foundation; clearly, Inchmarnock looked to the Gaelic west rather than the Brittonic east, with its seat at Dumbarton. The school-house gives a clear focus for the function and status of the monastic

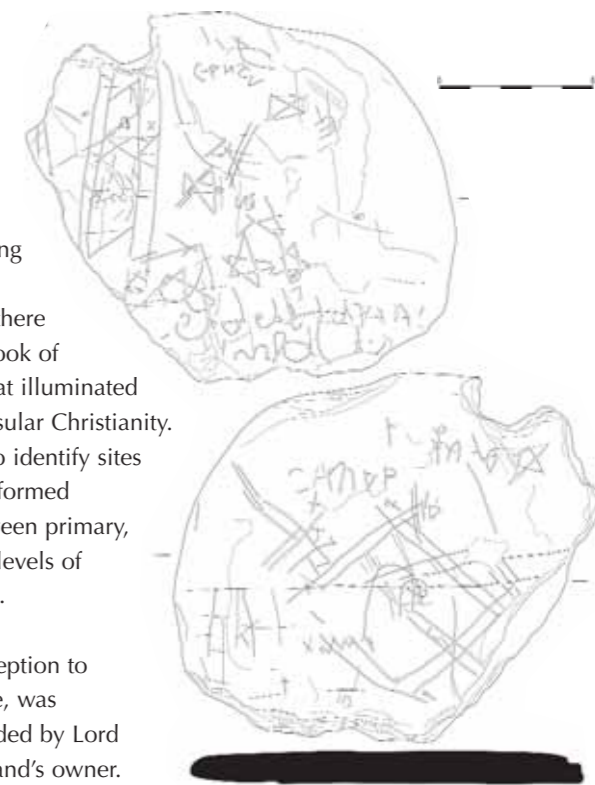
settlement and its role as a place of primary education. This was where the basics of literacy, of practising alphabets and controlling the stylus, were taught. Without these schools there would have been no Book of Kells, nor the other great illuminated manuscripts of early Insular Christianity. The challenge now is to identify sites and settlements which formed intermediate links between primary, secondary and tertiary levels of instruction and training.

The project, from conception to publication and archive, was commissioned and funded by Lord Smith of Kelvin, the island's owner. The results were published in 2008 in the Society of Antiquaries of Scotland monograph series, and the project was Highly Commended in the 'Best Archaeological Project' category at the 2010 British Archaeology Awards.

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Lowe, CE (ed) 2008 *Inchmarnock: an Early Historic Island Monastery and its archaeological landscape*. Society of Antiquaries of Scotland, Edinburgh



Practice scribbles: a child's work includes the name Ernán three times



The 'Hostage Stone', with enhanced decoration



Looking across the main Hungate excavation area in 2009

HUNGATE: digging in the heart of York

Peter A Connelly

the main slum districts of York; the area was razed to the ground during slum clearance prior to the Second World War. Its discovery, amazingly preserved just below the post-War surface, has allowed us to give a voice to the unaccounted stories, lives and community of Hungate in the 19th and early 20th centuries. From recovery of an alphabet muffin plate (which attests to education but also child labour) to installation of flush toilets – a huge improvement upon open cess pits but condemned by the 1920s – we are looking at the dynamic nature of a community that is often overlooked in official historical narratives.

10th-century Jorvik

Hungate has also produced crucial evidence on York a thousand years earlier. One feature was a late 10th-century sunken-featured building, a basement or cellar built in the early 970s AD. A large rectangular cavity cut deep into the ground with timber retaining walls and a stepped entrance from the back, this may have been utilised as a warehouse close to the River Foss. Unusual preservation of elements such as its timbers will aid analysis of similar structures without such features which are commonly found elsewhere. Excavation of this building threw up one extra surprise. Removal of posts from the retaining wall revealed that planks behind them were recycled remains of a boat. Further analyses of the boat planks reveal that the timber had been grown in south-east England and that the technology used to hold the planks appeared to be Anglo-Saxon in origin rather than Viking.

Roman cemetery

As the last of the Anglo-Scandinavian deposits were removed part of a Roman cemetery was unexpectedly uncovered. Initial assessment of grave goods dates the cemetery to the 3rd century AD, and it seems to have been for civilians. Two burials have provided a rich selection of grave goods including an imported glass bead necklace and a large selection of jet and shale jewellery. Similar assemblages were found elsewhere in York in the 19th century but this is the first time they have been recovered under modern excavation conditions. The cemetery is currently still under

York Archaeological Trust started excavating Hungate, the largest archaeological project in York city centre, in 2006 and will finish at the end of 2011. Funded by Hungate (York) Regeneration Ltd (HYRL) the project is one of the last large-scale PPG16 driven projects, and we hope it will be a model for future PPS5 archaeology.

Outlined below are just three of the major periods that have been encountered over the last four years as well as an insight into the continuing Community, Public and Education elements of the project.

Hungate in the 19th and early 20th centuries

By the start of the 20th century Hungate was a notorious slum. Referenced by Benjamin Seebohm Rowntree in *Poverty: a study of town life* as 'one of



The 19th to early 20th-century remains of St John's Place slum dwellings

excavation, so further information will be recovered during 2011.

Involving a wide public

With community, public, outreach and education programmes playing a strong part in the Hungate project it will come as no surprise that these elements have been one of its great successes. Over the last four years 20,000 people have visited the site and 1300 people became involved in practical work. From school children to people in their 70s, from undergraduates studying for degrees in Archaeology to those with no prior experience, from Australians to the local Community Archaeology group, all have got their hands dirty getting involved with the archaeological process.

Two distinctive projects stand out. One, with the City of York Council's Youth Offending Team has involved young people as part of their reparation programme. In 2009 this project was highly commended by the



A well-preserved late 10th-century sunken-featured building. Planks behind the retaining wall were the recycled remains of a boat

Learning Skills Council. The second has been with the Open University, which has been running the course *Archaeology: the science of investigation* for the past three years. Hungate contributes resources and practical elements to the OU and some 4000 people have taken the course in three years: clearly, passion for archaeology remains unabated.

Thanks to some outstanding multi-period archaeological remains and the outreach elements embedded into it the Hungate project has re-energised the archaeology of York. A long-term developer-funded project with a high degree of public involvement – is this a model for the future?

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A 3rd-century multi-segmented jet bracelet recovered from a Roman grave



Trainees hard at work during the Archaeology Live summer training school

Taking the Field: archaeology and the Battle of Culloden

There was no better test-bed than Culloden, the last battle fought on British soil, for the nascent discipline of battlefield archaeology when this was introduced to Scotland ten years ago. The final showdown between the Jacobites and the British Army, popularly remembered as the Hanoverians, took place on 16 April 1746, on what is often imagined to be featureless moor east of Inverness, in the highlands of Scotland.

■ Eye-witness accounts

The site is well preserved, thanks to its rural location and the care of the National Trust for Scotland, and the battle involved military technologies likely to leave a recoverable signature in the topsoil, in the form of lead musket balls, cannon shot, buttons, buckles etc. Another attraction of Culloden was the wealth of documentary evidence, with the mid-18th century seeing an upsurge in literacy levels and military bureaucracy. Thus we have at least half a dozen maps of the battle drawn by people who were there, letters from combatants, action reports and even magazine and newspaper articles. These, it was hoped, would provide a historical framework within which archaeological data could be assessed and comprehended, and also eye-witness accounts which could be tested through forensic analysis of the battlefield. There are numerous history books on the Battle of Culloden, and we wanted to use archaeology to challenge some of their interpretations.



