

## ADS/Internet Archaeology Annual Report 1 August 2013 – 31 July 2014

*The Archaeology Data Service (ADS) supports research, learning and teaching with free, high quality and dependable digital resources. It does this by preserving digital data in the long term, and by promoting and disseminating a broad range of data in archaeology. The ADS promotes good practice in the use of digital data in archaeology, it provides technical advice to the research community, and supports the deployment of digital technologies. It also manages the ejournal 'Internet Archaeology', published under a Council for British Archaeology imprint. The ADS was established at the University of York in 1996, and currently has a staff of fourteen.*

### 1. Highlights of the year

There is never such a thing as “a quiet year” in ADS but in 2013-14 we were able to consolidate a number of recent gains, putting ADS-easy, our online costing tool and data deposit system, into operation as well as doing a great deal of work on our internal Collections Management System. As a number of local authorities and museums begin to make use of OASIS and depositing grey literature and data with ADS a compulsory part of specifications for archaeological work, this is essential work to streamline our systems and will allow us to scale-up our activities. Whilst much of this is invisible to end-users we have also made a number of incremental enhancements to the user interface, particularly introducing a finer grained search and browse within our archives – essential as their number increases. Our use of DOIs as permanent identifiers for archives and our adoption of ORCIDiDs as the equivalent for people have also kept us at the vanguard of the digital repository world.

The ADS holdings of grey literature are now an essential research tool and the library is growing at an increasing pace, via backlog scanning projects, as well as via OASIS. The launch of the HERALD user needs survey for the next stage of OASIS is another important step and has included consultations in Northern Ireland, Scotland and Wales. It confirms the core role of OASIS in the future information landscape, allowing the creation of a truly integrated system, and the capture of key data at a time when the historic environment is under renewed threat. The grey literature library also continues to win awards and commendations, most recent from the Association for Industrial Archaeology. However, as it approaches 30,000 reports it is also becoming essential to update the library search interface, and this will be a priority for the next generation of ArchSearch. This work also embraces our growing journal holdings and our own ejournal *Internet Archaeology* has completed the transition to gold Open Access. As the majority of our content now comes with author processing fees (APCs) we decided that we should be the first established UK journal to make this move, keeping us at the forefront of publishing.

As UK funders tighten their belts, our investment in our European profile is also paying dividends. Our portfolio of European projects now pays a third of our annual salary bill. Our world-leading work on data standards and digital curation means we have become a favoured partner for EC Horizon 2020 proposals. In the context of many UK heritage organisations undergoing re-organisation and retrenchment we are quietly confident that ADS is well established on a sustainable financial footing.

## 2. Collections Development

### Significant new collections

#### **Newport Ship**

The Newport Ship is the most substantial late medieval vessel excavated and recovered in Britain. The ship was discovered during development on the west bank of the River Usk in Newport, South Wales in 2002. More than 23 metres of the clinker-built ship were recovered, along with significant artefact and environmental assemblages. Finds point to strong Iberian connections during the active life of the ship, which arrived in Newport, in the Severn Estuary, after the spring of AD 1468. The dismantling and recovery of the ship has enabled detailed recording using innovative 3D digital techniques and approaches to hypothetical reconstruction. This archive makes available this digital data along with digitised versions of site records, post-excavation documentation of the ship and specialist reports and catalogues. Funded by the AHRC, Cadw and others, this substantial archive will be accompanied by an *Internet Archaeology* article.



#### **ADS-easy archives**

We were very pleased to release our first archive which was deposited via ADS-easy. Oxford Archaeology (South) deposited a small archive of the digital outputs of a trial trench evaluation on the site of the former NXP Works in Southampton, Hampshire, on behalf of CgMs Consulting prior to the redevelopment of the site by Canmoor Projects Ltd. The work took place in March 2013 and the archive was deposited with the ADS in accordance with instructions from Southampton Arts and Heritage.

Although there were undoubtedly some steep learning curves for both ADS and our colleagues at Oxford Archaeology, once the data was in the system the ADS started to reap the benefits of the JISC-funded SWORD-ARM project. The internal archiving process was easier and more efficient; just some examples are included here:

- Because the depositor had completed the metadata within ADS-easy we did not have to copy this manually from a text document or spreadsheet into our systems, cutting out duplication of effort and hours of work.
- The programmatic movement of files within our system to our preservation directory meant we not only saved time but also reduced the likelihood of introducing human error.
- Because the interface was automatically generated from the system, we again saved time and increased the level of consistency we can achieve between archives, hopefully creating a more familiar experience for our users.

Even initial teething issues have been useful; we have been able to take the feedback from Oxford Archaeology (and other subsequent users of ADS-easy) and make changes in response, especially concentrating on making the creation of file level metadata easier to understand. This has, in turn, led to us embarking on work to ensure that all our internal guidelines are consistent, clear and easily understandable whether depositing in the 'traditional' way by CD or when using ADS-easy. This work is ongoing, as are modifications and enhancements to ADS-easy itself as it starts to become a part of the depositor's tool box.

Since the release of this archive we have accessioned and archived a further four archaeological archives from the commercial sector that have been delivered through ADS-easy and have a further five awaiting archive work and release.

