ADS Annual Report

1ˢᵗ August 2008 – 31ˢᵗ July 2009

1.   Highlights of the Year

During the last year work has continued on a range of existing projects and there has been the addition of a few new ones. In January work began on a complete update and redesign of our highly successful and much used Guides to Good Practice series. Since their original completion in 2003, these guides, which cover a range of topics from GIS to fieldwork archives and from VR to geophysics, have become a major resource in archaeology and are highly thought of around the world. Indeed it is this international dimension that has facilitated the much anticipated updating work on the guides, with international funding and partners from the USA and Europe participating in the production process and giving us the benefit of their particular national perspectives.

Another project of particular interest to those who curate, host or deliver archaeological information is an update of the HEIRNET registry which allows all types of cultural heritage data, from web sites to full blown web services, to be discoverable from a single source. This will greatly enhance the opportunities for the meaningful combination, cross searching and aggregation of numerous data sets. Under the auspices of the DARIAH and ACE projects work is already underway to extend the registry to European resources. Furthermore, the UK Joint Information Systems Committee (JISC) and US National Endowment for the Humanities (NEH) have agreed to co-fund a new project to establish a Transatlantic Archaeology Gateway (TAG) jointly with our partners at Arizona State University.

As part of increasing transatlantic collaboration, Internet Archaeology and ADS have also made a successful bid to the Mellon Foundation for a project entitled LEAP II: A Transatlantic LEAP. This builds on the success of the AHRC ICT Strategy project "Making the LEAP: Linking electronic archives and publications". Four exemplar archives and publications will be developed, using projects hosted in Northern American institutions. In 2008 the original LEAP project was winner of the British Archaeological Awards for Best Archaeological Innovation. As this report goes to press the LEAP project has also been Highly Commended in The Association of Learned and Professional Society Publishers annual awards in the Publishing Innovation category. The ALPSP said "this project enhances the value of both current and future scholarship and is reconfiguring the publishing landscape for archaeology".

June 2009 saw the completion of the VENUS project, including the delivery by ADS of an Archaeology Digital Preservation Guide to Good Practice and an exemplar archive containing a range of sample data generated in the field, as well as in the assorted post-processing and transformational actions.

Meanwhile the 'RedSquid' project has seen a root and branch overhaul of some of the ADS's most important information management, search and dissemination mechanisms. The most obvious result of this project will be the launch of the redesigned ADS website, including the updated ArchSearch mechanism, incorporating a faceted browse interface.

2.   Collections Development

<u>Outline of significant new collections</u>

J J Wymer Archive

The J J Wymer archive forms the first part of a project commissioned by English Heritage through the Aggregates Levy Sustainability Fund (ALSF) to secure the survival of John Wymer's personal archive. As part of the development of the archive, and in order to disseminate to public and professional audiences the full benefits of knowledge gained through past work in advance of aggregates extraction, John Wymer's field note books (spanning 1949-2004) have been digitised and presented via the ADS website. The ADS interface presents the eight volumes in an 'e-book' fashion, allowing the user to flick through as if they were reading the real thing at their desk at home. In addition, and because the text on each page has been recorded in an accompanying database, the user can enter their own search terms to look for a particular site, artefact or even person.

Anglo-Saxon Kent Electronic Database (ASKED)

The Anglo-Saxon Kent Electronic Database (ASKED) is a collaboratively built research tool, developed to facilitate the doctoral research of two students of the UCL Institute of Archaeology: Stuart Brookes, investigating state formation in Anglo-Saxon East Kent, and Sue Harrington, examining aspects of gender and craft production in early Anglo-Saxon England with particular reference to the early kingdom of Kent. The aim of ASKED was to enumerate all those individuals within eastern Kent for the period AD 400-750 for whom there is archaeological burial evidence. The project produced a comprehensive electronic register of the archaeological remains and material culture of these populations, thus providing for the first time a searchable corpus of this information. The database lists 52 cemeteries from eastern Kent, as well as the inhumations and objects interred within. Information for these burials is derived from published reports and the inspection of museum archival material.

The Urban Landscapes of Ancient Merv, Turkmenistan

As part of the LEAP project, in conjunction with Internet Archaeology the ADS hosts the archive for the urban landscapes of Ancient Merv project. Ancient Merv, in Turkmenistan, is one of the most complex and well-preserved urban centres on the Silk Roads of Central Asia. A succession of major cities at Merv started in the 6th century BC and continued until the Mongol sack of 1221AD, although Mongol occupation, a resurgent Timurid city of the 15th century, and expansion in the 19th century continues the urban sequence. Together the walled urban areas covered more than 1000 ha. The Institute of Archaeology, University College London, has had

a long collaboration with the Turkmenistan Ministry of Culture, focused on archaeological research and approaches to the conservation and management of the Ancient Merv Archaeological Park, which since 1999 has been a World Heritage Site.

Assessing the research potential of Grey Literature in the study of Roman England

Since the adoption of Planning Policy Guidance Note 16 (Archaeology and Planning) in 1990, around 90% of all archaeological work in England has been prompted by the planning process. The product of this work is the ubiquitous typescript report, commonly referred to as the grey literature of archaeology. The Roman Grey Literature Project was developed between Cotswold Archaeology and Reading University as a way to assess the research potential for the Roman period which may currently be hidden within the grey literature. The project database is based upon data from the Archaeological Investigations Project (AIP) based at Bournemouth University, which has been enhanced by Cotswold Archaeology with information on publications. It lists all of the c.9400 investigations recorded by the AIP which found Roman remains. The digital archive contains the final database, the GIS layer created from the database and the final project report. The resource also contains the GIS layer as an interactive map.

Number of new negotiations by month and funder
NB This does not include the ALSF archives

	New Projects Under Negotiation	Month	Funder
1	Martin Watts: OASIS reports	August	
2	Stafford Field Reports On line	August	
3	Hedingham Ware Pottery Industry	August	
4	Archaeology Department University of Bristol: OASIS reports	September	
5	AC Archaeology Limited: OASIS reports	September	
6	Archaeological Excavations and surveys: OASIS reports	September	
7	Trigpoint Conservation and Planning Ltd: OASIS reports	September	
8	Martin Cook: OASIS reports	September	
9	Archaeophysica Ltd: OASIS reports	September	
10	Lindsey Archaeological Services: OASIS reports	September	
11	M & M Archaeological Services: OASIS reports	September	
12	The Brigantia Archaeological Practice: OASIS reports	September	
13	Warwickshire Museums Field Services: OASIS reports	September	
14	Birmingham Archaeo-environmental: OASIS reports	September	
15	Society for Church Archaeology Journal	September	
16	Abercorn Archaeology LLP: OASIS reports	September	
17	British Dovecote Society	October	
18	Via Dell Abbondanza, Pompeii	October	Self
19	Archaeological Project Team Excavation Archives	October	EH

20	Rapid Coastal Zone Assessment – Yorkshire and Lincolnshire	October	EH
21	Wharram Percy Archive	November	
22	Rapid Coastal Zone Assessment – Norfolk	November	EH
23	Sutton Park Heritage Partnership Agreement, Lidar etc	November	
24	Understanding Health Inequality	November	
25	Celtic Art Database	December	AHRC
26	A Scientific and Archaeological Investigation of Prehistoric Glasses from Italy	December	
27	Rapid Coastal Zone Assessment – North East	December	EH
28	Chester Archaeological Society Journal	December	
29	Fieldwalking the cropmark landscape on the Sherwood Sandstone of Nottinghamshire	December	EH
30	Water Supply and Management in the Near East	January	
31	Old Hall Boreham	February	
32	Roman Settlements on Fen Edge Cambridgeshire	February	
33	Upper Palaeolithic faunal remains from Mediterranean sites	March	
34	Nettlebank Copse animal bone data	March	
35	Horse Burials in Britain PhD	March	
36	Exploring England's Past	April	HLF
37	Transmission and recall: the use of short wall anchors in the wide world PhD	April	
38	Timber framed properties in Hampshire between AD1130 and 1530 PhD	April	
39	Milton Keynes HER & web services	May	EH
40	Roman Coins from Southwark	June	
41	Archaeological Excavation Services: OASIS reports	July	
42	J M Tripper Archaeological and Surveying Consultancy: OASIS reports	July	
43	Archaeology Service, Shropshire County Council: OASIS reports	July	

Number of collections released with month of deposition/accession and month of start of service, by funder (with new editions italicised)

	Resource title	Released	Accession	Funder	Special interface
1	Archaeological Archives Forum Papers	August	February 08	None	
2	Warwickshire Assessment of Archaeological Resource in Aggregate Areas	August	July 08	EH (ALSF)	