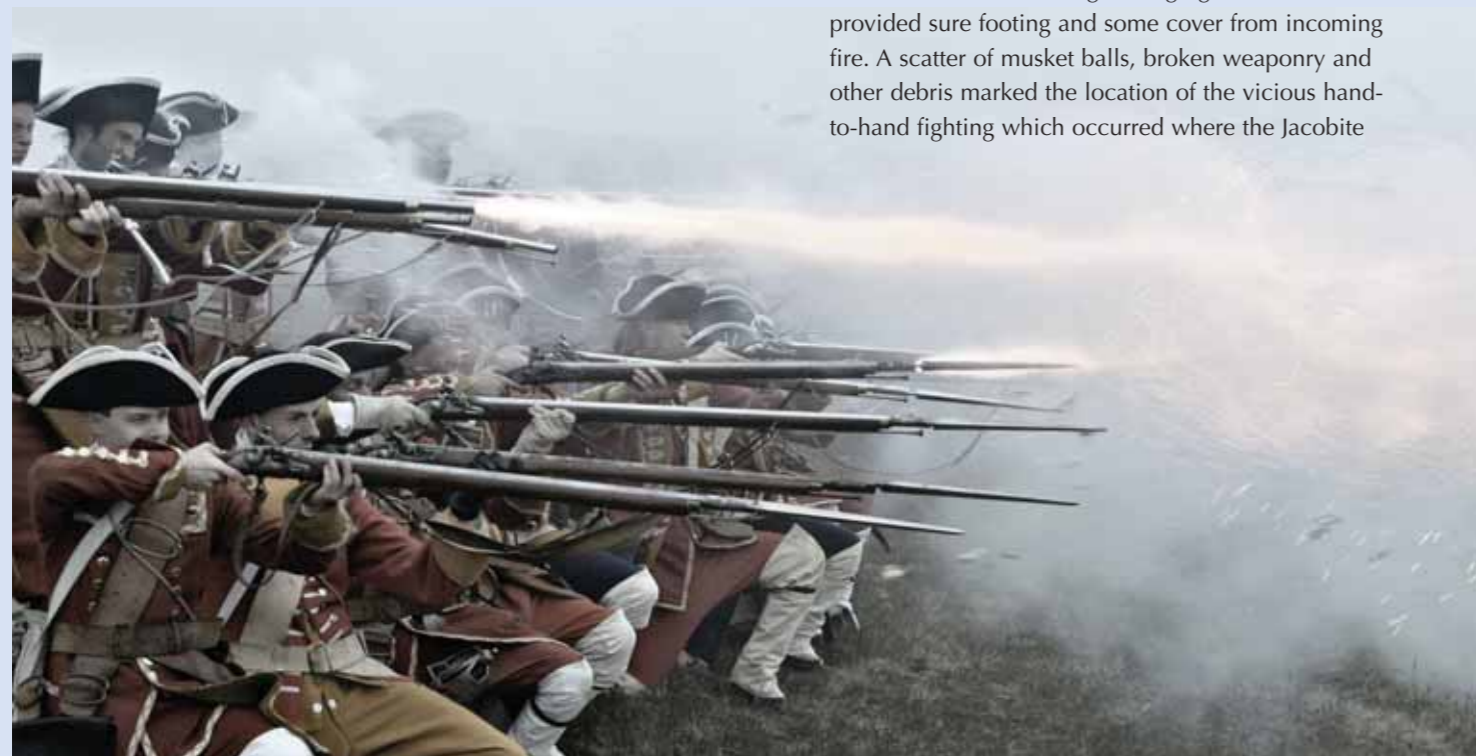
Reconstruction: Jacobites under fire. Photograph: Danny Carr

■ Vicious hand-to-hand fighting

The first opportunity to apply a multi-faceted methodology to the site came in 2000, with BBC's *Two Men in a Trench*. Filming the first episode of that ground-breaking series involved topographic survey, metal detector survey, geophysics and limited excavation. The fine-grained topographic

survey revealed a landscape which, far from being the 'level playing field' portrayed in many histories, contained undulations and ridges which helped to explain why the battle unfolded as it did. We now know that the Jacobite charge veered to the right because it followed a ridge of high ground which provided sure footing and some cover from incoming fire. A scatter of musket balls, broken weaponry and other debris marked the location of the vicious hand-to-hand fighting which occurred where the Jacobite

Reconstruction: the Hanoverian line gives fire. Photograph: Danny Carr



Reconstruction: the Jacobites give fire. Photograph: Danny Carr

charge hit the left of the Hanoverian line – establishing that interpretation markers were in the wrong place. Another misconception was exposed when a structure believed to be the ruins of a barn put to the torch with Jacobite wounded inside it was exposed to be nothing more than a 19th-century walled kitchen garden.

■ Ensuring accuracy of interpretation

The National Trust for Scotland enthusiastically took these results on board, and when the decision was made to build a new visitor centre archaeology was seen as a way of ensuring accuracy of interpretation and display. So it was that in 2005 and 2006 the Centre for Battlefield Archaeology at Glasgow University was commissioned to carry out a more detailed investigation. The return to the site yielded a fresh swathe of revelations. These included the realisation that the Jacobites had been using a greater amount of musketry than previously believed (Jacobite musket balls were slightly smaller than those of the Brown Bess used by Hanoverian troops). The ferocity of the Jacobite attack on the left flank of Hanoverian regiments was brought to light by fragments from mortar shells close to where the hand-to-hand fighting took place – these explosive bombs had been fired over the heads of the front line into the mass of Jacobites in a desperate attempt to push them back. Once again, geophysics shed light on buildings present during the battle and shown on

the contemporary maps, leading us to remains of a long-demolished structure.

The project demonstrated how techniques could augment one another. Viewed together, the geophysical and the metal detector surveys may have located unmarked graves of Hanoverian soldiers, though this discovery has yet to be tested. Analysis of the finds has also advanced our understanding, with experimental firings of muskets and cannon providing a fascinating insight into the deformation and impact damage displayed by the lead projectiles which have been recovered in their hundreds. In 2008 the new visitor centre opened, and the recovered artefacts took pride of place. It is however the landscape of battle which has undergone the most striking transformation, with footpaths and markers now highlighting the correct locations of various actions.

Culloden has become an international flagship for the investigation and display of battlefields but, more than that, it is a laboratory in which the techniques of battlefield archaeology continue to be refined.

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Director, Centre for
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A Jacobite pewter cross found during metal detector survey. Photograph: Tony Pollard



BEN LAWERS: *rediscovering a lost Scottish landscape*

Derek Alexander and John Atkinson

Ben Lawers Historic Landscape Project (2002–2005), a landmark field and education project for the National Trust for Scotland, set out to understand the effects of sudden changes inaugurated by large landowners in the 18th century in one area of the Scottish highlands, and to seek traces of earlier land use. Involving the local community in all aspects of the work was a key feature from its beginning. It focused on the north side of Loch Tay, which has many archaeological sites and excellent documentary records. Detailed survey by RCAHMS had recorded over 2000 structures and 300km of stone dykes, earthen banks and trackways, mostly dating to the 18th century. Earlier sites include a chambered cairn and numerous cup-and-ring marked rocks.

Splitting farms

The area once formed part of the huge Breadalbane Estate of the Campbells of Glenorchy, and the pre-improvement landscape is shown on detailed maps commissioned by this estate, surveyed by John Farquharson and published in 1769. These show the old multiple tenancy townships with their associated infield, outfield and shieling grounds. Major change occurred in the 1790s, splitting joint tenancy farms into single units. Many new farms were established in the old outfield. This situation is well recorded on the first edition Ordnance Survey maps of the 1850s but even by that date many of these new farms had been abandoned and are marked as ruins.

18th-century byre

A typical grouping of byrehouse, barn and kail yard dating to the late 18th century was investigated at Kiltyrie. Excavation of the main structure revealed it was divided in two, with living accommodation at the west end and a byre for cattle at the east. The byre was cobbled, with a central stone-lined drain which channelled effluent out of the door, to be collected in a scooped midden in front of the house. Artefacts included iron farm implements, coins, window glass and pottery. The poor quality of the ground led to the farm only being occupied for a single generation and it was abandoned by 1850.

Medieval and prehistoric habitation

We were also seeking the elusive remains of earlier settlements, and evidence came from two turf-built elongated structures with curved ends investigated above the 19th-century head-dyke at Kiltyrie. These don't appear on any maps, lack any 18th and 19th-century artefacts, and the date was later confirmed by radiocarbon dates from charcoal in one central fireplace, demonstrating the structure was used sometime between 1190 and 1300. Medieval material was also found in shieling huts, high up the mountain side. Shieling grounds were areas of upland pasture where the cattle were taken in summer to graze, away from ripening crops on the lower ground. While tending cattle, people stayed in small turf and stone huts, often making good use of time by preparing dairy produce or cutting and storing peat. Excavation of one of these shieling huts at Coire Odhar (above 2000ft) recovered sherds of green-glazed medieval pottery belonging to the 14th and 15th centuries, and radiocarbon dates have suggested occupation in the mid-16th century. Under the truncated remains of one hut a buried ground surface contained charcoal and flint and quartz tools that

suggested prehistoric occupation. Excavation of a pit beneath this layer revealed carbonised material which was radiocarbon dated to around 7000 BC.

Archaeological work from 2002 to 2005 was undertaken by volunteers on NTS working holidays or 'Thistle Camps' supervised by professional archaeologists from GUARD. People of all ages and backgrounds took part in this rare opportunity to learn and participate in a hands-on archaeological project. A major outreach project also worked with local schools. Post-excavation work is now complete and the results are progressing to full publication.

The Ben Lawers Historic Landscape Project was a multi-disciplinary project initiated by the National Trust for Scotland (NTS) with funding from the Heritage Lottery Fund, Historic Scotland, and Scottish Natural Heritage amongst others. It proved to be a landmark in late-medieval and post-medieval studies in Scotland and has added to our appreciation of how individuals, communities and landscapes evolve and change through time.

Interim reports and more information are available on www.benlawers.org.uk.