Number of collections released with month of deposition/accession and month of start of service, by funder

	<b>Title</b>	<b>Released Date</b>	<b>First accession date</b>	<b>Funder</b>
1	Gloucestershire Historic Landscape Characterisation (HLC) including the Cotswolds and the Wye Valley Areas of Outstanding Natural Beauty	Aug 2013	May 2013	English Heritage
2	Archaeological landscapes of east London: six multi-period sites excavated in advance of gravel quarrying in the London Borough of Havering	Aug 2013	Dec 2011	English Heritage
3	Combe Down Stone Mines	Aug 2013	Mar 2012	Homes and Communities Agency
4	Quarry Farm, Ingleby Barwick	Aug 2013	May 2013	English Heritage
5	Anglo-Saxon Graves and Grave Goods of the 6th and 7th Centuries AD: A Chronological Framework	Sep 2013	April 2013	English Heritage
6	La Grava: The Archaeology and History of a Royal Manor and Alien Priory of Fontevrault	Oct 2013	June 2013	English Heritage
7	Number 1 Poultry (ONE 94)	Oct 2013	Feb 2013	English Heritage

8	Chalcolithic and Early Bronze Age Burials in Northeast England	Oct 2013	Aug 2012	University of Newcastle
9	Osteological Analysis of Early Bronze Age human skeletal remains in Tyne and Wear Museums	Oct 2013	Nov 2012	University of Newcastle
10	Haltwhistle War Memorial Hospital Archaeological Building Recording (OASIS ID gbbuildi1-129159)	Oct 2013	July 2013	Developer
11	South Gloucestershire Aggregate Resource Assessment	Oct 2013	Oct 2013	English Heritage
12	Somerset and Exmoor Historic Landscape Characterisation (HLC)	Oct 2013	Aug 2013	English Heritage
13	Cottam A: a Romano-British and Anglian Settlement in East Yorkshire	Nov 2013	Jun 2010	University of York
14	Cowlam: Anglian Settlement in East Yorkshire	Nov 2013	Jun2010	University of York
15	Burdale: an Anglian settlement in the Yorkshire Wolds	Nov 2013	Sep 2013	University of York
16	Extensive Urban Survey - Cheshire	Nov 2013	Sep 2013	English Heritage
17	Heslington East Excavation Archive	Nov 2013	Mar 2013	University of York
18	Oxford Archaeological Plan	Nov 2013	Oct 2013	English Heritage
19	The Western Stone Forts Project	Nov 2013	Nov 2012	The Discovery Programme
20	A Stamford Ware Pottery Kiln in Pontefract. Excavations at Simpson's Malt, Pontefract, West Yorkshire.	Dec 2013	Jan 2012	English Heritage
21	The CSA Propylaea Project	Dec 2013	Aug 2013	Samuel H. Kress Foundation
22	Laxton Close (Southampton Regeneration), Sholing, Southampton: An Archaeological Evaluation Report (OASIS ID aocarcha1-130357).	Dec 2013	Feb 2012	Southampton City Council
23	Exford Drive (Southampton Regeneration), Harefield, Southampton: An Archaeological Evaluation Report (OASIS ID aocarcha1-138343)	Dec 2013	Feb 2013	Southampton City Council
24	Meggesson Avenue (Southampton Regeneration), Townhill Park, Southampton: An Archaeological Evaluation Report (aocarcha1-124784).	Dec 2013	Feb 2013	Southampton City Council
25	Mayflower Plaza, Commercial Road, Southampton (aocarcha1-138220 and aocarcha1-122004)	Dec 2013	Feb 2013	Southampton City Council

26	The Social Context of Submerged Prehistoric Landscapes	Dec 2013	Oct 2013	English Heritage
27	Blackwater Estuary Fish Traps, Essex	Dec 2013	May 2013	English Heritage
28	A Whole-site First-assessment Toolkit for combined Mineral Resource and Archaeological assessment in Sand and Gravel deposits	Dec 2013	Sep 2013	English Heritage
29	Drigg Burnt Mound, West Cumbria	Dec 2013	Mar 2013	English Heritage
30	North Yorkshire, York and Lower Tees Valley Historic Landscape Characterisation (HLC)	Jan 2014	Nov 2013	English Heritage
31	Essex Historic Landscape Characterisation Project (HLC)	Jan 2014	Nov 2013	English Heritage
32	Newport Medieval Ship	Feb 2014	Jun 2013	Heritage Lottery Fund, Cadw, AHRC
33	West Berkshire Aggregate Resource Assessment	Feb 2014	Dec 2013	English Heritage
34	Carlisle Cathedral, Cumbria: Excavations 1988, Roman, medieval and post-medieval reports	Feb 2014	Jul 2013	British Academy, Carlisle Cathedral
35	Visualisation in Archaeology	Mar 2014	May 2013	English Heritage
36	Pitcarmick Excavations 1993-5	Mar 2014	Jun 2013	Historic Scotland, British Academy
37	The small finds from the Baths Basilica Wroxeter: a digital resource	Mar 2014	Feb 2014	English Heritage
38	Profiling the Profession	Mar 2014	Oct 2013	English Heritage, HS, Cadw, NIDoE
39	Silbury Hill	Mar 2014	Jan 2014	English Heritage
40	Cattewater Wreck Archive	Mar 2014	Jun 2011	English Heritage
41	Rock View, Devon Consols, Gulworthy (OASIS ID southwes1-118728)	Mar 2014	Oct 2012	Developer
42	Assessment of archaeological resource in aggregate areas in Bath and North East Somerset	Apr 2014	Mar 2014	English Heritage
43	The Lyonesse Project: a study of the coastal and marine environment of the Isles of Scilly (OASIS ID cornwall2-58903)	Apr 2014	Mar 2014	English Heritage
44	The Archaeological Landscape of Frampton on Severn, Gloucestershire	Apr 2014	Oct 2013	English Heritage
45	Study Group for Roman Pottery Bibliography	Apr 2014	Sep 2013	English Heritage