3	A Review of Animal Bone Evidence from Central England	August	August 07	EH	Yes
4	Solent Aggregates to Outreach	August	July 08	EH (ALSF)	
5	Wrecks Ecology	August	August 08	EH (ALSF)	
6	The Viking and Anglo-Saxon Landscape and Economy (VASLE) Project	August	July 08	AHRC	
7	Rill Cove Finds Recording Project	September	June 08	EH	
8	Thornborough, North Yorkshire: Neolithic and Bronze-Age monument complex	September	August 08	EH (ALSF)	
9	Aggregate Extraction and the Geoarchaeological Heritage of the Ribble Valley	September	April – August 08	EH (ALSF)	
10	Wasperton Anglo-Saxon Cemetery	September	March 08	EH (ALSF)	
11	Aircraft Crash Sites at Sea	September	September 08	EH (ALSF)	
12	Marine Class Description and principles of selection for aggregate producing areas	September		EH (ALSF)	
13	Assessing The Research Potential Of Grey Literature In The Study Of Roman England	September	January 08	EH	Yes
14	East Riding of Yorkshire: assessment of archaeological resource in aggregate areas	October	September 08	EH (ALSF)	
15	Land south-west of Ripple, Worcestershire	October	October 08	EH (ALSF)	
16	The Palaeolithic Rivers of Southwest Britain	October	April 07	EH (ALSF)	
17	The Urban Landscapes of Ancient Merv, Turkmenistan	October	November 07	AHRC	
18	Roman Piercebridge	October	October 08	EH (ALSF)	
19	Styling the body in late Iron Age and Roman Britain	November	October 08	Reading University	

20	Anglo-Saxon Kent Electronic Database (ASKED)	November	March 08	AHRC	Yes
21	The Aggregate Landscape of Gloucestershire	November	November 08	EH (ALSF)	
22	St Anthony Finds Record	November	July 08	EH	
23	Roman barrows and their landscape context: a GIS case study at Bartlow, Cambridgeshire	November	October 08	Reading University	
24	London Archaeologist Journal	November	May 07 – November 08	UCL	Yes
25	Trent Valley Palaeolithic Project	November	February 07	EH (ALSF)	
26	A database of Mesolithic Sites based on Wymer JJ and CJ Bonsall, 1977.	November	October – November 07	unfunded	
27	*Aggregate Landscape of Somerset: updated*	*November*	*November 08*	*EH (ALSF)*	
28	Somerset Aggregates Lithics Assessment	November	November 08	EH (ALSF)	
29	Mucking - Prehistoric and Roman	December	December 08	EH (ALSF)	
30	Hampshire - assessment of archaeological resource in aggregate areas	December	December 08	EH (ALSF)	
31	Latton Lands Gravel Pit, North Wiltshire	December	November 0	EH (ALSF)	
32	National Mapping Programme: The Leadon Valley Sand and Gravel Aggregate Area (Leadon Valley ALSF)	January	January 09	EH (ALSF)	
33	ALSF Dissemination - OSL Guidelines	January	November 08	EH (ALSF)	
34	*WAMAP: Wessex Archaeology Metric Archive Project*	*February*	*July 08*	*unfunded*	*Yes*
35	Engendering Roman Military Spaces	February	February 08	Leicester University	Yes
36	Middleton Bottom Wheel Pit, Wirksworth, Derbyshire	February	February 09	EH (ALSF)	
37	The British Archaeological	February	March 05	AHRC	

	Expedition to the ancient emporium of Vetren – Pistiros, central Bulgaria				
38	Water Supply and Management in the Near East 63BC-AD636	March	February 09	Unfunded	
39	Rapid Coastal Zone Assessment: Yorkshire and Lincolnshire	March	October 08	EH (ALSF)	
40	Transition Zone Mapping for Marine-Terrestrial Archaeological Continuity (Contiguous Palaeo-Landscape Reconstruction)	March	March 09	EH (ALSF)	
41	Nene Valley: Archaeological and Environmental Synthesis	March	March 09	EH (ALSF)	
42	Clee Hills Project, Shropshire	March	February 09	EH (ALSF)	
43	Rapid Coastal Zone Assessment: North East	March	December 08	EH (ALSF)	
44	Seabed Prehistory	March	March 09	EH (ALSF)	
45	Derbyshire EUS	March	December 08 – February 09	EH	
46	The eastern cemetery of Roman London: excavations 1983-1990	April	March 09	EH (RECAP)	
47	Medway Valley Palaeolithic Project	May	March 09	EH (ALSF)	
48	Unlocking the Past: Archaeology from Aggregates in Worcestershire	May	April 09	EH (ALSF)	
49	Hartshill, Berkshire	May	February 09	EH (ALSF)	
50	The Cluniac priory and abbey of St Saviour Bermondsey, Surrey: excavations 1984-95	May	March 09	EH (RECAP)	
51	*Four new sites added to the Newham Museum Service archive*	*June*	*1998*	*Unfunded*	
52	*Dendrochronology Database updated*	*June*	*May 09*	*Unfunded*	*Yes*
53	*Proceedings of the Society of Antiquaries of Scotland and Archaeologia Scotica*	*June*	*January 09*	*Self*	*Yes*

	enhanced				
54	*Cruck Database updated*	*July*	*May 09*	*Unfunded*	*Yes*
55	San Vincenzo 5 - Excavations of San Vincenzo Maggiore	July	February 08 – July 09	AHRC	

A full list of new accessions is provided in Appendix C.

3.   Collections Management and Preservation

Systems developments

- A dedicated file server is currently being sourced. This will host original, dissemination and preservation copies of files. This data will be regularly synchronised to our offsite data repository at the UK Data Archive, University of Essex.

- Two new PCs were purchased running under Windows XP (the University does not support Vista).

- Two sets of equipment (webcam + headset) were purchased to facilitate video conferencing for international projects such as DARIAH.

- A support server (staff WIKI, CMS (Collections Management System) and shortly a standby database) was upgraded to the Solaris 10 operating system. The standby Oracle database will duplicate our production service and can be rapidly deployed if there are problems with the latter.

- The dedicated spatial server noted last year is now fully operational running ESRI ArcGIS 9.3, ArcSDE and Oracle 11g and is successfully serving up spatial datasets to our user community.

- Coldfusion 8 has been test bedded on a development server and will shortly move to a production environment replacing v.7.

- A Shibboleth, Apache web server, ModSSL and OpenSSL test bed is currently running successfully.

- Other interface developments pertaining to Archsearch III are described elsewhere.

Curation

- All deposited data sets were accessioned into the ADS Collections Management System.

- During the course of the year preservation and resource discovery metadata was prepared for all new collections.

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- Preservation copies of all data continue to be synchronised off site into our deep storage facility within the UK Data Archive at the University of Essex.

- A test installation of Fedora Commons, broadly an open source information management system, is in place. The ADS is evaluating this as a potential tool for managing file level preservation metadata.

- The ADS continues to refine levels of compliance to the Trustworthy Repositories Audit & Certification: Criteria and Checklist.

- The ADS curatorial team are continuing to use a series of checklists to audit completion of all ingest tasks; datasets are signed off by the appropriate project manager on completion of preparation and delivery.

- Preservation manuals and internal data procedures were kept under ongoing review.

- A formal preservation policy document is now available.

System uptime

Unplanned downtime

Date	Downtime (hour.min)	Comment
20-21 April 2009	6.21	Our servers unaffected but Computing Service problems prevented external access
13 May 2009	0.45	University firewall problems prevented external access

Planned downtime

All patching, etc of servers took place during the Tuesdays 8-9am (UK time) advertised 'at risk' period

4. Advisory services

New Guidelines

In January 2008 the ADS began a collaborative two-year project to revise and develop our series of Guides to Good Practice The project will encompass important revisions of the existing six ADS Guides as well as the development of entirely new documents covering areas such as marine scanning, laser scanning, GPS, digital audio and digital video. Previous authors have been asked to revise existing content and new authors, from both Europe and the US, will contribute to the development of the guides into new themes and areas.

The project to develop the Guides is predominantly being carried out in support of the Digital Antiquity initiative, a Mellon Foundation funded US–based project with the aim of creating "a collaborative organization devoted to enhancing preservation and access to digital records of archaeological investigations". A major aim of the Guides is to develop the basis for workflows for the creation of digital datasets that can be effectively archived both by Digital Antiquity's tDAR repository in the US and by the Archaeology Data Service in the UK. As part of this initiative the development of the Guides will involve close collaboration with teams in the US at both the University of Arkansas and Arizona State University.

Other ADS projects are also planned to feed into the revision and development of the Guides. ADS involvement in the European VENUS project has resulted in one of the first published guides focussing on marine scanning and photogrammetry. In addition, the incorporation of findings from the ADS Big Data project, together with the revision of the existing guide on aerial photography and remote sensing data, will see a significant contribution to the guides from English Heritage funded projects.

Guidance about the deposition of sensitive and/or personal data has been drafted for consideration by the ADS Management Committee. Once agreed it will be incorporated in the guidelines for depositors.

Number of projects seeking advice (meeting/email/phone):

18 emails
4 phone calls
6 meetings

(Covering c.22 planned projects)

Technical Appendices Assessed

43 technical appendices were assessed on behalf of AHRC

Workshops

A joint ADS/Digital Curation Centre information day was held in York on 8 May, aimed specifically at HERs. Presentations were given by the ADS on digital preservation issues in archaeology, whilst the DCC presented the Digital Curation Lifecycle model. A second information day for museum archaeologists is planned for 2010.

The ADS also hosted a VENUS maritime archaeology workshop on 3 November 2008. This workshop was intended to draw together representatives from the maritime archaeology community, with representatives from the archaeological VR community and those involved with digital preservation. The objectives were two-fold: (1) to disseminate best practice on digital preservation in general and (2) to gather feedback from maritime archaeologists on the best approaches, from their perspectives, to selection and retention of born digital material. The workshop was

attended by 13 people comprising representatives from major stakeholders in the digital maritime and archaeology sector including English Heritage, the Hampshire and Isle of Wight Trust, Wessex Archaeology, the Universities of Every and Hull, and the ADS.