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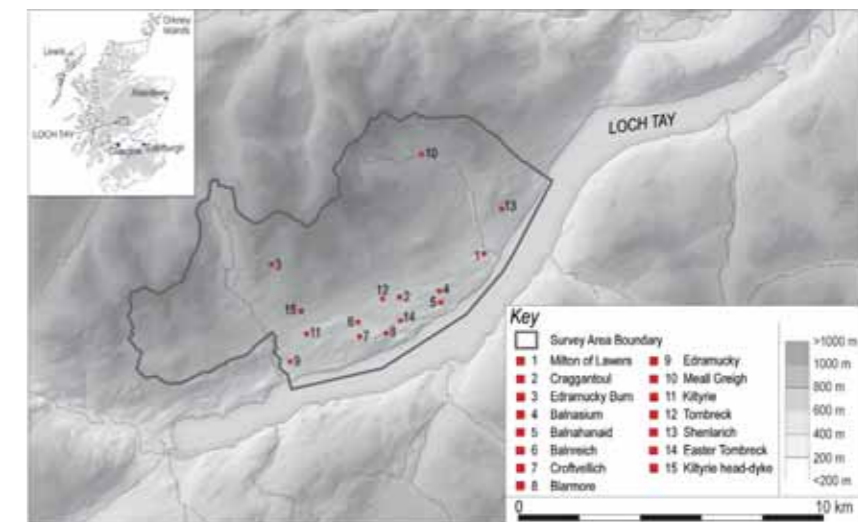
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Atkinson, J 2010 'Settlement form and evolution in the Central Highlands of Scotland, c 1100–1900', *International Journal of Historical Archaeology* 14, No 3, 316–334

Boyle, S 2003 'Ben Lawers: an improvement-period landscape on Lochtayside, Perthshire', in Govan, S (ed), *Medieval or later rural settlement: ten years on*, Historic Scotland, Edinburgh, 17–29

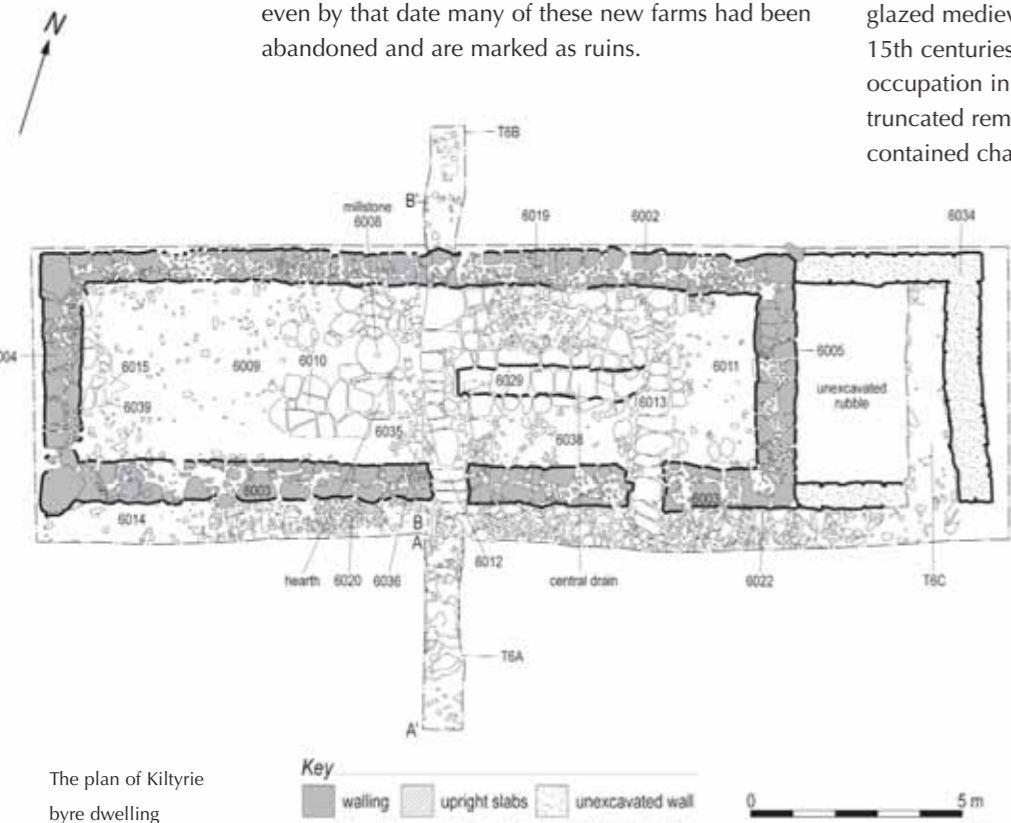
Boyle, S 2009 'Mapping Landscapes of the Improvement Period: surveys of North Lochtayside, 1769 and 2000', *Scottish Geographical Journal* 125, No 1, 43–60

The study area and sites investigated



Leading a guided walk: public engagement was an essential element of this project

Excavating the byre dwelling at Kiltyrie



The plan of Kiltyrie byre dwelling

Excavating the shieling at Meall Greigh





Excavation of a prehistoric ring cairn near the watershed of the Aire and Ribble rivers

The 21st-century need for fossil fuels has unexpectedly illuminated aspects of the history and archaeology of a great swathe of northern England. Between 2005 and 2008 National Grid constructed a series of cross-country pipelines to transport North Sea gas, beginning at Easington on the East Yorkshire coast and ending 130 miles away, near Morecambe Bay in Lancashire. Network Archaeology Ltd undertook numerous surveys and investigations along this route, leading to much greater understanding of the region's archaeology.

SITES AND GAPS

New sites ranged from an extensive Mesolithic flint scatter in Holderness to post-medieval kilns in Lancashire. Particular highlights included a major Romano-British roadside settlement in East Yorkshire and an enigmatic prehistoric ringwork on the Pennine watershed. But the length of the pipeline route and use of consistent methodology allowed the results to transcend the site-specific. Genuine gaps

A large millstone, reused in the floor of a 2nd- or 3rd-century farmstead near Gargrave, North Yorkshire



TRANSECTING A LANDSCAPE: the benefits of pipeline archaeology

Patrick Daniel

can be discerned, absences in time and space eloquent of longer term processes and deeper patterns. At Holderness for example our results suggest that by the late Iron Age and early Roman period, rural settlement had expanded from an initial focus on high ground around the Hull Valley, to take in lower-lying land to the east. This development, which may have been a reaction to falling sea levels, resulted in a surprisingly dense scattering of small farmsteads. This pattern differed from that across the Vale of York for the same period, where settlements were less numerous but larger, and set within bigger field systems.

FACTORY FARMING IN THE PENNINES?

By contrast, such remains were almost entirely absent from the Pennine section, despite Roman military roads and forts constructed there. Possibly the Pennine valleys were too poorly drained for permanent habitation, or local people were resistant to Roman material culture. However, inhabitants of a farmstead between the fort at Elslack and the villa at Gargrave were different: so many grindstones and millstones were recovered from here that it seems these people produced food for market on an industrial scale. Roman pottery and coinage reveal imported comforts and novelties for the site's occupants, whether entrepreneurial locals or incomers.

EARLY INDUSTRIALISATION

In the post-medieval period West Yorkshire and Lancashire formed the epicentre of early industrialisation, and the pipeline encountered ample evidence of this: numerous lime kilns and quarries were recorded, as well as brick clamps near Otley, and an iron bloomery near Ilkley. Usually small scale and relatively early in date, these remains are evidence of by-employments that complemented the main business of farming. Pipeline finds demonstrate the rural roots of industrialisation, and a capable populace pre-adapted for the enormous changes to come.

RECOGNISING BIAS

Such was the scale of this pipeline that it generated improvements to the archaeological response: existing ways of working were put to the test and upgraded in return. Day-to-day running of archaeological projects is overlooked in the literature yet efficient logistical management is crucial to the success of any project, especially one of this magnitude. The amount of data also encouraged a reflective approach: how relevant were the pipeline findings to the interpretation of the wider landscape? Familiarity with pipeline engineering teaches us that such schemes are not impartial. On the contrary, constraints on a pipeline are numerous: habitation, woodland, wetland and steep slopes are all avoided if possible. Landuse in the past was also affected by such factors. Bias too can be seen in almost total absence of early medieval settlement from the pipeline: if settlement nucleation can be attributed to this period, then such remains are less likely to be encountered, given that pipelines obviously avoid the historic cores of our towns and villages. Pipelines are also of course planned to avoid known archaeological sites.

The pipeline has been operational since 2008, but thanks to ongoing funding by National Grid, the archaeological response to it continues: publication and dissemination of the results, as well as ensuring the physical archive is available to future researchers, now form the proper focus for work. In acknowledgment of the importance of grass roots involvement, many talks have also been given to community archaeological and amenity groups. Such occasions satisfy local curiosity as to 'what they found when the pipeline came through', but conversely, also allows the speaker to tap into the deep knowledge that exists in such groups.