46	Distribution and significance of urban waterlogged deposits in Berwick-upon-Tweed	May 2014	Nov 2013	English Heritage
47	Area 13 and Area 5, Larkhill Camp, Larkhill, Wiltshire (OASIS ID: wessexar1-92176)	May 2014	Mar 2014	Developer
48	Druids Lodge Polo Club, Salisbury, Wiltshire (OASIS ID: wessexar1-82314)	May 2014	Mar 2014	Developer
49	Nunton Farm, Nunton, Wiltshire (OASIS ID: wessexar1-83280)	May 2014	Mar 2014	Developer
50	Rock Cottage, Chilmark, Wiltshire (OASIS ID: wessexar1-98742)	May 2014	Mar 2014	Developer
51	The Old Rectory, River Street, Pewsey, Wiltshire (OASIS ID: wessexar1-109911)	May 2014	Mar 2014	Developer
52	Land adjacent to 106 High Street, Great Cheverell, Wiltshire (OASIS ID: wessexar1-110035)	May 2014	Mar 2014	Developer
53	Area 5, Larkhill Camp, Wiltshire (OASIS ID: wessexar1-111096)	May 2014	Mar 2014	Developer
54	Red Hone Cottage, Urchfont, Wiltshire (OASIS ID: wessexar1-111988)	May 2014	Mar 2014	Developer
55	Extensive Urban Survey - South Gloucestershire	May 2014	Feb 21014	English Heritage
56	Terrestrial mineral resource assessment: Northamptonshire	May 2014	Mar 2014	English Heritage
57	Parks and Gardens Data Service	May 2014	Apr 2011	Heritage Lottery Fund
58	Experimental Mapping of the Risk of Encountering Buried Archaeology on Aggregate Landscapes	May 2014	Feb 2014	English Heritage
59	MOD Raffyn to Bulford Electricity Distribution upgrade (OASIS id: wessexar1-82199)	May 2014	May 2014	Developer
60	Cult, Religion and Pilgrimage. Archaeological Investigations at the Neolithic and Bronze Age Monument complex of Thornborough, North Yorkshire	May 2014	Jul 2013	British Academy, AHRC
61	Southampton, Former NXP Works (OASIS ID: oxfordar1-156064)	May 2014	Apr 2014	Southampton City Council
62	Land at Station Road, Honeybourne, Worcestershire (WSM49638)	May 2014	May 2014]	Developer
63	Land at Green Hedges, Claphill Lane, Rushwick, Worcestershire (WSM49639)	May 2014	May 2014	Developer
64	Mount Wear House, Countess Wear Road, Exeter	Jun 2014	Apr 2014	Developer
65	Lacock Bridge	Jun 2014	Apr 2014	Developer

66	AustArch: A Database of 14C and Luminescence Ages from Archaeological Sites in Australia	Jul 2014	Feb 2014	Australian Research Council
67	Worcestershire Historic Landscape Characterisation (HLC)	Jul 2014	Jun 2014	English Heritage & ADS
68	Aeon Archaeology: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
69	Archaeological Building Recording Services: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
70	Archaeology Services Lewes: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
71	Archaeology Team, CBC: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
72	Bristol and West Archaeology: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
73	Community Archaeology on the Mendip Plateau: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
74	David Andrews: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
75	Dr Robert H Bewley: Intervention Reports deposited via OASIS	Jan 2014	Aug 2013	English Heritage & ADS
76	ECUS Ltd: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
77	Hazel Riley: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
78	Independent Archaeology Consultants: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
79	KDK Archaeology: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
80	Kirkdale Archaeology: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
81	Mike Middleton: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
82	MOLA Northampton: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
83	Northern Counties Archaeological Services: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
84	Norvic Archaeology: Intervention Reports deposited via OASIS	Feb 2014	Feb 2014	English Heritage & ADS
85	Solstice Heritage: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS
86	Thames Discovery Programme: Intervention Reports deposited via OASIS	Jan 2014	Jan 2014	English Heritage & ADS

87	The Landscape Partnership: Intervention Reports deposited via OASIS	Jul 2014	Jul 2014	English Heritage & ADS
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It should be noted that this is a significant rise of 81% on the number of archives created in the same period last year (48).

#### Updates / new editions

	<b>Title</b>	<b>Description</b>	<b>Date of update</b>
1	NMR Scotland	A reload of the National Monuments Record of Scotland adding over 54,000 new records bringing the total to over 311,000. Each is linked to the full Canmore record.	April 2014
2	Sussex Archaeological Collections	The articles for volume 149, alongside abstracts and supplementary data for volumes 150 and 151, have been added to the collection.	Feb 2014
3	London Archaeologist Volume 12	The archive of the journal 'London Archaeologist; has been updated with all parts of Volume 12.	Jan 2014

#### Grey Literature Library

From August 2013 to July 2014 we archived 4,924 grey literature reports via OASIS (an increase from the same period last year of 1,111 or 29%).

#### Internet Archaeology

During the course of the year 2013-14 *Internet Archaeology* published 12 new articles, 5 data papers as well as several reviews. Articles marked \* are open access. Our new series of data papers has been well-received. Data papers are short, peer-reviewed, open access publications designed to make other researchers aware of a dataset, and accompanied by a referee statement on the data's re-use potential and significance.