5.   Publicity and promotion

Conference Appearances:

In addition to conference attendance members of staff from the ADS presented 45 papers at 32 different conferences, workshops and seminars throughout the year. These included major international conferences such as the CAA, the ESF Alliance Conference and the Society for American Archaeology as well as UK conferences such as the IfA. A full list of conferences, workshops and other significant meeting attended is available in Appendices E and F.

Newsletters and press coverage:

Issues 22 and 23 of ADS News were published during the year:

Issue 22, England's Rock Art: From heathland to hi-tech. Articles on ERA, Employment in Digital Archaeology, Grey Literature Library, the Requiem and Merv archives (print run 2000): http://ads.ahds.ac.uk/newsletter/issue22/

Issue 23, Good Practice: the guides get an international update. Articles on Guides to Good Practice, RedSquid, European projects, and the Underhill and JJ Wymer archives (print run 2000): http://ads.ahds.ac.uk/newsletter/issue23/

Institute for Archaeologists Yearbook 2008/9. Linking Publications and Archives, Archaeology Data Service and Internet Archaeology, article by Julian Richards.

The September/October 2008 issue of British Archaeology carried an article by Caroline Wickham-Jones "Do digital records record everything we want to know?", The article names the ADS as the 'top site' for archaeological archives, "*the ADS leads with an impressive collection of online material brought to you by a strong team*"

In November 2008 the ADS/Internet Archaeology project Making the LEAP: linking electronic archives and publications was named as winner of the Best Archaeological Innovation award. The same project was also Highly Commended in the category of Best Archaeological ICT project. http://www.britarch.ac.uk/awards/winners2008.html#inno

In May 2009 JISC Inform Magazine (Issue 24/Spring 2009) carried an article by Stuart Jeffrey on the e-Science funded Archaeotools project. Available via JISC Inform plus+, http://www.jisc.ac.uk/publications/documents/inform24.aspx#traditionalsubjects

Throughout the year the ADS continued to appear in numerous blog posts covering archaeological and digital preservation topics. Examples of the most significant types of post are:

"*Any publication is cool, but I have a feeling that this one is going to be particularly fun because Mike and the rest of my colleagues are the lucky recipients of one of four initial LEAP II grants, aimed at providing practical exemplars of how archaeological researchers can truly link electronic archives with publication*" Charles Watkinson, Director of Publications at the American School of Classical Studies at Athens. http://www.charleswatkinson.com/2009_03_01_archive.html

"*The study aims to build on the work from the original Keeping Research Data Safe consultancy and is being undertaken by a consortium consisting of 4 partners involved in the original study (University of Cambridge, Charles Beagrie Ltd, OCLC, and University of Southampton) and 4 new partners (the Archaeology Data Service, University of Oxford, UK Data Archive, and University of London Computer Centre) with significant data collections and interests in preservation costs. All the partners bring considerable relevant expertise, knowledge and resources to the project.*" Neil Beagrie, Charles Beagrie Ltd. http://blog.beagrie.com/

"*Anglo-Saxon Landscape and Economy: using portable antiquities to study Anglo-Saxon and Viking Age England*" Example News link posted by David Beard in the Archaeology In Europe Blog. http://www.archaeology.eu.com/weblog/

Regular postings to our own and other email lists continued to take place throughout the year to highlight significant new resource releases. For example the following list posts were made:

ADS general list Ads-all@jiscmail.ac.uk (members) c20 posts (>200 members) British Archaeology discussion list (CBA moderated). Britarch@jiscmail.ac.uk 8 posts (>1400 members) Other lists posted to regularly include Antiquist and the Higher Education Academy. The ADS RSS news feed continues to run with an average of three new news items per month (c.50 in the last year) and is broadly consumed (e.g. by Wessex Archaeology).

6.   **Resource discovery**

Interoperability

The ADS continues to drive towards the broad adoption of a service-orientated architecture both internally and externally. We are in the advanced stages of rolling out the ARENA 2 web service implementation for the DARIAH project (with RCAHMS). Additional services will now be picked up from partners in the USA under the TAG programme, which will significantly expand the reach of the ADS hosted aggregator. We will also launch the HEIRNET Java Universal Discovery, Description and Integration server before the end of the year (under the ACE programme). Finally we will also create and host a number of OAI-PMH targets for direct/aggregated consumption by Europeana under the forthcoming CARARE

project. Negotiations continue with other potential service harvesters such as those operated by NERC and OpenDOAR.

Resource Discovery metrics:

Service	Number	Comments
Total Records Aggregated:	1,039,165	
External Data Sources	25	Including the monuments inventories for England, Scotland, Wales and NI
Web services hosted	5	2 OAI PMH, 3 SOA
Web services consumed	3	EH Heritage Gateway test service, two ESRI WMS
External aggregators	2	Intute and ADS RD Metadata bulk loaded to MICHAEL – Multilingual Inventory of Cultural Heritage in Europe.

7. **Resource delivery**

User Interface developments:

ArchSearch III is the RedSquid component that integrates both the faceted classification search (for all aggregated records and our own archive holdings) with an advanced geospatial search mechanism based on OpenLayers. This represents a very significant step forward for the ADS not just in terms of usability, but in terms of ensuring that our site design paradigms keep pace with general changes on the web. The initial beta version of this site was demonstrated to the ADS Management Committee on 1 April. It is due for launch by Autumn/Winter 2009 and user (focus group/expert group) testing is proposed around the end of 2009 or early 2010, including student groups in York and UCD.
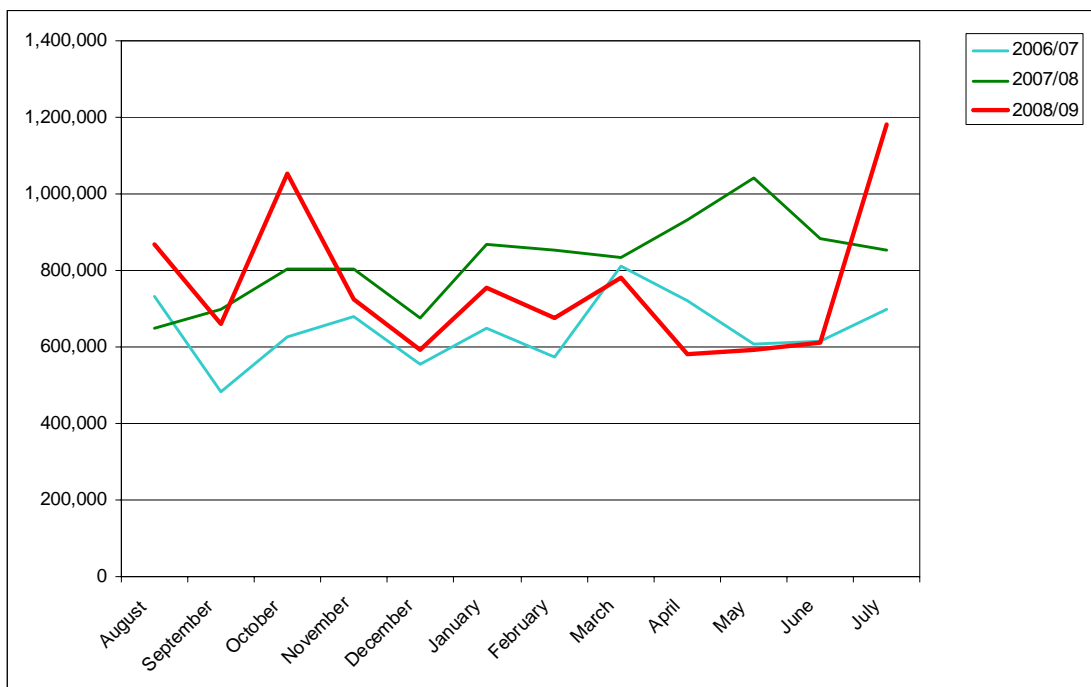
Since the launch of the 'England's Rock Art' site in July 2008, the ADS has continued to work to enhance the interface to this resource. A number of changes has been made in response to user feedback, in particular enhancing the map search and display interface. The ADS has also worked to maximise browser compatibility for the resource especially in Internet Explorer 6, used by many local authorities. We have also refreshed and updated the site with the most recent Rock Art data and included the information pertaining to the management and conservation of the sites. Work continues on the 'back end' data input and validation forms which will be released in the near future.

Access statistics

The total number of adjusted page requests for 2008/9 was 9,069,421, which would represent a small decrease on 2007/8 raw numbers. (9,551,250) Removing the adjustment, which is meant to cover known spurious accesses such as site scrapes, brings this years accesses to within 3% of the 2007/8 figure. If we had confidence

that the increase seen January to May 2007/8 is user driven as opposed to being a software artefact (e.g. LinkChecker) then this year's figures would essentially represent no change on the previous year. However, it has long been recognised that this type of naive access statistics gathering and analysis, whilst useful as a broad brush indicator of usage, does not provide either reliable usage indicators or the level of detail on types of usage we require.