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The foundations of a late 17th-century farmhouse on the route of the pipeline at Scales Hill, above the river Wharfe in West Yorkshire



A section through the South Dyke, part of the Aberford Dykes complex of ditches and banks near the A1 north of Leeds; construction of the pipeline resulted in a much clearer understanding of these monuments



Gas pipelines built for National Grid between 2006 and 2008 crossed almost the whole width of the country, from Easington in the east to Nether Kellet in the west

All photographs © Network Archaeology

Joint venturing: archaeology in partnership at Terminal 5 and other projects

One major innovation in archaeological work in the UK over the last decade has been creation of joint ventures. Several leading practices have now worked together in various partnerships, and some of the largest have been between Oxford Archaeology and Wessex Archaeology. Since 2000 Oxford Wessex joint ventures have worked on the M6 Toll, Terminal 5 at Heathrow airport, Stansted airport, the Channel Tunnel Rail Link (High Speed One), and most recently the East Kent Access Road in Thanet. The benefit to the client is in ensuring that sufficient resources are available to complete the work within a tight schedule. Benefits for individual practices include flexibility to undertake their own projects, and sharing risks.

Joint venture

The joint venture that paved the way for these innovations was Framework Archaeology, the first in a development-related context, formed specifically to work for BAA (formerly the British Airports Authority) in a long-term framework agreement to provide archaeological services for all its airports. The joint venture worked alongside a leading consultant, Gill Andrews, a distinguished academic, John Barrett, and the BAA management team. The aim was to devise a programme to achieve the greatest possible contribution to knowledge in the most cost-effective manner.

Test bed

As a result, excavations at Heathrow Terminal 5 were not just one of the largest excavations ever undertaken in the UK, over 70ha, they were also the test bed for new ways of interpreting and recording on-site. These were developed from ideas in John Barrett's *Fragments from Antiquity*, and created an approach centred on understanding inhabitation of the landscape. The key objective was to create an accessible narrative of the human history of the site. The research-led philosophy required a different type of research design and, in order to implement it, an innovative approach to excavation. This required a recording system able to provide rapid feedback of data to allow excavators and specialists to make informed decisions on excavation strategy. The system tried to empower diggers by demanding high level interpretation right at the trowel point. The aim was to actively engage everyone in the team in exploring and writing a history of the site and which meant constant contact with experts of all kinds, and extensive staff training in areas such as artefact recognition, survey and IT.

This iterative approach and improved versions of the recording system are currently being used in the East

Kent Access Road. This was the largest fieldwork project in 2010 and the systems helped rapid decision making in the very different circumstances of a highways project through one of the richest archaeological areas in the UK.

Understanding landscapes

At Heathrow the work contributed, on a massive scale, to our understanding of the region. Detailed examination of the architecture of the Neolithic Stanwell Cursus demonstrated how the construction of this monument was used to achieve social cohesion during the Neolithic period. The study of land division, settlement and agricultural and deposition practices clarified the origins and development of the 2nd millennium Bronze Age landscape in terms of social fragmentation and re-establishment of community. On the site of a mid-1st millennium BC nucleated settlement which had

farmed the already-modified landscape, a Romano-British farmstead developed. It was aligned on a wider scale, along roads and towards villas, and to the wider economic and political landscape of the Roman province.

New software was designed to distribute digital data within the project team and to provide more data than ever before in publications. The focus of the Heathrow publications – the first volume was published in 2006 and the second was launched at the Royal Society in March – is the historical process and human agency supported by empirical data. The inclusion of a CD-ROM Freeviewer and online resources allows the reader to build on this work and to challenge it.

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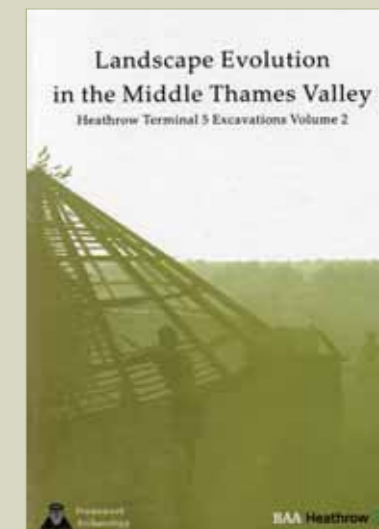
T5: 'Archaeology on a grand scale. T5 excavations with major archaeological features highlighted'. © BAA and Framework Archaeology



Archaeological features appearing at Thanet, after earth removal for the East Kent Access Road, 2010. © Oxford Wessex Archaeology



Volume 2 was launched at the British Academy, 30 March 2011. The line-up is Gill Andrews (Archaeological Consultant to BAA), Ken Welsh (OA), Niall Donald (WA), Lorraine Mephram (WA), John Lewis (Society of Antiquaries and formerly WA), John Barrett (Academic Advisor, University of Sheffield) and Alex Smith (OA)





The London Archaeological Archive and Research Centre: past, present and future

Every few years archaeological organisations and museums confront the volume of material coming out of the ground – and every time this volume increases (see Roland Smith, *TA* 79). Added to this is the increase in digitised data. These problems – challenges – have increased in volume and complexity over the years and, with changing ideals and shrinking budgets in museums, there is an increasing burden upon the contractor to act as surrogate custodian of material which ought to be in the public domain.

Good practice

But it has not all been doom and gloom. The Archaeological Archives Forum (AAF) continues to work on guidance for good practice with regard to archive management, and there have been successful efforts to address local archive issues, notably the London Archaeological Archive and Research Centre (LAARC) between 1997 and 2002. This was not the first time that a regional store had been developed. Projects in Northamptonshire, Oxfordshire and York, to name just three, helped reconcile parochial issues. The main challenge for London, however, was the sheer size and scale of material collected in the 20th century and the anticipated needs for future deposition of finds and records.

150,000 boxes

When Hedley Swain carried out his survey of archaeological archives in the UK in 1997–8 London, (most Surrey and Middlesex boroughs plus the City of London), appeared to have almost a fifth of the national total. This might have been a slight overestimate, but the numbers the Museum of London had to deal with were enormous. A full audit in 1998 revealed 5000 site codes issued (some with MoL, some with external contractors), 150,000 boxes of finds and over a quarter of a million registered small finds. This would require 10km of shelving, plus capacity for at least a 20 year period.

LAARC solution

This initial audit was critical to the planning work that was initiated by the incoming Director, Simon Thurley. We needed to know exactly what we had, what the physical state of the archive was and exactly where it was – we defined the ‘London Archive’ as everything the Museum of London had plus everything that external contractors wanted to deposit. Our task in the museum itself was made easier by the work of Nina Crummy, who had consolidated the collection into a single store at Lever Street in Islington, making it possible to define the problem and then design the required facilities. LAARC opened in February 2002 and was well-received as a model in the management of archaeological archives. Access was assured and researchers and curators alike could easily access material for study and display.

Outreach and education

Creating the space was only half the story. The Museum had to be proactive in ensuring this collection could be used. LAARC was to be the focus and springboard for outreach and educational activities. First, a volunteer force was organised to work on the collections and make them more accessible, with support from the Getty Grants Programme. The Archive Volunteer Learning Programme (AVLP), funded by the HLF, targeted interaction with ‘socially excluded’ people. The latter continues and is funded by the Renaissance Programme. National and regional awards were won by these projects. Higher Education was another important constituency, initially conspicuous by its absence but, as the years progressed, university departments became aware of the archive and its potential for undergraduate and graduate study into not only material for research but also archive management and issues relating to deposition, care and access.

Committed management

The Museum of London’s LAARC has transformed the way that archaeology has been made accessible and interpreted over the last ten years. Its success has been due to the establishment of clear and concise collections management strategies and associated standards for deposition, but without full support of the Board of Governors it would never have got off the ground. Such projects require a single, committed senior management group to establish the principles and to assess and accept any risks.