#### **Issue 35**

*King Solomon's Silver? Southern Phoenician Hacksilber Hoards and the Location of Tarshish* - Christine M. Thompson and Sheldon Skaggs. Proposal received: July 2013; Submitted: July 2013; Published: October 2013

*Bridging the 'Geospatial Divide' in Archaeology: Community Based Interpretation of LIDAR Data* - Gary L. Duckers. Proposal received: December 2012; Submitted: February 2013; Published: October 2013. Words: 17935 (237KB); Images: 35 (3.75MB)



*Bryozoans in Archaeology* - Matthew Law. Proposal received: February 2013; Submitted: March 2013; Published: August 2013. Words: 10257 (94KB); Images: 7 (420KB)

*Pioneers, publishers and the dissemination of archaeological knowledge: A study of publishing in British archaeology 1816-1851* - Sarah Scott. Proposal received: December 2012; Submitted: March 2013; Published: August 2013. Words: 24269 (197KB); Images: 6 (2.3MB)

*\*Using Social Media for Research Dissemination: The Digital Research Video Project* - Suzanne Pilaar Birch. Proposal received: April 2013; Submitted: May 2013; Published: September 2013. Words: 4395 (63KB); Images: 1 (96KB); Videos: 4 (16MB)

*\*Surveying Caribbean Cultural Landscapes: Mount Plantation, Barbados, and its global connections* - Jonathan Finch, Douglas Armstrong, Edward Blinkhorn and David Barker. Proposal received: April 2013; Submitted: May 2013; Published: September 2013. Words: 6983 (92KB); Images: 15 (5.3MB)

#### Data Papers

*The Evolution of Rome's Maritime Façade: archaeology and geomorphology at Castelporziano (Data Paper)* - Amanda Claridge and Helen Rendell (Referee statement by Charles French)

*Burdale: An Anglian Settlement in the Yorkshire Wolds (Data Paper)* Julian D. Richards and Steve Roskams (Referee statement by Gabor Thomas)

*Ceramics and Society: Early Tana Tradition and the Swahili Coast (Data Paper)* Stephanie Wynne-Jones and Jeffrey Fleisher (Referee statement by Paul Lane)

#### **Issue 36**

*Laying Bare the Landscape: commercial archaeology and the potential of digital spatial data* - Wendy Morrison, Roger M. Thomas and Chris Gosden. Proposal received: February 2014; Submitted: May 2014; Published: August 2014. Words: 3513(42KB); Images: 7(4MB)

*How are teeth better than bone? An investigation of dental tissue diagenesis and state of preservation at a histological scale (with photo catalogue)* - Hege I. Hollund, Miranda M.E. Jans and Henk Kars. Proposal received: September 2012; Submitted: January 2014; Published: July 2014. Words: 7728(222KB); Images: 71(17.3MB)

*\*GIS Visualisations of Mortuary Data from Holešov, Czech Republic* - Ladislav Šmejda. Proposal received: October 2009; Submitted: October 2013 ; Published: June 2014. Words: 13259 (181KB); Images: 14 (3MB)

*\*Making Place for a Viking Fortress. An archaeological and geophysical reassessment of Aggersborg, Denmark* -Hannah Brown, Helen Goodchild and Søren M. Sindbæk. Proposal received: May 2011; Submitted: December 2012; Published: June 2014. Words: 19651 (291KB); Images: 42 (36MB)

*\*Least-cost Paths - Some Methodological Issues* - Irmela Herzog. Proposal received: September 2013; Submitted: December 2013; Published: June 2014. Words: 15142 (264KB); Images: 7 (855KB)

*\*Jarlshof Lost and Found: Low altitude aerial photography and computer-generated visualisation for the interpretation of the complex settlement remains found at Jarlshof, Shetland* - Kieran Baxter. Proposal received: April 2013; Submitted: August 2013; Published: March 2014. Words: 8378 (100KB); Images: 20 (5MB); Video: 1 (51MB)

### Data Papers

*AustArch: A Database of <sup>14</sup>C and Non-<sup>14</sup>C Ages from Archaeological Sites in Australia - Composition, Compilation and Review (Data Paper)* - Alan N. Williams, Sean Ulm, Mike Smith, Jill Reid (Referee statement by Pete Veth)

*Heathrow Terminal 5 Excavation Archive (Data Paper)* - Framework Archaeology, compiled by Niall Donald. (Referee statement by Nicholas J. Cooper)

In the summer of 2014, it was decided to take the final steps to transition *Internet Archaeology* to full Open Access. The journal has seen a steady increase in funded, quality content and alongside our existing programme of opening up back issues and with the speed of change occurring in the scholarly landscape more generally, the *Internet Archaeology* Executive feel that we have reached that oft-quoted 'tipping point' and we will transition fully to open access by the end of 2014.

## **3. Collections Management and Preservation**

### Systems developments

The ADS is migrating some systems to Virtual Machines hosted by the University of York (UoY) IT Services. A draft Service Level Agreement has been provided to ensure ADS interests and needs are respected. The ADS is one of the few remaining groups within the UoY that still manages "bare metal" servers, and it is foreseen that the ADS will move to a completely virtual setup. This will provide better performance (with dedicated and clonable Virtual Machines (VMs) alongside proper load balancing), resilience (direct security management), and sustainability (with no need to migrate to new "bare metal" servers when old ones die). The ADS has been closely consulting with the ITS to get the best balance of its existing systems with minimal disruption.