For this reason RedSquid developments include an optional user registration feature that we hope will allow for more comprehensive and detailed reporting, at least amongst academic users, than has previously been possible. Whilst this will provide us with much more useful data, we will also maintain the raw statistics in order to continue to compare results with previous years.

	2006/07	2007/08	2008/09
August	730,739	649,566	866,798
September	481,426	696,652	662,127
October	626,357	805,085	1,051,477
November	680,881	804,145	723,797
December	555,868	674,490	592,031
January	649,674	866,207	753,823
February	573,157	853,800	674,453
March	813,009	832,177	780,563
April	721,013	933,235	582,080
May	607,832	1,041,638	591,265
June	614,783	884,596	611,358
July	697,354	853,471	1,179,649
Totals	**7,752,093**	**9,895,062**	**9,069,421**

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User feedback:

As well as the usual informal feedback channels the ADS Helpdesk handled 164 requests for assistance in 2008-9 (this figure was 281 in 2007-8). In keeping with previous years there is no significant pattern in the queries that would inform us that major changes were needed in a particular resource. One issue discernable from last year's helpdesk traffic was that the new site-reporting mechanism for Defence of Britain sites needed to be emphasised on those resource pages (to avoid users reporting directly to us). This has been done and the helpdesk figures consequently reflect this. Far fewer Defence of Britain 'reports' have been spuriously channelled through the helpdesk.

The following are a sample of comments received through the helpdesk or directly from users in the last 12 months:

"*I have just found about your website on England's Rock Art via Nature.com… Absolutely Beautiful photos.*" Comment on the ERA Gallery, Alexander Trevi, Design Blogger, Chicago, USA. August 2008.

"*..just discovered your splendid website, which is invaluable for someone annotating the odds and ends of early nineteenth century life….a treasure trove.*" Comment on the PSAS archive, David Parker, (Author, *A Companion to the Pickwick Papers*), October 2008

"*I think your online tutorial called 'Archaeology ALIVE – Reading Archaeology' is excellent and I have assigned the Early Humans version to my first year undergraduate students.*" Comment on Archaeology ALIVE, Dr Karen Milek, Lecturer, University of Aberdeen, October 2008.

"*It was….very useful for me to have the data on-line, so thank you very much!" and on user accesses "I should think that it is a hundred times more than if it had been a hard-copy archive!*" Comments on Catalhoyuk, Dr David Shankland, Reader in Social Anthropology, University of Bristol, October 2008.

"*I am from Argentina and I am studying architecture at university. Right now, I'm doing a pro(j)ect about medieval urbanism, that's why I entered your website. I was very impressed with the work you have done, the mapping…everything! Thanks for the information.*" Estefania, student, Argentina, February 2009.

"*My perception"(of the availability of a journal) "arose through the obviously mistaken assumption that almost all national archaeological journals are now digitised, as with Med Arch, which resource I have used often. Roll on the day……. Anyway, the very useful Archway resource is one small step in this direction.*" Comment on Journal of Medieval Archaeology and ArchWay, Jeremy Haslam, researcher, March 2009.

8. Partnerships and collaboration

<u>United Kingdom</u>

- We have continued our involvement in a number of UK networks of digital archives, including the Network of Centres being coordinated by Professor David Robey on behalf of the AHRC, and the Research Data Management Forum being led by the Digital Curation Centre.

- We have provided information on the ADS Charging Policy and data archiving costs to Neil Beagrie, for a consultancy he is undertaking for JISC on the costs of digital data archiving.

- We have continued to work in partnership with other heritage agencies. We have been active participants in FISH (the Forum for Information Standards in Heritage) with Kieron Niven (ADS Data Standards Editor) acting as FISH convenor. Kieron has also been involved in the establishment of an IfA Digital Data Special Interest Group.

- We continue to work within the Archaeological Archives Forum to promote digital archives standards. This work compliments our standards role within the HE sector and allows us to keep abreast of broader archival developments. The ADS is a project partner in the most recent AAF initiative looking into Maritime Archives. Led by the Hampshire and Wight Trust for Maritime Archaeology, the most recent report of the project findings and recommendations, "Securing a Future for Maritime Archaeological Archives Element Two: Review of Maritime Archaeological Archives and Access", is due for release shortly.

- We have continued to work with HEIRNET partners to maintain the catalogue of historic environment resources in the HEIRNET Register, and we have established an historic environment web service UDDI registry service and T-model, on behalf of HEIRNET.

- Julian Richards is a member of the Advisory Committee for the English Heritage 'Heritage Gateway' project and we have continued to support web service development in collaboration with the English Heritage NMR Heritage Gateway team, including the development of a web service for the Parks and Gardens database partnership.

- We have continued to work with the English Heritage NMR, the Royal Commission on the Ancient and Historical Monuments of Scotland, and the Archaeological Investigations Project at Bournemouth University to support OASIS. With the support of Historic Scotland we have also worked with RCAHMS to develop a system for the management and recording of the Scottish C14 dating programme, which is linked to OASIS records. We have submitted a proposal to English Heritage for GLADE, a project to evaluate user needs for grey literature and to assess the scope for capturing the grey literature backlog. We have also been asked by English Heritage to develop a project design for the next stage of OASIS development, integrating a number of web-based recording systems, with the next generation of OASIS as a common core.

- English Heritage have also agreed to continue to fund a post (going forward on a part-time basis for a further two years) to support the dissemination and archive of ALSF digital outputs, and they have provided additional funding to secure the preservation of a number of more complex dataset generated during the ALSF programme. There are currently 112 ALSF project archives in the ADS online catalogue.

- We continue to maintain the Archaeology Image Bank in collaboration with the HEA.

- We continue to host the online library catalogue of the Society of Antiquaries of London, as well as their online catalogue of prints and drawings.

Europe

- The ADS has contributed to further EAC Archives Working Groups and will be hosting the next meeting in York in May 2010. The Group continue to work towards producing a European version of the AAFs publication "Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation" by Duncan Brown. Once the project, to be managed by the IfA, is underway the ADS will provide wiki technology for the project to enable collaboration across the 12 European partners.

- The ADS has continued to liaise closely with DARIAH partners numerous via Marratech/Skype meetings, and the DARIAH-TECH email list. In mid July Stuart Jeffrey attended a planning and scoping meeting of the DARIAH Technical group held in the eScience centre in Edinburgh (called Developers and Architects Meeting for Arts and Humanities Research Infrastructures). Presentations on ADS elements of the DARIAH work have been made on two occasions this year to the DARIAH management group by Tobias Blanke and Mike Priddy (Centre for e-Research, King's College London, WP7 leaders). A further progress report on the ARENA II element of DARIAH will be made at the general DARIAH meeting in Paris in October.

- The ADS has continued to work towards the Archaeology of Contemporary Europe (ACE) objectives and attended an ACE meeting in Santiago de Compostela in Spain. In addition to continuing work on the development of the UDDI under the auspices of this project, the ADS has also been involved in the preparation of ACE reports covering contemporary and historical archaeological practice in archaeology overseas. This involved a survey of various British Schools of Archaeology abroad, their constitution and funding, as well as various other forms of overseas archaeology (e.g. Higher Education based) as well as the preparation of both a list of publications dealing with overseas work such as the journals associated with the schools as well as a bibliography of works analysing UK overseas archaeological practice. Current work for ACE is in the tailoring and management of the broad ACE questionnaire on various aspects of domestic archaeological practice.

North America

- Plans are now well advanced for the development of an archaeological digital archive in the United States, under the auspices of the Archaeoinformatics consortium. With funding from the Andrew Mellon Foundation Arizona State University will oversee the

establishment of a digital archiving service, now known as Digital Antiquity. Julian Richards took part in the appointment of the new Executive Director, via access grid. The project also includes funding for ADS to lead a two-year project to develop a comprehensive revised online edition of the Guides to Good Practice for data formats used by archaeologists, in collaboration with the University of Arkansas. ADS also hopes to promote interoperability with US archives.

- As part of increasing transatlantic collaboration, Internet Archaeology and ADS have also made a successful bid to the Mellon Foundation for a project entitled LEAP II: A Transatlantic LEAP. This will build on the success of the AHRC ICT Strategy project "Making the LEAP: Linking electronic archives and publications". From March 2009 to April 2011 four exemplar archives and publications will be developed, using projects hosted in Northern American institutions.

9. Research and development

Archaeotools. In September 2007 the ADS and the Natural Language Processing Research Group at the University of Sheffield began work on a two-year project, funded under the AHRC-EPSRC-JISC e-Science Research Grants Scheme. Earlier in the year we completed the index of the ADS database of over one million metadata records describing sites and monuments in the UK, according to three criteria: When, What and Where. The resulting faceted index tree has been implemented in the new ArchSearch interface.

All ADS staff were also involved in training the Information Extraction software to recognise the key terms describing When, What and Where according to agreed word lists in a sample of grey literature reports, and an indexing tool was developed to allow a full index of the grey literature library, with 90%+ success rates. This will also be publicly released during 2009-10. Finally, the same technique was employed to extract index terms for a sample of antiquarian literature – the full back run of the Proceedings of the Society of Antiquaries of Scotland. Place names were checked against existing services (EDINA's GeoXWalk), allowing us to return precise grid references where these were not otherwise available in the reports.