Future worries

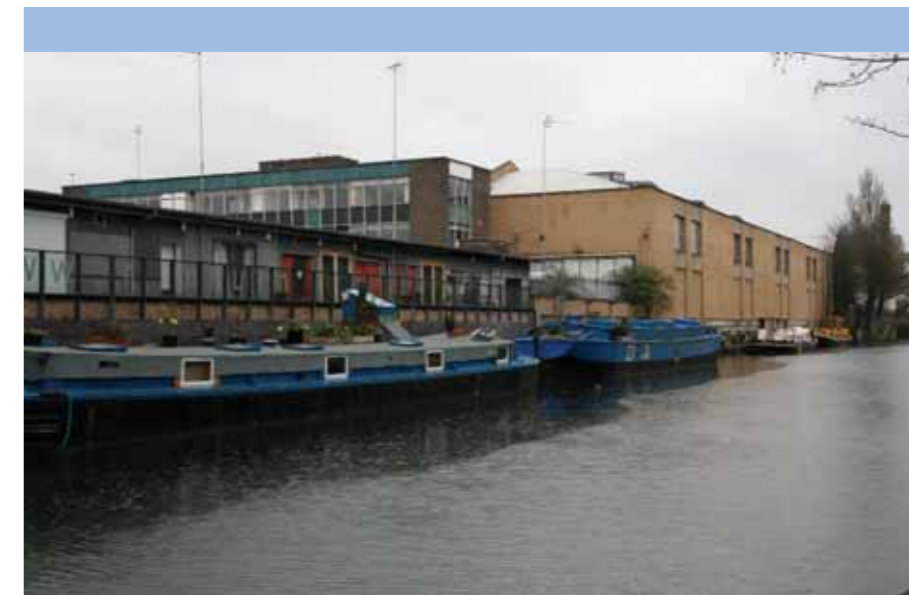
But the second decade of this century has already introduced a worrying climate. Policies defined by the incoming government of May 1997, of universal

access to museum collections, may be replaced by programmes of benign neglect, which would take us back to the pre-LAARC days, resulting in an archive that becomes unusable and, in due course, closed to users. London’s archive now manages the results of over 7500 sites and their accompanying finds assemblages.

A collection of truly national and international significance, it has no equal in size, quality of content and potential but it is ostensibly a major burden, with little immediate value, to those in command of the museum’s budgets.

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The LAARC, on Regent's Canal

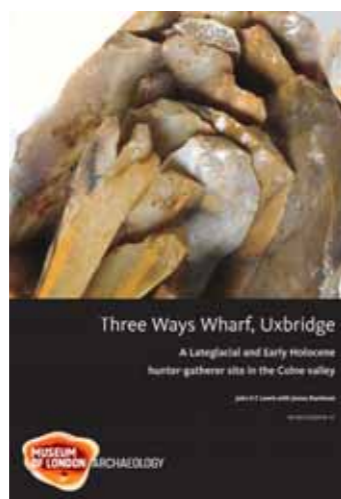


Well-organised storage inside the LAARC

New standards of archaeological publication have been a feature of the last decade. We have all become aware of the diverse audiences who must be satisfied, of the needs (ethical as well as political and financial) to produce reports worthy of the work that has gone into excavation, the importance of good design, and opportunities offered by new technology. The following is a selection that illustrates the high standards now being achieved.



Part of the study area in the 1990s, with the Whitehall Wood quarry in the centre and the Hunt's Hill quarry top right. Courtesy T Bovis. From *Archaeological landscapes of east London*



Early Mesolithic flint refitting group from Three Ways Wharf



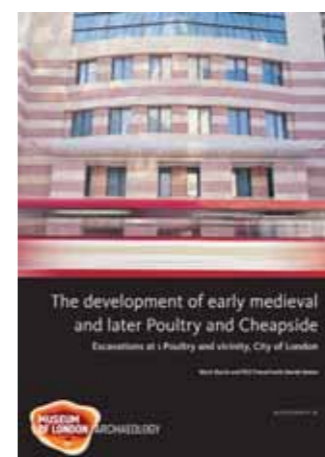
St Mary Graces on Wyngaerde's panorama of London, c 1540 (centre left), with the Tower of London in the foreground; tenements on St Katherine's Lane and East Smithfield converge to the far left by the abbey gatehouse and Tower Hill. © Ashmolean Museum, University of Oxford. From *The Cistercian abbey of St Mary Graces, East Smithfield, London*

London's archaeology in print: new MOLA publications

This spring Museum of London Archaeology (MOLA) publishes another seven books on London archaeology – the latest in a comprehensive programme of over 80 publications from the last decade funded by clients under PPG16 contracts, and by English Heritage. The publication series (monographs, studies series and popular books) are characterised by integrated analysis, thematic interpretation and a strong emphasis on design and editorial skills. The monograph and studies series have developed a common structure: introduction; chronological narrative describing the site sequence interwoven with specialists' evidence; thematic chapters; conclusions; and appendices with supporting data, supplemented by CD-ROMs and online resources. Keys to the integrated approach are collaboration and dialogue among the project team and a focus on strong research aims, set out before fieldwork begins and revised at the assessment stage. This approach depends on the right in-house team, supplemented by experts from academic institutions. *Archaeological landscapes of east London* by Isca Howell et al covers six multi-period sites in Havering, investigated between 1963 and 1997 in advance of gravel extraction. Also in east London, *Mapping past landscapes in the lower Lea valley* by Jane Corcoran et al takes a geoarchaeological approach to

reconstructing the past landscape and its relationship to archaeological distributions. Modelling the ancient landscape buried below thick alluvium and modern made ground allows the archaeological potential of any location in the Lower Lea Valley to be predicted. This introduction to Quaternary deposits in Greater London is complemented by a Late Glacial and Early Holocene hunter-gatherer site in the Colne valley. John Lewis's *Three Ways Wharf, Uxbridge* examines five in-situ lithic and faunal scatters; one phase, associated with exploitation of reindeer and horse, is dated to c 10,000 BP; the succeeding Early Mesolithic phase with red and roe deer is dated at c 9200 BP.

Within the City of London, this year also sees final publication of one of the largest excavations in the Roman and medieval city at 1 Poultry, near the Bank of England. *The development of early medieval and later Poultry and Cheapside* by Mark Burch and Phil Treveil shows a sequence of Late Saxon reoccupation from the 10th century, with scattered sunken-floored buildings succeeded by more regular narrow-fronted timber roadside properties by the 11th century, increasing in density until the 13th century when large stone houses were built in open areas behind street frontages. Remarkable survivals include the late 11th-century church of St Benet Sherehog.

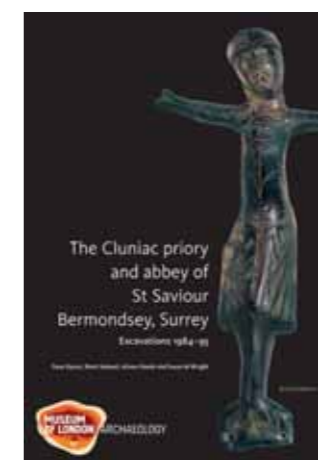


The Queen Victoria Street facade of James Stirling's building at 1 Poultry



A detail from an artist's reconstruction of the cold climate braided river of the Late Glacial period, 12,000 BP. From *Mapping past landscapes in the lower Lea valley*

Monasteries on opposite banks of the Thames are covered by *The Cluniac priory and abbey of St Saviour Bermondsey, Surrey*, by Tony Dyson et al. Bermondsey, established in the 1080s near an Anglo-Saxon minster, became a centre of pilgrimage and, in 1399, an abbey, before its transformation into a Tudor courtier's mansion. In contrast, *The Cistercian abbey of St Mary Graces, East Smithfield, London* (Ian Grainger and Christopher Phillpotts) was founded in 1350 by Edward III on the site of a Black Death burial ground, the last Cistercian house built in England; its buildings were reused in a Royal Navy victualling yard. Both books examine the layout, architecture and history of the monastery, and the people who lived and were buried there.



An 11th-century sculpted panel, perhaps indicating the raising of Lazarus and used in the early chapel at Bermondsey

Upgrade and extension of the East London line network was an opportunity to examine life in London's inner city and suburban districts between the 19th and 21st centuries, published as Emma Dwyer's *The impact of the railways in the East End 1835–2010*. Building recording and excavations at Bishopsgate goods station and Lea Street in Haggerston shed light on life in these areas before the arrival of the railways, and the resulting tumult for occupants of the East End.



'Over London by rail' by Gustav Doré, 1872. Museum of London LIB5788. From *The impact of the railways in the East End 1835–2010*

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The Thames through Time project

'The water of the Thames may once have fallen from the back of a plesiosaur or filled the bath of Archimedes.'

Peter Ackroyd, in *Thames, Sacred River*, alludes to the place of the river in the grand sweep of geological time and ancient history. John Burns, the radical 19th-century politician and historian of the river coined the phrase 'The Thames is liquid history'. Both emphasise the Thames as a potent element of the English landscape and a powerful symbol of Englishness. The modern river and its environs are the result of millennia of human interaction with this liquid environment and over the last 40 years, first rescue and then commercial archaeology have revolutionised our understanding of this complex interrelationship. Extensive terraces of gravel bordering the river laid down over successive Ice Ages were worked for aggregates during the 19th and 20th centuries, and the Thames remains one of the main areas of gravel quarrying operations in Britain. As a result, the region has seen some of the most

intensive archaeological activity in England, with the size and depth of gravel quarries providing exceptional opportunities for investigating multi-period remains.