In addition, ITS has also agreed to host our Oracle instance, as it became clear during consultation that some of the features we use were unlicensed; nor managed or tuned in an efficient manner. We have migrated two lightly used schemas over to ITS hosted Oracle with good results, and will be getting our own dedicated VM and Oracle instance. We are in the process of migrating ArchSearch and other schemas to ITS, and will schedule downtime for an OASIS migration which will effect external users. This setup will allow us to call upon the expertise of experienced Database Administrators within ITS. Two lightly used MySQL databases also exist for Piwik and our Wordpress blogs, which we will also migrate to ITS-hosted MySQL.

The final service to be migrated to ITS is ColdFusion. The University has a permanent instance of ColdFusion and is on a regular upgrade cycle, whereas ADS has been paying for our own licenses and we are currently using an old, insecure version of ColdFusion. ITS would not allow us to expose a new Virtual Server with our version of ColdFusion to the web due to the vulnerabilities that exist. Our own instance of ColdFusion was also hacked due to these vulnerabilities and improper installation, which affected OASIS and *Internet Archaeology*.

- No new workstations were purchased this year, although more RAM was added to 5 workstations to squeeze out better performance from existing hardware.
- One Macbook Air 11" laptop was purchased for iOS development and staff travel.
- Two virtual servers were provided by ITS and have been configured, running production services.
- The mapserver server suffered hardware failure and was backed up and securely disposed of.
- Two HDDs on Medea died, but the server was still in warranty so replacements were provided by Dell. No data was lost as redundancy was built into the server, although 3 hours internal downtime was suffered while the HDDs were replaced.
- A ColdFusion vulnerability was exploited, which led to the OASIS and *Internet Archaeology* domains being infected with spam briefly. ITS assisted in cleaning and re-securing the server, but Memnon was deemed to continue to be infected so everything was migrated to VMs and prepared for re-installation.

### Curation

Continued development and enhancements have been made to the Collections Management System (CMS) to streamline and harmonise the efforts of our Digital Archivists. These include integration of ORCID's for depositors, a Project Docs and Advice sections to centrally manage documents and email correspondence with depositors, and an Advanced Search mechanism to find anything within all sections of the CMS.

- All deposited datasets were accessioned into the CMS.
- During the course of the year preservation and resource discovery metadata was prepared for all new collections.
- Preservation copies of all data continue to be synchronised offsite into our deep storage facility within the UK Data Archive at the University of Essex.
- A new ITS provided tape backup has been added to ADS\_preservation, providing inline backups of preservation files.
- 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.

System uptime: 99.83% uptime

#### System downtimes:

Server	Date	Downtime (mins)	Comment
Minerva3	21-Oct-2013	37	Glassfish ran out of memory but Oracle was incorrectly shutdown and didn't come back up cleanly
Minerva3	4-Nov-2013	200	Glassfish ran out of memory due to a new Solr configuration
Minerva3, Memnon	1-Dec-2013	240	A power outage on campus led to the network falling over
Minerva3	5-Dec-2013	180	Glassfish fell over for no identifiable reason
Minerva3	15-Dec-2013	200	Same as previous, appeared to be due to Redsquid connecting to Solr
Minerva3	13-Jan-2014	15	Mystery failure which brought down whole server
Minerva3	30-Jun-2014	180	Whole server went down, likely due to Oracle memory issues

#### **4. Advisory services**

##### New guidelines

##### ***Guides to Good Practice***

This year work on the Guides to Good Practice has focused on the development of a 'UAV Guide to Good Practice'. This Guide has been produced by Stephen Gray (University of Bristol) and looks at aerial survey data produced by small unmanned aerial vehicles (e.g. quadcopters or drones). This Guide ties in with a companion guide (by the same author) published by Jisc both of which are due to be released in September 2014.

Work has also been undertaken under the ARIADNE project which has focused on the assessment of good practice within the 14 archaeological partners (with ADS as lead). This has involved collecting information on where good practices (e.g. documents, guidelines, procedures) exist within each partners' area of expertise, as well as identifying areas where there are gaps and where 'good practice' can be developed. The final report for this task (submitted July 2014) included a plan of future development to the Guides to Good Practice in light of this assessment.

ADS has also been approached by Tim Thompson and David Errickson (Teesside University) regarding providing a home for guidelines they have produced for the creation and documentation of data resulting from non-contact scanning techniques (e.g. structured light and laser line scanning).

##### ***ADS Guidelines for Depositors***

Supported by funding from the Archives and Records Association, ADS began a new project to refresh the ADS Guidelines for Depositors. The project has evaluated the current ADS online Guidelines for Depositors (ADS 2012) and updated these guidelines in light of the recent revisions to the Guides to Good Practice (ADS/Digital Antiquity 2013) and the development of ADS-easy. The project will produce a new

user-friendly interface and involve the creation of interactive training exercises and video tutorials. A user needs survey was instigated in July 2014 to ensure that the new Guidelines for Depositors meet user needs appropriately. The new Guidelines for Depositors are due to be released in September 2014.

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

13 projects involving 20 emails, 1 meeting and 4 phone calls.