Making the LEAP. All four exemplar archives have been completed, comprising Whittlewood, TAESP, Silchester and Merv, and the final project report was submitted to the AHRC. As reported under the Year's highlights, *Internet Archaeology* and ADS have been awarded funding by the Andrew W Mellon Foundation to develop four further exemplars based upon North American hosted projects.

The project will use the existing infrastructure of the e-journal Internet Archaeology to provide four sustainable exemplars of multi-layered e-publications and e-archives of broad interest to an international audience. An online mechanism, linked to the journal, that facilitates and encourages comment and debate will also be developed. The archive component of each exemplar will be hosted by an appropriate US-based digital repository, or by the Archaeology Data Service.

VENUS. June 2009 saw the completion of the VENUS project, including the delivery by ADS of an Archaeology Digital Preservation Guide to Good Practice (G2GP) and an exemplar archive containing a range of sample data formats (and sample data)

generated in the field, as well as in the assorted post-processing and transformational actions. Around 43Gb of data was uploaded from the VENUS project ftp servers to the ADS for selection and retention followed by accessioning. Around 3Gb of data was ultimately selected for accessioning into the exemplar archive. This consisted of digital imagery of a complete survey from Port-Miou C and the associated metadata files, various bathymetric files (e.g. multi-beam sonar) and associated metadata, illustrative video of the Marseille mission and the Hull University demonstrators plus the UEVE augmented reality work package. Also available are project databases and associated documentation as well as numerous reports detailing recording and processing methodology which would be required to facilitate reuse of the archived material.

Both resources are freely available from the ADS website and in the case of the G2GP downloadable and printable versions of the guide are available. Sample data as outlined above is available from the website, although its primary purpose is to demonstrate how such data should be held and disseminated as a compliment to the G2GP.

10.   **Service management**

During the year 1 August 2008 – 31 July 2009 the ADS had a total income of £638,184, and total expenditure of £704,619, of which £19,937 was retained as the ADS share of University of York overhead income. Research projects are now budgeted on a full economic costing (FEC) basis, with 80% generally being recovered from the research funder, and the 20% University of York contribution normally being covered from estates and indirect costs. The outstanding negative balance was offset by a substantial carry forward from the 07-08 financial year, including an advance payment from the ACE project, which is funded on a biannual cycle. A figure of £20,000 was transferred to the preservation legacy endowment fund and a credit balance of £14,192 was carried forward to the 2009-10 financial year. The full accounts for 2008-9 are available as a separate document.

The internal management team held quarterly meetings to review finances, and all ADS staff met to review work progress on a monthly basis, with separate meetings of the curatorial and technical staff. During July 2009 an internal re-organisation of space allowed all ADS staff to be co-located in a suite of ground floor offices in King's Manor. It is envisaged that the move will improve internal communications.

Jen Mitcham took maternity leave from August 2008 to May 2009 and then returned to work on a 60% of full-time basis. Dr Ray Moore was appointed as maternity leave cover but has been retained on a fixed term contract, working initially on the CTRL archive project. All staff had performance reviews, in accordance with University of York procedures, and all staff attended a Department of Archaeology Away Day in October 2008.

Appendices

(A) STAFFING LIST

Prof J D Richards, Director
T Austin, Systems Manager
J Bateman, Curatorial Officer
M Charno, Curatorial Officer
T Evans, Curatorial Officer
C S Hardman, Collections Development Manager
S Jeffrey, User Services Manager
J Mitcham, Curatorial Officer (maternity leave 18 August 2008 – 18 May 2009)
R Moore, Curatorial Officer (from 18 August 2008)
K J Niven, Curatorial Officer / Data Standards Editor (from 1 Jan 2009)
D Page, Administrator
S J Waller, Applications Developer

(B) MANAGEMENT COMMITTEE MEMBERSHIP

Met on 01 October 2008 and 01 April 2009

From the end of the year 2008-09 a category of 'corresponding member' was introduced for those who, whilst not expected to attend meetings, wished to remain informed about ADS development. Corresponding members are indicated with an asterisk

Tim Darvill	CHAIR, Bournemouth University
Mike Heyworth	VICE-CHAIR, Council for British Archaeology
Jeremy Huggett	VICE-CHAIR, University of Glasgow
Diana Murray	VICE-CHAIR, RCAHMS
Graeme Barker	Arts and Humanities Research Council
Ian Broadbridge	Arts and Humanities Research Council
Peter Halls	Association for Geographic Information
Dave Barrett	Association of Local Government Archaeological Officers
Barry Cunliffe*	British Academy
Isabel Holroyd*	British and Irish Archaeological Bibliography
Dan Pett*	British Museum
Nick Poole	Collections Trust
Dan Hull	Council for British Archaeology
Marion Meek*	Dept of the Environment for Northern Ireland
William Kilbride	Digital Preservation Coalition
Keith May	English Heritage
Gillian Grayson	English Heritage (NMR)
John Walker	Federation of Archaeological Managers and Employers

Anthony Sinclair	Higher Education Academy
Noel Fojut	Historic Scotland
Edmund Southworth	Lancashire County Museums
Mark Thorley	Natural Environment Research Council
Gary Lock*	Oxford University
Hilary Malaws	RCAHMW
David Gaimster/Ortrun Peyn	Society of Antiquaries of London
Simon Gilmour	Society of Antiquaries of Scotland
Paul Miller	Talis Information Ltd
Clive Orton	University College London, Institute of Archaeology
Vince Gaffney*	University of Birmingham
Armin Schmidt	University of Bradford
Richard Higgins	University of Durham, Archives and Special Collections
Nick Ryan	University of Kent at Canterbury
Mark Gillings*	University of Leicester
Sam Turner	University of Newcastle
Graeme Earl	University of Southampton, Dept. of Archaeology
Steve Mills*	University of Wales - Cardiff, School of History and Archaeology
Alastair Fitter	PVC, University of York

(C)   NEW COLLECTIONS

- *Selby Community Project - geophysical survey archive.* The project presents the results of both geophysical and building surveys conducted in advance of proposed development at Selby War Memorial Hospital. The works were commissioned by Faber Maunsell on behalf of Selby District Council and conducted by Archaeological Services Durham University.

- *San Vincenzo 5 - Excavations of San Vincenzo Maggiore.* This data is primarily collected for the purposes of publishing the fifth and last volume in the series of excavations monographs for the monastic site at San Vincenzo, Italy, excavated under the direction of Professor Richard Hodges from 1980 to 1996. The volume describes the archaeology of the abbey's principal basilica, San Vincenzo Maggiore, its architecture, and its cemetery. It also describes the associated workshops where enamels, glass and other fine objects were made in the 9th century. The catalogues of finds and faunal remains is extensive, largely comprising discoveries made in a rich 9th-century midden associated with the workshops.

- *VAG Cruck Database updated.* Additional entries and revisions have been incorporated up to July 2009, giving a total of 5894 entries (4039 true crucks). The database holds period, location and reference information for each record. The database contains information on the name, location, function and condition of the cruck buildings with further details on the crucks themselves and bibliographic references.

- *VENUS: Virtual ExploratioN of Underwater Sites - Port-Miou C wreck, Marseille.* The VENUS consortium, composed of eleven partners, is pooling expertise in various disciplines: archaeology and underwater exploration, knowledge representation and photogrammetry, virtual reality and digital data preservation. The project aims to develop scientific methodologies and deliver technological tools for the virtual exploration of deep underwater archaeology sites. This exemplar archive contains some of the material collected during the third mission of the project - the survey of the Roman wreck site of Port-Miou C, near Marseille. The archive presents a representative sample of the data collected during the mission, chosen to illustrate the techniques and technologies used and the archiving strategy employed.

- *Proceedings of the Society of Antiquaries of Scotland and Archaeologia Scotica enhanced.* Previously unavailable sections of the ever popular PSAS and Archaeologia Scotica are now available online. These new files mainly consist of title pages, indexes, minutes of meetings, lecture summaries and acquisition lists and typically appeared at the front or back of each journal volume.

- *VAG Dendrochronology Database updated.* 543 dates have been added to this resource. The database now consists of the tree-ring dates for 2450 buildings in the United Kingdom, ranging from cathedrals to cottages and barns. The database holds period, location and reference information for each record. The database was compiled by the Vernacular Architecture Group and is based on the lists published annually in the journal Vernacular Archaeology.

- *Newham Museum Service archive.* Four new sites from the Newham archive have been made available online. The new sites are as follows: Beckton Nursery, East Beckton District Centre, Hays Storage Services Ltd (Dagenham), and Langthorne Hospital (Leyton) - all archaeological interventions from the mid 1990's. The data that has been made available consists primarily of pdf files containing text and appendices from the site reports.

- *The Cluniac priory and abbey of St Saviour Bermondsey, Surrey: excavations 1984-95.* The project covers the excavations by Museum of London Archaeology (MOLA) on the site of the Cluniac priory and later abbey of St Saviour Bermondsey took place between 1984 and 1995. The site, formerly in Surrey and now part of the London Borough of Southwark, is a Scheduled Ancient Monument (GLSAM no. 165). Important parts of the digital archive are being made available through ADS as part of the English Heritage Rescue of Complete Archaeological Projects (RECAP) to ensure continued access for researchers.