The *Thames through Time* project provides an introduction, overview and synthesis of this rich resource, and the information generated from

hundreds of investigations, from test-pits and trenches, aerial and geophysical surveys and full scale excavations, is drawn together and set within the context of current research. It is concerned with the archaeology of the Upper and Middle Thames from the source of the river near Cricklade to the tidal zone at Teddington Lock, for Oxford Archaeology, since its formation in 1973, has carried out surveys and excavations throughout the Thames valley, largely publishing the results on a site by site basis.

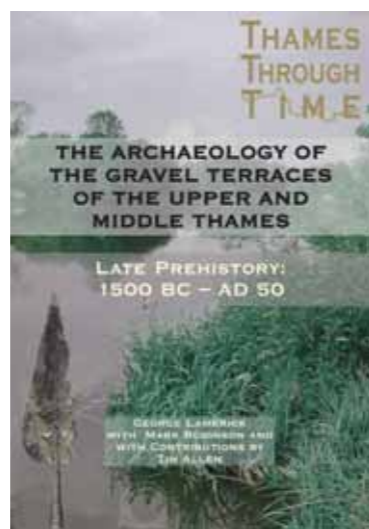
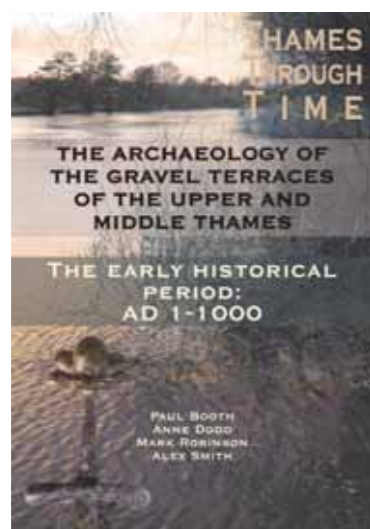
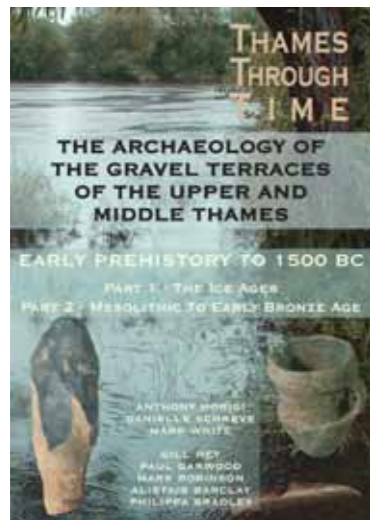
Thames through Time is a collaboration between Oxford Archaeology and Surrey County Archaeological Unit, and draws on the work and expertise of many individuals and organisations. The volumes are written by specialists drawn from OA and SCAU, the British Geological Survey, and numerous university departments. The project has been funded by English Heritage with resources from ALSF.

Three volumes have already been published. *Early prehistory to 1500 BC* looks at the formation and changing environment of the Thames Valley, and early human occupation, starting some half million years ago and taking the story up to the early Bronze Age. *Late Prehistory* looks at transformation of the valley into a farmed landscape and the evolution of Thames Valley communities during the later Bronze Age and Iron Age. *The early historical period* covers the Roman impact on the region, important regional evidence for the 5th century, and subsequent development of Anglo-Saxon settlement and society. A final volume, covering AD 1000–2000, is currently in preparation and highlights just how extensive the changes of the last 50 years have been.

It is often a criticism of commercial archaeology that there is little opportunity to step beyond the site and out into the landscape, to construct a broader thematic picture of change. The *Thames through Time* project addresses this criticism and presents the work of hundreds of archaeologists as a more coherent whole, something that stands comparison, as an investigation into a landscape, with the most exciting site and finds discoveries over the last few decades.

Anne Dodd

Head of Post Excavation and Publication
Oxford Archaeology South



Roman Mosaics of Britain

David S Neal and Stephen R Cosh
Published by The Society of Antiquaries of London

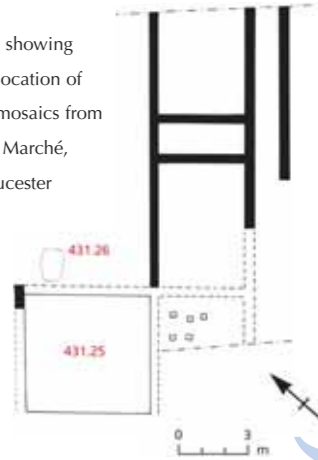
The last decade has seen the triumphant conclusion of 70 years of research and draughtsmanship by the two authors, concentrated on one idiosyncratic and single-minded project – to faithfully reproduce and research every one of the 2000 known Roman mosaics in Britain. The results are all now available in sumptuous print. Each of the four volumes contains a county gazetteer, each site described, with drawings, photographs of figured elements taken at the time of discovery, plans of relevant structures, bibliography and, most importantly of all, meticulous reconstruction paintings.

The first volume includes discussions of the iconography of Romano-British mosaics and the organisation and practicalities of the whole process, including sources of materials. Various mosaic 'groups' are identified, and the intriguing possibility that we can distinguish individual artists, and the contribution mosaic studies make to understanding Romano-British buildings, are discussed. In Volume III, *South East Britain*, the authors trace the origins of mosaic-making in Britain, and the development of colour palettes and motifs, from the black-and-white geometric designs of 1st-century Fishbourne palace, reflecting contemporary Gaulish fashions, to the most elaborately polychrome designs of the 2nd to 4th centuries, featuring figures from classical mythology, some of which (like Brading's Orpheus taming the animals with his music, or Lullingstone's Bellerophon slaying the Chimera) may have been invested with new meaning as symbols of Christianity.



Mosaic from Bon Marché, Gloucester.
Painting by Stephen R Cosh

Plan showing the location of the mosaics from Bon Marché, Gloucester



Volume IV, *West Britain*, incorporating *Wales*, launched in February 2011 at the Society of Antiquaries, brought this monumental project to a triumphant conclusion. The result is an unrivalled resource for anyone interested in Roman art, craftsmanship, architecture and social life.

Alison Taylor MifA



Detail from the ambulatory mosaic at Woodchester, Gloucestershire. Painting by David S Neal



Photograph of the leopard from the central zone of the Great Pavement at Woodchester, Gloucestershire

In America they call it



The Sonoran desert landscape © Ian George English Heritage



A view of Tucson, from Sentinel Peak © Ian George, English Heritage

In the UK we struggle to truly integrate the management of the historic environment. PPS5, published last year, wraps the historic environment into one bundle, implying that it is all one resource consisting of Heritage Assets of greater or lesser significance, but in practice the move towards specialism has created silos in which those advising on listed buildings, often in district councils, are approaching their concerns from a different starting point from those, often in county councils, advising on archaeological concerns.

Connected preservation

Such boundaries are largely irrelevant within a system which from the first legislation made no such distinctions. The United States Antiquities Act of 1906 provided a system for creation of National Monuments, although the first was in fact a natural phenomenon – Devils Tower, Wyoming (more properly called by its Lakota name *Mato Tipila* or

Historic Preservation

Roger Anyon and Ian George

Bear Lodge). Likewise, the ground-breaking National Historic Preservation Act of 1966 (NHPA) makes no distinction, using the term historic property to subsume a diversity of resources such as archaeological sites, landscapes, buildings and objects. Among its achievements NHPA established several institutions, namely the Advisory Council on Historic Preservation, State Historic Preservation Offices, and the National Register of Historic Places, which connect preservation at federal, state, and local levels. In addition, NHPA created the Section 106 compliance process that effectively connects all levels of government and the public into preservation activities. Numerous amendments to the NHPA since 1966 have provided greater autonomy for tribal people of the US in managing their heritage resources.

'Urban bioplanning'

There is much we can learn from the integrated approach to conservation of historic and natural landscapes of a state like Arizona, particularly Pima County, which covers 9184 square miles in the Sonoran Desert of southern Arizona bordering Mexico. It includes the metropolitan area of Tucson and both the Tohono O'odham Nation and Pascua Yaqui Tribe reservations and has a population of approximately 1 million. Just over a decade ago the county set out to implement the Sonoran Desert Conservation Plan (SDCP), an entirely local initiative designed to conserve the unique habitat and heritage resources of the Sonoran Desert. Of this plan the former Secretary of the Interior Bruce Babbitt said in 1999 this 'really is the most exciting event of its kind anywhere in the US.' He coined the phrase 'urban bioplanning' because the plan integrates the needs of 'human, plant and animal communities'.

Of all the aspects of conserving the historic environment it is probably in the area of funding that we can learn from the US system. Implementation of the SDPCP was funded by bonds approved at the ballot box by voters of Pima County. In both 1997 and 2004 the electorate voted to support this landscape conservation project with high ratings of approval. Expenditures of over \$190 million were authorised on Open Space acquisition, and over \$26 million was allocated for acquisition of archaeological sites and rehabilitation of historic buildings. Federal and state grants secured an additional \$4.5 million for the historic preservation initiative.