Workshops

***ARIADNE Data Management Planning and Online Resources for Archaeology Workshop:***

This workshop held in Pilzen (4 September 2013) introduced archaeological researchers to strategies for effective data management and planning, alongside a tour of some of the online data resources available to researchers, particularly through the new EC Infrastructures-funded Advanced Research Infrastructure for Archaeological Dataset Networking (ARIADNE) project. ADS presented on the obstacles that can be overcome and benefits gained by adopting good practices of data publication, and showcased data available via the ADS, discussing how researchers use ADS.

***ARIADNE Workshop on Online Resources:***

Partners from the ARIADNE project again came together in Paris (22 April 2014) for a workshop chaired by Catherine Hardman. The workshop introduced archaeological researchers to a variety of online data resources, including those held by the three partners providing online access to their data as part of the ARIADNE project. Michael Charno opened the workshop with an overview of the work of the ADS with a special focus on the work they undertake to make the data they host freely and openly available for reuse, not only by individual researchers and users but other data providers. Michael was followed by Keith Kintigh (tDAR), Jess Ogden (Fasti Online), Marcel Riedal and Fabian Scheler (ARACHNE). The workshop concluded with an open question and answer session.

***OU DCE Digital Data and Archaeology: Management, Preservation and Publishing Workshop:***

This course held in Oxford (3-4 March 2014), as part of the Oxford University Department for Continuing Education programme, provided data creators and curators with the essential knowledge and skills necessary to carry out digital preservation and data management. The course featured speakers from ADS and English Heritage who highlighted the importance of digital preservation and data standards in archaeology, introduced best practices for data creation and management, and interrogated case study examples of digital archives. The course also provided attendees with knowledge of online tools for data deposition, information on how to publish data online, and an understanding of how to use Linked Open Data in archaeology.

***Postgraduate Research Group Archaeological Data Management and Archiving Workshop:***

This practical workshop held in Southampton (28 September 2013) provided attendees with the opportunity to interrogate examples of both good and bad datasets to understand the impact bad data management can have on the reuse potential of datasets.

### ***Centre for Digital Heritage Summer School:***

ADS was involved in the Centre for Digital Heritage's Summer School which was designed to help newcomers from any discipline learn the essential skills needed to build and run a successful digital heritage project; from getting the funding to archiving data. ADS presented our experience of curating digital material and explored real world examples of Digital Heritage projects, highlighting the practical pitfalls of creating, managing, curating, and using digital data, by comparing successful data management examples with flawed projects. ADS staff then provided support to the summer school students as they developed their digital heritage project ideas.

## **5. Publicity and promotion**

### Conference and Workshop Appearances

In addition to general conference attendance, members of ADS staff presented a combined total of 43 papers at 31 different conferences, workshops and seminars throughout the year. These included major international conferences such as CAA2014 Paris (ADS presented on 'ADS Resources Online', 'Present practices in online archiving of archaeological data' and 'The development of data sharing and open data in archaeology'); EAA2013 Pilzen (ADS presented on 'Archaeological thesauri' and the 'Economics of archaeological research infrastructures'); the ODIN codesprint and first year conference at CERN (ADS presented on 'Data preservation and persistent identifiers in UK archaeology').

Judith Winters was invited to speak at Digital Past (Llandudno) in February 2014 on '*Internet Archaeology: Some reflections on a digital past*'. She also co-organised a session with Virginie Fromageot-Lanièpce (CNRS) at CAA, Paris in April 2014 on '*Strategy, Practice & Trends in Online Archaeology*' and presented a paper in the session on 'Data Publication – the new black'.

A full list of conferences, workshops and other significant meetings attended is available in Appendix E.

### University Visits

ADS staff gave lectures or seminars at the following universities over the past year: University of Bradford, University of Southampton, University of Liverpool, University of Manchester, Glasgow School of Art, University of Oxford, University of Cambridge, Aberystwyth University and the University of York. Most of these visits included two talks, one to undergraduates and another to postgraduates. The number of visits has increased from previous years and we hope to continue developing relationships with universities. A work pack is now available, which includes a presentation on ADS, Data Management and Digital Archiving, a step-by-step workbook that guides a student through ADS resources and a data management plan workbook for postgraduates.

### Massive Open Online Courses (MOOCs)

ADS has also developed relationships with the Universities of Southampton and Leicester who have offered MOOCs this year. This has introduced the ADS to a vast variety of new users who have provided excellent feedback on our services (see section 7: Selected user comments). The additional use of the ADS service during the periods the MOOCs were running is highlighted in the ADS website user metrics.

***Archaeology of Portus: Exploring the Lost Harbour of Ancient Rome (8,000+ learners)***

<http://moocs.southampton.ac.uk/portus/mooc/>

***England in the Time of King Richard III (10,000+ learners)***

<https://www.futurelearn.com/courses/england-of-richard-third-2014/>

Newsletter

Issue 26 of the ADS hardcopy newsletter was published in March 2014. Over 400 copies were sent to University archaeology departments, Historic Environment Record (HER) offices, major archaeological services and key ADS stakeholders. Over 300 additional copies have been distributed during conferences, seminars and workshops; this will continue throughout the year.

E-Newsletter

The first e-newsletter was published on 8 October 2013. Three issues have now been published with issue four due to be released in October 2014. This e-newsletter is distributed to all our registered users via the ADS-managed Jisc mail accounts and is publicised via ADS social media accounts.

Email Lists

The ADS general list [ads-all@jiscmail.ac.uk](mailto:ads-all@jiscmail.ac.uk) which is used to publicise key events and activities posted 15 emails over the past year and membership has continued to grow with 1,718 members currently registered. ADS also regularly posts to the Britarch, Antiquist, HER Forum, FISH and the IfA IMSIG lists.