- *Hartshill, Berkshire.* Between January and April 2003 Cotswold Archaeology (CA) carried out an archaeological excavation funded by the Aggregates Levy Sustainability Fund (ALSF) at Hartshill Copse, Upper Bucklebury, West Berkshire. The project identified evidence for late Bronze Age (c. 10th century BC) and Early Iron Age (c. 5th century BC) settlement. The late Bronze Age contexts have yeilded substantial amounts of iron working residue - evidence of the earliest ironworking yet known in Britain.

- *Unlocking the Past: Archaeology from Aggregates in Worcestershire.* This project was undertaken by Worcestershire Historic Environment and Archaeology Service (WHEAS) and funded by English Heritage through the Aggregates Levy Sustainability Fund programme. Local group and museum collections from aggregate production areas of south Worcestershire were assessed as part of a project designed to 'unlock' their potential. Many of these had never been studied previously, while others warranted re-consideration in the light of limitations of previous analysis and/or advances in archaeological knowledge and techniques of analysis. Assessment of the collections has identified several regionally important assemblages and numerous lesser assemblages along with one nationally significant archive collection, that from Cruso Hencken's excavations at Bredon Hill 1935-7.

- *Medway Valley Palaeolithic Project.* The Medway Valley Palaeolithic Project (MVPP) was developed in response to the priorities and objectives of the Aggregates Levy Sustainability Fund. The project was focused within the Thames Gateway development area on sand/gravel aggregate deposits in southeast Essex and north Kent associated with the palaeo-Medway River. This area has a long history of aggregate extraction, as well as still containing a substantial aggregate resource liable for future extraction or impact by other development.

- *The eastern cemetery of Roman London: excavations 1983-1990.* Archaeological excavations conducted between 1983 and 1990 at different sites within an area covering about 12ha in the modern London Borough of Tower Hamlets, to the east of the City of London, produced evidence for a large Roman cemetery. This cemetery was one of several serving Roman London, and lay immediately to the east of the town. During these excavations 136 cremation burials and 550 inhumation burials

were recorded, together with a further 165 features identified as disturbed burials, but without surviving human remains. They were reasonably well dated from the 1st to the 5th century AD, although 3rd- to 4th-century burials were particularly well represented.

- *Derbyshire EUS*. Derbyshire and Nottinghamshire County Councils launched a survey of small towns in the two counties in 1997 as part of the national EUS programme instigated and funded by English Heritage. In Derbyshire 22 small towns were surveyed to provide high quality data about the archaeological potential of the towns and their historical development for archaeologists and the local planning authorites. The reports utilised information from the county Historic Environment Record and a range of accessible secondary sources; no fieldwork was undertaken. The value of the reports for the identification of conservation areas and the preparation of conservation area appraisals has also been recognised. The project was carried out on behalf of Derbyshire and Nottinghamshire County Councils who act as archaeological advisors and maintain the Historic Environment Records for the respective counties. The project was managed by The County Archaeological Officer for Nottinghamshire.

- *Seabed Prehistory*. The Seabed Prehistory - gauging the effects of marine aggregate dredging project, was undertaken by Wessex Archaeology and funded by the Aggregate Levy Sustainability Fund (ALSF). The project developed methodologies for assessing and evaluating prehistoric seabed deposits in the course of licence applications. This involved directed geophysical and geotechnical surveys, geoarchaeological and environmental analyses and the integration of all data sources to produce reconstructions of palaeogeographies and environments.

- *Rapid Coastal Zone Assessment: North East*. North East Rapid Coastal Zone Assessment, or NERCZA, is one of a series of projects initiated by English Heritage around the coasts of England. The project - undertaken by Archaeological Research Services - comprised a desk based assessment of the threat posed to heritage assets in the North East by rising sea level and consequential coastal erosion.

- *Clee Hills Project, Shropshire*. The project sought to survey and characterise all evidence for human activity on the Clee hills (within the AONB of the Shropshire Hills in the south of the county), formulate a management strategy that would involve all who lived, worked and used the hills and provide an outline interpretation of the visible archaeological remains.

- *Nene Valley: Archaeological and Environmental Synthesis*. The Nene Valley project presents the evidence of the character of the relationship between the environmental and archaeological record and variations in the watertable for the Nene Valley from its source in Northamptonshire to Peterborough.

- *Transition Zone Mapping for Marine-Terrestrial Archaeological Continuity (Contiguous Palaeo-Landscape Reconstruction)*. The primary objective of this project was to produce a contiguous palaeo-landscape reconstruction across the marine to terrestrial boundary therefore enhancing the archaeological continuity across space and through time within an area of landscape previously examined through a series a stand-alone investigations.

- *Rapid Coastal Zone Assessment: Yorkshire and Lincolnshire.* The Yorkshire and Lincolnshire Rapid Coastal Zone Assessment (RCZA) was undertaken by Humber Field Archaeology on behalf of English Heritage. The project consisted of a desk based rapid coastal zone assessment of the threat posed to heritage assets along the Yorkshire and Lincolnshire coast by rising sea level and consequential coastal erosion.

- *Water Supply and Management in the Near East 63BC-AD636.* The aim of this doctoral thesis is to assess the ancient systems of water supply and management in the Near East from 63 BC to AD 636, from both a technological and sociological perspective. Some of the main themes to be discussed are of direct relevance to water supply studies such as the debate over productive rural aqueducts versus consumptive urban aqueducts and the constant-offtake principle. This analysis considers differences and similarities between the pre-Roman period and the period between 63 BC - AD 636 as well as between the Roman and late Roman periods.

- *The British Archaeological Expedition to the ancient emporium of Vetren - Pistiros, central Bulgaria.* Adjiyska Vodenitsa (Hadji's Water Mill), near Vetren, central Bulgaria, is a premier archaeological site of the European Iron Age. It was an inland emporium, acting as a centre of exchange between Continental regions of the East Balkans and the Mediterranean between 5th and 2nd centuries BCE. The project described here, funded by an AHRB grant (1999-2000), aimed to conduct a geophysical survey to determine the size and character of the fortified area, and of the colluvial/alluvial deposits that brought about the site's demise; conduct a limited on-site excavation and post-excavation analysis; create an electronic database of finds and conduct a preliminary examination of faunal remains.

- *Middleton Bottom Wheel Pit, Wirksworth, Derbyshire.* In 2007 Archaeological Research and Consultancy at the University of Sheffield (ARCUS) were commissioned by Derbyshire County Council to carry out a programme of archaeological trial trenching at Middleton Bottom wheel pit, Middleton-by-Wirksworth, Derbyshire, as part of a programme of refurbishment. The project was ultimately funded through the English Heritage Aggregates Levy Sustainability Fund Monuments at Risk programme.

- *Engendering Roman Military Spaces.* This research project investigates socio-spatial behaviour inside Roman military forts during the early Empire. It uses the distribution of artefacts found in forts in the German provinces to analyse the activities carried out within the various components of these forts. It then investigates the relationships between these spaces and the members of these communities - both soldier and non-soldier - who were likely to have been engaged in these activities. In so doing it develops better understandings of the complexity of the daily life within such military establishments. It focuses particularly on evidence for women and children and on their roles within these military domains.

- *WAMAP: Wessex Archaeology Metric Archive Project.* In the summer of 2007, Jessica Grimm of Wessex Archaeology approached the Animal Bone Metrical Archive Project (ABMAP) to discuss the possibility of depositing Wessex Archaeology metric animal bone data onto the ABMAP database. This led to the

formation of the Wessex Archaeology Metric Archive Project (WAMAP), with data from WAMAP datasets, structured to be compatible, added to the ABMAP database. The data transferred contains a selection of all measurements commonly taken during Wessex Archaeology zooarchaeological analysis; complete WAMAP datasets can be downloaded from the following pages, as well as a list of measurement definitions. The datasets are derived from Wessex Archaeology developer-funder projects (primarily in the United Kingdom), and as such, will provide information from a wide range of archaeological sites in terms of location, period and type.

- *ALSF Dissemination - OSL Guidelines.* These guidelines - produced by Professor GAT Duller of the Institute of Geography and Earth Sciences, Aberystwyth University and funded through the Aggregates Levy Sustainability Fund - are designed to establish good practice in the use of luminescence dating for providing chronological frameworks. They provide practical advice on using luminescence dating methods in archaeology.

- *National Mapping Programme: The Leadon Valley Sand and Gravel Aggregate Area (Leadon Valley ALSF).* The Leadon Valley NMP (ALSF) project covered an area of 126 km² west of the River Severn and north-west of Gloucester; and also south-west of the Malvern Hills, north-east of the Forest of Dean and bounded along its northern and western edge by the modern Gloucestershire-Herefordshire-Worcestershire county boundaries. The project sought to identify and assess historic and archaeological assets within the potential aggregate producing area using aerial photographs.

- *Latton Lands Gravel Pit, North Wiltshire.* Excavation of a 14 hectare site at Latton Lands, Wiltshire in advance of quarrying was undertaken by Oxford Archaeology on behalf of Cotswold Aggregates between 2001 and 2004. The excavation produced evidence of multi-period occupation dating from the late Neolithic/early Bronze Age to the post-medieval period. The fieldwork produced an unanticipated density of deposits and quantities of artefactual and ecofactual material, particularly of Iron Age date.