Canoa ranch buildings immediately after purchase by Pima County © Simon Herbert, Pima County

Purchasing sites for conservation

Over 52,000 acres of landscape have been purchased for conservation and an additional 127,000 acres are managed under lease and permit for conservation purposes. Within this vast acreage, many hundreds of archaeological sites and historic structures are protected. The historic preservation acquisitions provide protection for ten properties totalling over 1400 acres, and include prehistoric archaeological sites, historic ranches, an abandoned US Army fort, part of a Spanish Mission and places of traditional cultural importance to Indian Tribes in Arizona. Details of the bond initiative can be found at <http://www.pima.gov/cmo/admin/Reports/ConservationReport/>. Highlights of the programme are the purchase of part of Fort Lowell which contained officers' quarters dating to the Apache campaigns in the late 1800s, protection of the mission garden (the only surviving remnant of the original Jesuit settlement from which the city of Tucson grew) and conservation of 121 acres of a Hohokam village known as Los Morteros, occupied between AD850 and 1300.

Public belief in the need to conserve our archaeological heritage can clearly reap rewards. Through public ballot, Pima County has ensured the future of key heritage assets. Public support, including volunteerism, is a big part of achieving historic preservation in the US and may point a way ahead in the current challenging times in the UK. By looking to examples of achievement from the US and elsewhere we will find that the future will look very different but could perhaps be better.

Roger Anyon

Pima County Office of Cultural Resources and Historic Preservation

Ian George MIfA

English Heritage



Canoa ranch buildings after conservation by Pima County © Simon Herbert, Pima County



The officers' quarters of Fort Lowell © Simon Herbert, Pima County

Public support, including volunteerism, is a big part of achieving historic preservation in the US and may point a way ahead in the current challenging times in the UK.



Protesters in Tahrir Square, Cairo, forming a human shield around the Egyptian Museum after the news that it had been looted. Photograph: Sandro Vannini



Protesters in Tahrir Square, Cairo (the Egyptian Museum is to the right). Photograph: Sandro Vannini



Zahi Hawass visiting the Egyptian Museum the day after it was looted (the new gift shop and the burned-out National Democratic Party headquarters are in the background). Photograph: Sandro Vannini

EGYPT'S ANTIQUITIES IN CRISIS?

Beth Asbury was IfA's Membership Administrator until last autumn, when she moved to Cairo to become Administrative Assistant in the Ministry of State for Antiquities. She carried on working through the curfews, communication blackouts, tear gas cannon fire and the neighbourhood watches barricading the streets, and has sent this report of events to date (March).

The Egyptian Antiquities Service was established in 1859, attached to the Ministry of Public Works. In 1994 it became the Supreme Council of Antiquities (SCA), chaired by the Minister of Culture. As part of attempts to develop standards of professional practice in Egypt, in the mid-2000s, Zahi Hawass, Secretary General of SCA, issued guidelines for foreign missions: www.sca-egypt.org/eng/FMR_MP.htm. Team members must have 'significant experience', and be 'professional' or 'recognised experts.' Individuals and those unconnected with scholarly institutes can no longer be granted concessions to undertake fieldwork, mission heads must submit formal project proposals to the Permanent Committee and must publish their findings in good time.

'Egyptianising Egyptology'

These new rules came under criticism at the time, but have been accepted now and were instrumental in Dr Hawass being nominated as one of *Time* magazine's '100 most influential people' in the world for 2005. A controversial figure, often criticised for his temper and for frequency in the media spotlight, it cannot be ignored that he proved to the world that the pyramids were not built by slaves by predicting in his PhD thesis

and then finding in 1990 the tombs of those workmen. World heritage owes him a lot. He put a stop to people climbing up the pyramids of Giza, raised the salaries of site guards to try to stop them allowing access to restricted places or flash photography of vulnerable painted scenes for *baksheesh* and instigated public awareness campaigns to encourage Egyptians to take pride in their own heritage. He built 70 new storage magazines across the country, started training programmes for young Egyptian archaeologists, redeveloped dilapidated museums and began building new ones, notably the Grand Egyptian Museum in Giza and National Museum of Egyptian Civilisation in Old Cairo, as well as new regional museums. He has been at the forefront of some amazing discoveries (like the excavation of the tunnel in Seti I's tomb, DNA work on Tutankhamun's family and identification of the mummy of the female king, Hatshepsut), repatriation of about 5000 stolen artefacts and 'Egyptianising Egyptology', for example by heading the first Egyptian excavation in the Valley of the Kings.

Defending the Museum

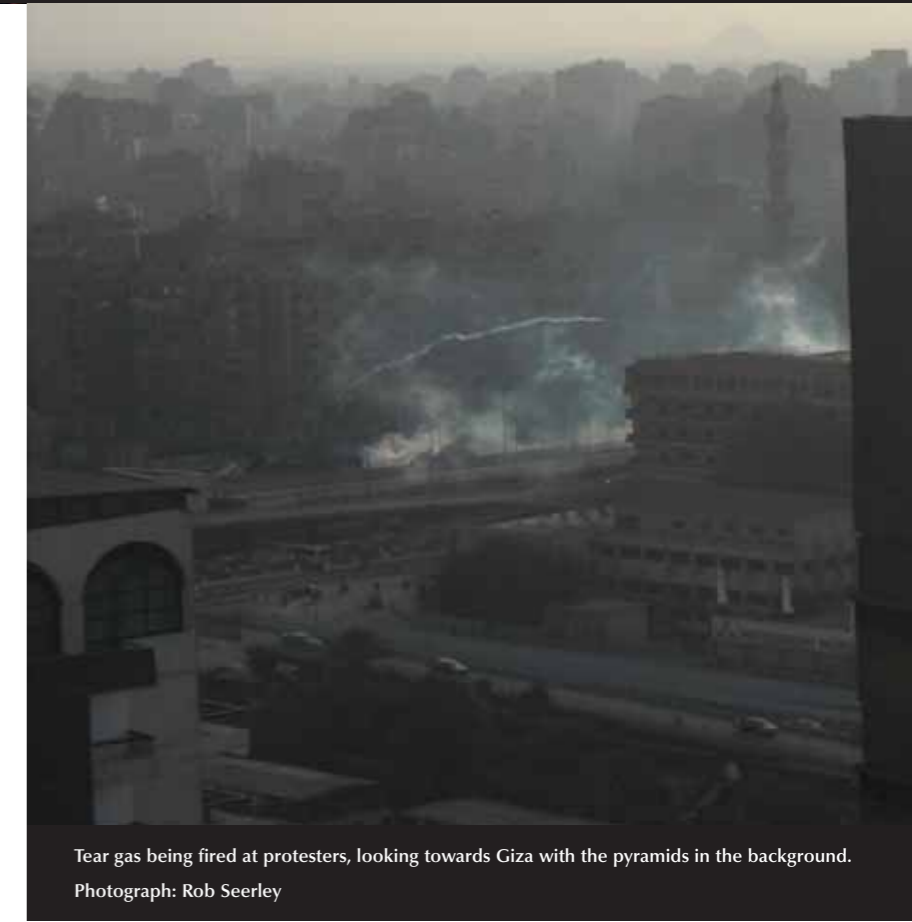
On 28 January, things changed. In the midst of the strife in Tahrir Square, opportunistic thieves broke into the Egyptian Museum itself through a skylight. Initial reports were made that 70 objects were damaged and 18 stolen, but some have been returned now and the final report is still being worked on. It was a sad day for the SCA. Egyptians formed a human chain around the Museum to prevent it becoming another Baghdad Museum, but the police are lying low and consequently looting of

vulnerable sites and storage magazines has become rife: www.drhawass.com/blog/status-egyptian-antiquities-today-3-march-2011.

Controversy

Mubarak stepped down on 11 February and the Egyptian people had successfully led an almost bloodless revolution. There are still protests though and Dr Hawass has come under fire, accused of corruption and of stealing antiquities. Archaeology graduates picketed the SCA offices for weeks demanding jobs, and his media notoriety means he has become a target for adverse publicity (for all sides of the arguments see <http://artsbeat.blogs.nytimes.com/2011/03/03/egyptian-antiquities-chief-resigns>). Dr Hawass has been reporting on how powerless he feels and on 3 March he resigned his post. He hopes his resignation will put pressure on the interim government to bring the police back and protect Egypt's sites, and to encourage the international community to do the same – otherwise World Heritage Sites here are at a huge risk. These assets are not just about heritage, but are crucial to the economy and to the very identity of Egypt.

I fear too for other good people behind the projects, the museums, the training, the cataloguing and excavating. There is a risk that through sudden change at this time there will be no continuity and this could lead to inactivity. Never have I felt so conscious of being in the middle of something that is going to be in the history books in my own lifetime. I truly hope an enduring plan is back in place by the time this article is published.