*Internet Archaeology's* email list [intarch-interest@jiscmail.ac.uk](mailto:intarch-interest@jiscmail.ac.uk) is used to publicise new releases and other related news to its steady membership (c.300). New members continue to sign up to the email list, but clearly social media outlets, especially Twitter, have taken over the publicity role the email list once played.

RSS News Feed

The ADS RSS news feed continues to run with an average of three new news items per month (c.35 in the last year) and is consumed by Wessex Archaeology amongst others. The *Internet Archaeology* RSS news feed posts an average of 1-2 news items per month, used primarily to list new content as and when it is published.

Press Releases and News Items

The ADS was also mentioned in several international press releases and newsletters:

**ADS:** <http://csanet.org/newsletter/fall13/nlf1303.html>

**ADS Impact study:** <http://blog.beagrie.com/2014/07/20/science-and-innovation-esds-impact-study-is-1-of-3-stand-out-studies-internationally/>

***Publications:***

[http://www.niso.org/news/pr/view?item\\_key=dd448efd0f210acab8b1c6dce1efda94d0347aaf](http://www.niso.org/news/pr/view?item_key=dd448efd0f210acab8b1c6dce1efda94d0347aaf)

**OASIS:** <http://www.archaeologyskills.co.uk/report-writing-and-publication/284/>

**HERALD user survey:** <http://www.archaeologists.net/news/140707-oasis-survey-your-opinions-please>

**NEARCH:** <http://www.iai.ie/index.php/news-a-events/iai-news/210-european-commission-funds-new-european-archaeology-project.html>

<http://www.dainst.org/en/pressrelease/european-commission-supports-%E2%80%9Cnearch%E2%80%9D-project-major-international-archaeology-programme?ft=all>

**DADAism:** <http://words.usask.ca/news/2014/01/22/u-of-s-uk-netherlands-researchers-to-dig-into-archeological-data-for-hidden-treasures/>

<http://www.diggingintodata.org/Home/AwardRecipientsRound32013/tabid/201/Default.aspx>

<http://www.ahrc.ac.uk/News-and-Events/News/Pages/Digging-into-Data-Challenge.aspx>

[http://www.sshrc-crsh.gc.ca/news\\_room-salle\\_de\\_presse/latest\\_news-nouvelles\\_recentes/digging\\_into\\_data\\_challenge\\_winners-gagnants\\_du\\_concours\\_au\\_coeur\\_des\\_donnees\\_numeriques-eng.aspx](http://www.sshrc-crsh.gc.ca/news_room-salle_de_presse/latest_news-nouvelles_recentes/digging_into_data_challenge_winners-gagnants_du_concours_au_coeur_des_donnees_numeriques-eng.aspx)

### Blog Mentions

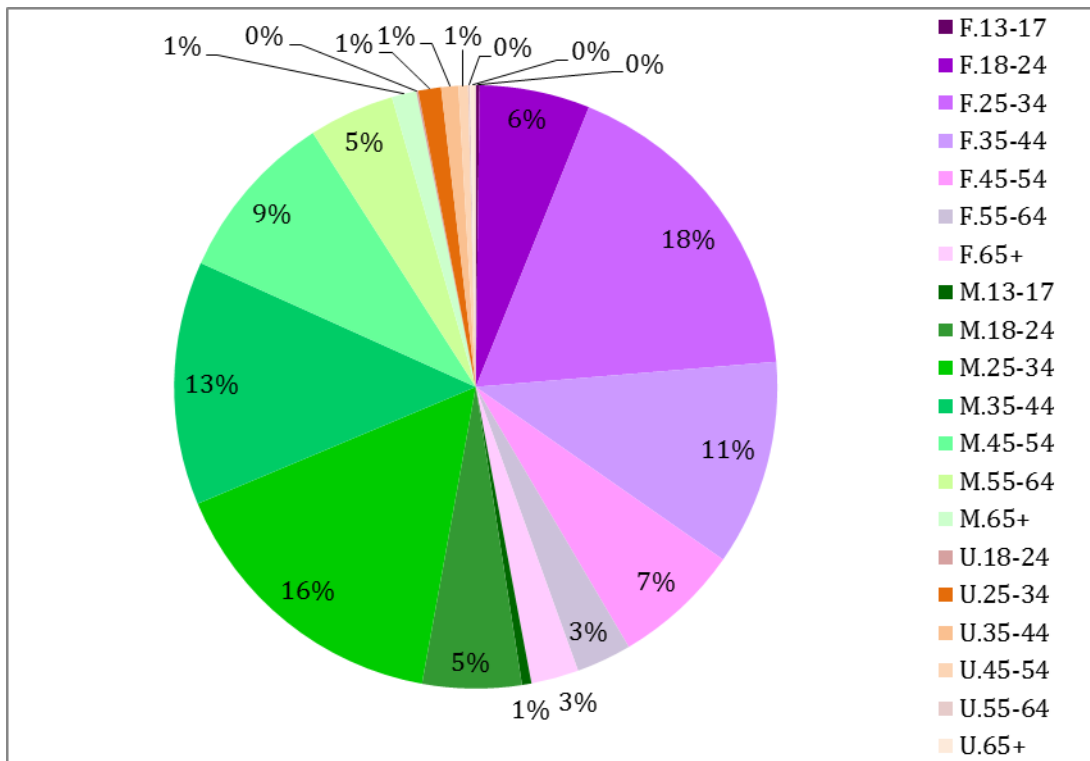
The ADS has been mentioned in many blog posts over the past year, including those of the DCC, Open Data in Archaeology, Day of Archaeology 2014, International Open Access week 2013, Archaeogeomancy.net, and Doug's Archaeology.