- *Hampshire - assessment of archaeological resource in aggregate areas.* The assessment consists of a consideration of the archaeology within the aggregate producing areas of the county through analysis of data contained in the Hampshire Archaeology and Historic Buildings Record (AHBR). In nine of these areas AHBR data was enhanced through systematic mapping from aerial photographs as part of English Heritage's National Mapping Programme (NMP)

- *Mucking - Prehistoric and Roman.* The project, funded by the ALSF and undertaken by Cambridge Archaeological Unit, consolidated the existing data and post-excavation research from the excavations of the prehistoric and Roman phases at Mucking. The online archive contains initial phased site plans, feature gazetteers, prehistoric pottery reports and assessment of the physical archive.

- *Somerset Aggregates Lithics Assessment.* The project examined the lithic (flint and chert) collections recovered from the most significant aggregate areas of Somerset, on the Mendip plateaux and the Burtle Beds of the Somerset Levels.

- *Aggregate Landscape of Somerset: updated.* This resource has been updated to include reports from the recent aerial survey concentrated on the Mendip Hills.

- *A database of Mesolithic Sites based on Wymer JJ and CJ Bonsall, 1977.* This database consists of information for all the Mesolithic sites in England and Wales, which was originally published as a Gazetteer of Mesolithic sites in England and Wales (Wymer and Bonsall 1977). The database notes include a list of errors noted whilst checking the dataset, some of these existed in the original paper document and others were the result of errors made during the digitisation of the report. Corrections have been noted by the author and are listed in the database notes.

- *Trent Valley Palaeolithic Project.* The Trent Valley Palaeolithic Project (TVPP) aimed to provide an improved understanding of the geoarchaeological history of the Trent Valley and areas formerly drained by the Trent, and through this to gain a better understanding of the settlement and cultural history of this region of the Palaeolithic world.

- *London Archaeologist.* For anyone interested in the history, heritage or archaeology of the capital, London Archaeologist is essential reading. Published by the London Archaeologist Association since 1968, it is the periodical of record for the London area, covering every major archaeological discovery, period, event and issue. Content includes excavation reports, historical articles, artefact and finds studies, environmental archaeology reports, exhibition reports, book reviews, news and commentary. Volumes 1 to 10, along with some of the volume indexes, are available through the ADS. More recent volumes are available directly from the publisher.

- *Roman barrows and their landscape context: a GIS case study at Bartlow, Cambridgeshire.* Eckardt and Brewer have carried out a GIS analysis of the landscape context of the Bartlow Hills, examining whether the famous Roman barrows were visible from nearby Roman roads, villas and other settlements. Questions about the location of other funerary monuments (prehistoric barrows and Roman burials) were also addressed. A paper on this work is to be published in the journal Britannia in 2009.

- *St Anthony Finds Record.* The project aimed to provide a record of the finds recovered from the designated wreck site the St. Anthony. Described as a "fine ship" belonging to King John III of Portugal, the St. Anthony was wrecked on 19th January 1527, while sailing from Flanders to Portugal, a short distance from Gunwalloe Fishing Cove, on Lizard, Cornwall.

- *The Aggregate Landscape of Gloucestershire.* This project consisted of a consideration of the archaeology within the aggregate producing areas of the county of Gloucestershire, and the formulation of a Resource Assessment and Research Framework for those areas.

- *Anglo-Saxon Kent Electronic Database (ASKED).* The Anglo-Saxon Kent Electronic Database (ASKED) is a collaboratively built research tool, developed to facilitate the doctoral research of two students of the UCL Institute of Archaeology: Stuart Brookes, investigating state formation in Anglo-Saxon East Kent, and Sue Harrington, examining aspects of gender and craft production in early Anglo-Saxon

England with particular reference to the early kingdom of Kent. The aim of ASKED was to enumerate all those individuals within eastern Kent for the period AD 400-750 for whom there is archaeological burial evidence. The project produced a comprehensive electronic register of the archaeological remains and material culture of these populations, thus providing for the first time a searchable corpus of this information. The database lists 52 cemeteries from eastern Kent, as well as the inhumations and objects interred within. Information for these burials is derived from published reports and the inspection of museum archival material.

- *Styling the body in late Iron Age and Roman Britain.* This online database provides a basic record of c.1300 toilet instruments recorded in the publication 'Styling the body in late Iron Age and Roman Britain: a contextual approach to toilet instruments' (Crummy, N. & Eckardt, H. 2008. Instrumentum Monograph No. 36). Catalogue numbers given in the text and figures of the book refer to the database presented here, which also lists each object's findspot, and provides a reference to the original publication, where such information is available. The database can be searched by catalogue number, by type or sub-type, by site or by context type, allowing researchers to interrogate the data according to their specific questions.

- *Roman Piercebridge.* The Roman Piercebridge project has published the results of extensive excavations undertaken between 1969 and 1981 in the vicinty of Piercebridge, Durham. The site lies at the point where Dere Street, one of the main north/south Roman roads crosses the River Tees. There is a Roman fort on the north bank, the interior of which is now occupied by the modern village of Piercebridge. To the east is an area of civil settlement in the Tofts Field. South of the river there was further civil settlement along the line of Dere Street and, east of that at Holme House, a native roundhouse developed into one of the most northerly Roman villas known in England.

- *The Urban Landscapes of Ancient Merv, Turkmenistan.* Ancient Merv, in Turkmenistan, is one of the most complex and well-preserved urban centres on the Silk Roads of Central Asia. A succession of major cities at Merv started in the 6th century BC and continued until the Mongol sack of 1221AD, although Mongol occupation, a resurgent Timurid city of the 15th century, and expansion in the 19th century continues the urban sequence. Together the walled urban areas covered more than 1000 ha. The Institute of Archaeology, University College London, has had a long collaboration with the Turkmenistan Ministry of Culture, focused on archaeological research and approaches to the conservation and management of the Ancient Merv Archaeological Park, which since 1999 has been a World Heritage Site.

- *The Palaeolithic Rivers of Southwest Britain.* The Palaeolithic Rivers of Southwest Britain (PRoSWeB) project synthesises the archaeological evidence for the Lower and Middle Palaeolithic occupation of south-west Britain (c. 500,000 - 40,000 BP), with a principal focus upon the archaeological and geological potential of the region's Middle Pleistocene fluvial environments. The online archive comprises all final project reports, a selction of digital images and the databases generated by the project team.

- *Land south-west of Ripple, Worcestershire.* The online archive - arising work at Ripple quarry in Worcestershire - has been updated to include a selection of digital images and finds database.The prehistoric features uncovered at this site - including

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a Late Neolithic / Early Bronze Age post pit - are considered regionally significant on the grounds of their date, character, and contribution to current research frameworks.

- *East Riding of Yorkshire: assessment of archaeological resource in aggregate areas.* This desk-based assessment of aggregate-producing areas in the East Riding of Yorkshire was carried out by Humber Field Archaeology, with funding from the Aggregates Levy Sustainability Fund, through arrangement with English Heritage.

- *Assessing the Research Potential of Grey Literature in the study of Roman England.* Since the adoption of Planning Policy Guidance Note 16 (Archaeology and Planning) in 1990, around 90% of all archaeological work in England has been prompted by the planning process. The product of this work is the ubiquitous typescript report, commonly referred to as the grey literature of archaeology. The Roman Grey Literature Project was developed between Cotswold Archaeology and Reading University as a way to assess the research potential for the Roman period which may currently be hidden within the grey literature. The project database is based upon data from the Archaeological Investigations Project (AIP) based at Bournemouth University, which has been enhanced by Cotswold Archaeology with information on publications. It lists all of the c.9400 investigations recorded by the AIP which found Roman remains. The digital archive contains the final database, the GIS layer created from the database and the final project report. The resource also contains the GIS layer as an interactive map.

- *Marine Class Description and principles of selection for aggregate producing areas.* The project builds on previous ALSF projects, notably On the Importance of Shipwrecks (ALSF 3767), on the developing legal and administrative framework associated with the Heritage Protection Bill, and other schemes and initiatives concerned with the selection and management of historic assets.

- *Aircraft Crash Sites at Sea.* The digital archive contains the reports from a Wessex Archaeology project that analysed current gaps in data and understanding relating to aircraft crash sites at sea. The study arose partly out of the discovery of aircraft parts and associated human remains as a result of marine aggregate dredging.

- *Wasperton Anglo-Saxon Cemetery.* The on-line archive contains the specialist reports commissioned in 2005-7 in support of the forthcoming published research report (Carver, Hills and Scheschkewitz, 2009).

- *Aggregate Extraction and the Geoarchaeological Heritage of the Ribble Valley.* The digital archive has been updated to include the report for the second phase of the project (the Kirkham Moraine area in Lancashire). The archive also contains the geodatabases constructed over both phases of work in order to collate known geomorphological, palaeoenvironmental and archaeological data for the study areas.

- *Thornborough, North Yorkshire: Neolithic and Bronze-Age monument complex.* In 2003 funding was provided by English Heritage, from the Aggregate Levy Sustainability Fund to undertake a programme of fieldwork including topographic survey, fieldwalking and excavation at the monument complex at Thornborough, North Yorkshire. The digital archive contains the unpublished fieldwork reports generated by this project.