Tear gas being fired at protesters, looking towards Giza with the pyramids in the background. Photograph: Rob Seerley

Beth Asbury AlifA

Administrative Assistant, Ministry of State for Antiquities
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NB On 4 April Zahi Hawass was sworn in again as Minister of State for Antiquities, after Egyptian archaeologists and museum staff had written to the prime minister threatening to strike and bring what little tourism there is in Egypt to a halt unless a competent minister was appointed swiftly to deal with archaeology-related affairs and to stop the looting.

Beyond shipwrecks: new dimensions in marine archaeology

Andrew Fitzpatrick

One major development in the last decade has been the widening of the scope of marine archaeology, now seen to extend from the Lower Palaeolithic to the Cold War and to encompass much more than sailing vessels and the ways people used the sea. Archaeology is now a regular requirement of Environmental Impact Assessment for marine developments such as off shore wind farms or for dredging for sand and gravels. It is recognised as an important issue by the marine landowner – the Crown Estate – as evidenced by recent publication of a finds protocol for the offshore renewables industry. The wider potential of seabed prehistory is well illustrated by research on Doggerland (p18).

The discovery of the remarkable collection of 28 well-preserved hand axes from the North Sea, reported through this finds protocol, demonstrated that Palaeolithic ground surfaces still survive. The axes provide dramatic evidence that deep in the Ice Age hunters had roamed across a lost world. The

axes were dredged up in marine sand and gravel off Yarmouth but delivered to a wharf at Vlissingen in the Netherlands. Once they were recognised on the gravel reject heap, an exclusion zone was established by Hanson Aggregates and dredging was stopped so that geophysical and vibrocore surveys could model the ancient landscape and environment. The 2008 British Archaeological Award for the Best Discovery was awarded to Jan Meulmeester who recognised the hand axes but this also highlighted co-operation between industry and English Heritage through the British Marine Aggregate Producers' Association (BMAPA), and also international co-operation around the North Sea. The Dutch National Service for Archaeology, Cultural Landscape and Built Environment also played an important role.

The protocol introduced by BMAPA and English Heritage 2005 to protect archaeological remains in English waters in during marine sand and gravel extraction has raised awareness of marine heritage in the industry and led to the regular reporting of finds. Those that have aroused the greatest excitement have been not been ancient but modern. Military aircraft are of particular interest and are protected under the Protection of Military Remains Act. The distinctive shape of aluminium aircraft parts, precise manufacturing details of more robust engine parts and documentary evidence often allow the nationality and even individual aircraft type to be identified. A preliminary report of Aircraft Crash Sites at Sea aroused widespread interest, fanned by the stunning clarity of surveys of a German Dornier 17 bomber on Goodwin Sands.

With outstanding finds and widespread popular interest; supported by stronger planning and legal frameworks together with industry support, marine archaeology can look forward to the next ten years.

Andrew Fitzpatrick MifA
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www.wessexarch.co.uk



A German Dornier 17 bomber that crashed on Goodwin Sands, summer 1940.
© Wessex Archaeology

New members & Members news

ELECTED

Member (MIFA)
James Brightman
Andrea Burgess
Claudine Gerrard
Chris Mayo
Barrie Simpson
Sorina Spanou
David Thurley

Associate (AIFA)
Katrina Anker
Seb Fry
Stuart Joyce

Practitioner (PIFA)
Madeline Andrews
Holly Beavitt-Pike
Pascal Eloy
Jonathan Kaines
Karl Macrow
Jeffrey Muir
Becky Peacock
Simon Roper-Pressdee
Caroline Sims

Affiliate
Rachel Cruse
Fiona Deaton
Julie Howard
Ann Lawrence
Christopher Leech
Grant Lock
David McNally
Elissa Menzel
Neil Middleton
David Mullen
Chris Simmons
Lim Swii Yii
Jenna Taylor

Student
Seosaimhin Bradley
Shaun Brown
Simon Colebrook
Eleanor Cowle
Gemma Cruickshanks
Keith Dallimore
Matthew Doyle
Mark Fussey
Helen Griffiths
Alexander Griffiths
Paul Hart
Gemma Hewitt
Elizabeth Hunter
Benjamin Inglis-Grant
Samantha Neil
Rodrigo Pacheco Ruiz
Alexander Portch
Gillian Ramsay
Kevin Redgate
Stephen Ruddock
Emily Ruscoe
Hannah Simpson
Charlotte Staniforth
Mara Vejby
Sarah White-Miller
Rory Williams-Burrell
Paul Wragg

TRANSFERS

Member (MIFA)
William Bedford
Taleyna Fletcher
Andy Holland
Ben Jervis
Jane Kenney
Paul Roberts
David Saxby

Associate (AIFA)
Charlotte Coles
Naomi Hall
Nicholas Gilmour
Caroline Sturdy
Colls

Practitioner (PIFA)
Caroline Butler
Derwin Gregory
Robert Skinner

Pre-Construct Archaeology PCA

PCA have also just opened a regional office in Cambridge, with **Mark Hinman, MifA 5315** as Regional Manager. PCA's new Central Region office covers central England and Wales. Mark has over 25 years experience in the delivery of archaeological services across the UK, and since 1995 has been based in Cambridge, primarily as a manager within Cambridgeshire County Council Archaeology Field Unit (now Oxford Archaeology East) and has worked extensively throughout the Midlands and East Anglia.

Mark Hinman
7 Granta Terrace, Stapleford
Cambridge CB22 5DL
01223 845522 or 07887 530153
info.central@pre-construct.com

GUARD

After the University of Glasgow stopped operating Glasgow University Archaeological Research Division (GUARD) on 31 December 2010, former GUARD staff managed to launch a new independent trading company, GUARD Archaeology Limited, on 1 January 2011, with **John Atkinson MifA 5161**, as Managing Director. They intend to continue providing services throughout Scotland and elsewhere within the UK (<http://www.guard-archaeology.co.uk>), and have already made a good start, with discovery and



Excavation by GUARD Archaeology Ltd of a Bronze Age cairn in the Scottish Borders, February 2011. ©GUARD Archaeology Ltd

excavation of a Bronze Age cairn and timber circle in the Borders, excavation of a prehistoric pit complex in the western highlands, discovery and recording of an early distillery site in Kintyre, and a growing number of contracts.

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S Members news

Roland Smith MfA 795

Roland Smith has joined Cotswold Archaeology as Regional Manager for their new South Midlands office, after working for Wessex Archaeology for many years, most recently as Operations Director. He will be responsible for running Cotswold's new regional operation, with particular emphasis on

business development and quality assurance. Roland has direct experience of managing large archaeological projects, and has recently been Chair of the Federation of Archaeological Managers and Employers (FAME). He served on IfA Council from



Roland Smith

2004 to 2006 and 2008 to 2010, and was on Executive as Hon Vice Chair for Standards, 2005–2006. He continues to be involved in the Registered Organisations committee.

MetroMOLA

MOLA (Museum of London Archaeology) has just set up a new regional UK operation, branded MetroMOLA, with offices in Birmingham, Manchester and Portsmouth. This offshoot will be headed by **Chris Thomas**, currently Senior Consultant with MOLA, and its aim is 'to extend the services of MOLA across the UK and internationally in environmental impact assessments, conservation management, archaeological mitigation, historic buildings survey and community engagement.

B

Frances Griffith MfA 313

Frances started work as County Archaeologist for Devon County Council more than 30 years ago. In 1984 she established the Devon Aerial Reconnaissance Project, as well as establishing the HER within its local government home. She also served as President of Devon Archaeological Society, on the Councils of the Prehistoric Society, the RAI and the Society of Antiquaries, and during her years as Secretary of CBA she provided land use planning and agricultural policy inputs to government. She retired on 31 March and now proposes to spend more time on research and publication projects, as well as engaging, as Hon Research Fellow, in the work of Exeter and Bournemouth Universities. She will be working in an advisory capacity for Devon four days a month.

Bill Horner MfA 1030

Bill succeeded Frances Griffith as County Archaeologist for Devon on 1 April. He came to work for Devon County Council in 1991, from a background of archaeological work on Exmoor and the Somerset Levels. In Devon he has been engaged with the HER, development control and strategic planning, and has also developed and managed externally funded projects, notably the county's Historic Landscape Characterisation exercise. Since 1992 he has shared the aerial reconnaissance and post-reconnaissance work. His expertise ranges from wetland archaeology to 20th-century defences, and he chaired Devon Archaeological Society for four years.

Devon County Council will lose his current post, and Ann Richards (HER Assistant Archaeologist) has retired, but there is still a complement of 9.8 FTE souls, and under Bill's leadership they hope to continue to go from strength to strength.

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Frances Griffith and Bill Horner.
Photograph: Helen Rance