- *Rill Cove Finds Recording Project.* The project examined the finds from the previously unidentified wreck site at Rill Cove, Cornwall. The full on-line resource contains the project report, database and artifact images.

- *The Viking and Anglo-Saxon Landscape and Economy (VASLE) Project.* Recently the role of metal-detected objects in the study of Anglo-Saxon and Anglo-Scandinavian England has greatly increased through reporting to the Portable Antiquities Scheme (PAS) and the Early Medieval Corpus (EMC). There are now thousands more artefacts and coins known than a decade ago which, in conjunction with fieldwork, have the potential to revolutionise our understanding of the early medieval period. The VASLE project was the first attempt to examine this data on a national scale. Such an approach enables the detailed analysis of the nature of portable antiquities data, the biases within such datasets and the relationship between patterns of recovery and historic settlement.

- *Wrecks Ecology.* The Wrecks Ecology project develops an increased understanding of the environmental interactions of wreck sites and the impacts on wreck sites from aggregate extraction.

- *Solent Aggregates to Outreach.* The archive contains the reports from a major project designed to increase awareness and knowledge of the archaeology and historical importance of the maritime environment and its aggregate resources.

- *A Review of Animal Bone Evidence from Central England.* A review of the animal bone evidence from Central England from Mesolithic to modern times. The dataset collected consisted of details gleaned from excavation reports (or specialist bone reports), concerning vertebrate remains (of fishes, amphibians, reptiles, birds and mammals) found primarily on archaeological sites. The full database is available to download or search online.

- *Warwickshire Assessment of Archaeological Resource in Aggregate Areas.* This project characterised and mapped the available information on Warwickshire's archaeological resource in areas of past, present and potential future aggregates extraction in order to enhance existing baseline data and to improve archaeological mitigation of future extraction proposals in the county. The extensive final report is now available.

- *Archaeological Archives Forum Papers.* A selection of papers from the Archaeological Archives Forum available to download from our online library.

(D)   PUBLICATIONS

Richards, J.D. 2008. "Managing Digital Preservation and Access: The Archaeology Data Service", in McManamon, F.P, Stout, A. and Barnes, J.A. (eds.) *Managing Archaeological Resources: Global Context, National Programs, Local Actions.* One World Archaeology, (WAC), Left Coast Press, Walnut Creek, USA, 173-94.

Jeffrey, S., Kilbride, W., Richards, J. & Waller, S. 2008 "Thinking outside the search box: the Common Information Environment and Archaeobrowser", in Posluschny, K. Lambers and I. Herzog (eds.) *Layers of perception, Proceedings of the 35th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA) Berlin*, Germany, April 2-6, 2007. (eds A. Posluschny, K. Lambers & I. Herzog), Kolloquien zur Vor- und Fruhgeschichte Band 10, Bonn, 206–211.

Austin, T. Mitcham, J. and Richards, J. 2008 "From questions to answers; outcomes from the 'Big Data' project" in A. Posluschny, K. Lambers and I. Herzog (eds.) *Layers of Perception. Proceedings of the 35th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA) Berlin*, Germany, April 2-6, 2007, Kolloquien zur Vor- und Fruhgeschichte Band 10, Bonn, 194-99.

Richards, J.D., Winters, J.C, and Charno, M.D. 2008 "Making the LEAP: Linking Electronic Archives and Publications" ALT-N newsletter, July 2008.

Richards, J.D. and Hardman, C. "Stepping back from the trench edge: An archaeological perspective on the development of standards for recording and publication" in M.Greengrass and L.Hughes (eds.) *The virtual representation of the past.* Digital Research in the Arts & Humanities. Ashgate, 101-12, 2008.

Jeffrey, S., Richards, J., Ciravegna, F., Waller, S., Chapman, S. & Zhang, Z., 2009. "The Archaeotools project: faceted classification and natural language processing in an archaeological context", *Philosophical Transactions of the Royal Society*. (A), 367, 2507–19 doi:10.1098/rsta.2009.0038

Hardman, C. 2009 "The Online Access to the Index of Archaeological Investigations (OASIS) Project: Facilitating Access to Archaeological Grey Literature in England and Scotland" in *The Grey Journal* 5(2) ('Archaeology and Grey Literature'), 76-82.

Jeffrey, S., Richards, J., Ciravegna, F., Waller, S., Chapman, S. & Zhang, Z. in press. When ontology and reality collide: the Archaeotools project, faceted classification and natural language processing in an archaeological context", in *On the road to reconstructing the past, Proceedings of the 36th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA), Budapest, Hungary, 2008* (eds E. Jerem & V. Szevere´nyi).

Charno, M., Richards, J.D. & Winters, J in press "Making the LEAP: Linking Electronic Archives and Publications", in *On the road to reconstructing the past,Proceedings of the 36th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA), Budapest, Hungary, 2008* (eds E. Jerem & V. Szevere´nyi).

(E)   PRESENTATIONS GIVEN

09/09/2008	Presentation by Stuart Jeffrey	e-Science All Hands Meeting, Edinburgh, Sept 9th 2008	Conference
30/09/2008	Presentation by Michael Charno	OUDCE Masters Seminar	Seminar
30/01/2008	Presentations by Stuart Jeffrey	University of Southampton Masters/Staff Seminars	Seminars
10/10/2008	Presentation by Stuart Jeffrey	Institutional and National Support for Research Data Seminar, Said Business centre, Oxford University	Seminar
29/10/2008	Presentation by Stuart Jeffrey	Discovery Programme, ShareIT project, Dublin.	Conference
03/11/2008	Presentations by Stuart Jeffrey, Michael Charno, Jonathan Bateman, Tony Austin	VENUS Digital Preservation Workshop, York.	Workshop
4/11/2008	Presentation by Stewart Waller	UCL:ICCHA Sharing Archaeology, Beijing, China	Conference
04/11/2008	Presentation by Catherine Hardman	ESF Alliance Conference, Budapest.	Conference
14/11/2008	Presentation by Catherine Hardman	ALGAO Training day, London.	Workshop
18/11/2008	Presentation by Stuart Jeffrey	University of Manchester, Masters Seminar	Seminar
24/11/2008	Presentation by Stuart Jeffrey	University of Reading U/G Seminar	Seminar
02/12/2008	Presentation by Stuart Jeffrey	Image Database Conference, Deutsches Archaologisches Institut, Berlin.	Conference
09/12/2008	Presentation by Michael Charno	University College London, U/G Seminar	Seminar
10/12/2008	Presentation by Stuart Jeffrey	University of York, Departmental Seminar, York.	Seminar
16/12/2008	Presentation by Jonathan Bateman	TAG, Southampton.	Conference
06/02/2009	Presentations by Julian Richards, Stuart Jeffrey, Tony Austin and Michael Charno	ACE-DARIAH-ARENA2 workshop, York.	Workshop
11/02/2009	Presentation by Stuart Jeffrey	University of York, Archaeology Masters (GIS) Seminars.	Seminar
19/02/2009	Presentation by Julian Richards	GIS and Archaeology Conference, Seoul.	Conference
25/02/2009	Presentation by Stuart Jeffrey	OUDCE Information Skills for Heritage Professionals,	Workshop

Oxford.

03/03/2009	Presentation by Stuart Jeffrey	University of York, Archaeology Masters (VR) Seminars.	Seminar
20/03/2009	Presentations by Julian Richards, Michael Charno and Catherine Hardman	CAA 2009, Williamsburg, USA.	Conference
20/03/2009	Presentation by Stuart Jeffrey	IBBT workshop, Brussels.	Workshop
07/04/2009	Presentations by Stuart Jeffrey and Kieron Niven	IfA Conference, Torquay.	Conference
22/04/2009	Presentation by Julian Richards	SAA Conference - Digital Preservation Workshop, Atlanta.	Conference
08/05/2009	Presentations by Stuart Jeffrey, Michael Charno and Catherine Hardman	DCC/ADS Information Day for HERs	Workshop
30/05/2009	Presentation by Catherine Hardman	Digital Archive Study Day, Kings Manor.	Workshop
08/06/2009	Presentation by Stuart Jeffrey	AHRC e-Science, London.	Conference
09/06/2009	Presentation by Catherine Hardman	EAC Archive Working Group Meeting, Brussels.	Workshop
25/06/2009	Presentation by Catherine Hardman	English Heritage Lunch and Learn session, York.	Seminar
26/06/2009	Presentation by Catherine Hardman	DPC Digital Preservation road Show, York.	Workshop
01/07/2009	Presentation by Stuart Jeffrey	HEA Conference, Birkbeck, London.	Conference
20/07/2009	Presentation by Stuart Jeffrey	JISC Roadshow, York.	Workshop

(F)   OTHER CONFERENCES/ WORKSHOPS ATTENDED

25/09/2008	Attended by Stuart Jeffrey	Creative and Cultural Industries Workshop, Collections Trust, DCMS. London	Workshop
26/11/2008	Attended by Stuart Jeffrey	Research Data Management Forum , Manchester	Workshop
30/04/2009	Attended by Stuart Jeffrey	Research Data Management Forum , Manchester	Workshop
27/07/2009	Attended by Stuart Jeffrey	AHRC ICT (Arts+Humanities.net) Workshop	Workshop