### Social Media

The ADS Facebook account is updated in sync with the ADS RSS feed, but with additional content, such as all new releases, events and links to news items related to ADS collections. ADS also post relevant news on other popular archaeology related Facebook pages, including *Internet Archaeology*, Bronze Age, Wessex Archaeology, Defence of Britain and Mesolithic Miscellany. We currently have **982 (746 in 2012/13)** followers and over the past year we have seen a steady increase in Facebook followers, although following a change to Facebook we have seen a drop in users reading and sharing our posts. In July 2013 the ADS page had an average daily reach of **790** people (more than our official number of 'Likes'), with an average of **15** people talking about ADS daily. However, in July 2014 we only had a reach of **76.54** people and an average of **1** person talking about us per day. This is a result of Facebook reducing the number of individual newsfeeds it posts our information to, in order to encourage organisations to pay to 'boost' their ratings, which we have not done. Despite this, popular posts such as releases of big datasets, are still reaching an average of **400** people in total as the result of people sharing our posts on their own pages.

The following pie chart represents the age and gender of ADS Facebook fans. The majority of these fans are in the 25-44 age bracket which suggests postgraduate level professionals. This suggests that ADS could increase its user base by targeting a younger undergraduate level audience.





The trend between the frequency of Facebook posts and people accessing ADS resources is continuing. The simplicity of clicking on a link to learn more about a post increases the traffic to the resource. This suggests that the more we publicise via Facebook and other social media channels the more traffic to the website: <https://www.facebook.com/archaeology.data.service>.

*Internet Archaeology's* Facebook page currently has **708** followers.

@ADS\_Update has **2,703** followers on Twitter; up from 1,981 in 2012/13. This year has seen much more activity by the ADS on Twitter. All new archive releases, events, project updates and major Grey Literature Library updates are announced via our corporate channel @ADS\_Update. @ADS\_Chatter is used for less formal communications at conferences etc. and currently has **395** followers. Regular ADS announcements are frequently re-tweeted or favourited. A Twitter account was opened for the Archaeology Britain App which has **351** followers. The Twitter announcements also see a similar correlation between the increases in people accessing ADS resources following tweets.

Internet Archaeology has **5,792** followers on Twitter, up from 3757 last year. The account sees frequent re-tweets and clearly shows that daily communication is the key to growing engaged followers. @Intarch\_Editor is used both to promote past and existing journal content, as well as for conference tweeting, engaging in conversation and posting links about e-publishing and open access publishing more generally.

The ADS Blog 'Sound Bytes' is intended to be a platform for ADS staff to write short articles discussing technical issues as well as disseminating updates on ADS research activities. Over the past year 29 articles have been published; over double the number from last year. Articles have covered topics from conferences and workshops reviews, to the work behind archive creation, curation and dissemination, European and UK projects, and new themes and technologies in digital heritage.

Piwik web analytics show that the blog has had **4,289** unique page views over the last year. This is an increase from the 4001 unique page views in 2012-2013. The article 'Archaeology Britain Mobile App Development' by Michael Charno was the most popular blog post with **269** unique page views since its posting in October 2013 but the blog post 'Will the real Julian Richards please stand up?' discussing ORCID was also found to be very popular with **148** unique page views since its posting in July 2014. The vast majority of readers come to the blog via links from our Facebook page or our Twitter updates, continuing to emphasise the importance of social media in the growth of our audience: <http://archaeologydataservice.ac.uk/blog/>

## 6. Resource discovery

### Interoperability

The ADS continued to develop its service-orientated architecture approach throughout the year both internally and externally. The ADS hosts seven web service targets for the English Heritage (Heritage Gateway). Both the TAG and ARENA2 services have been maintained via our main interface ('external' services) demonstrating interoperability at a service level with partner institutions in the US and in Europe. We have completed our supply of UK heritage metadata to Europeana through CARARE but this will continue via LoCloud. Metadata for ADS collections has also been supplied to the Keeper's Registry, MEDIN (the Marine Environment Data Information Portal), and to a number of HE Institutional Repositories.

### Number of aggregated records, external data sources and consumers of web services

Service	Current Count (Previous Year Count)	Comments
Total Records Aggregated	1,332,622 (1,279,965)	
Hosted External Data Sources	53 (35)	This is calculated by looking into ArchSearch for Collections with 10 or more records. Some results are waiting to be removed from ArchSearch but don't appear in the Solr index
OAI-PMH	5/11/6 (5/11/6)	Targets/Sets/Schemas haven't changed
SOAP	7 (10)	Oxford, Milton Keynes, and North Lincolnshire all moved their HG services to Exegesis
RESTful	1 (0)	Created an OASIS RESTful service for Discovery and Excavation in Scotland
External APIs	4 (3)	DataCite, SENESCHAL, Google Maps, Open Street Map
External Aggregators	7 (7)	NERC, MEDIN, DataCite, Keeper's Registry, Europeana, DES, and the Heritage Gateway all consume ADS data
LOD Triples	680,500 (656,877)	Archives and Amphora triples

## 7. Resource delivery

### User Interface developments

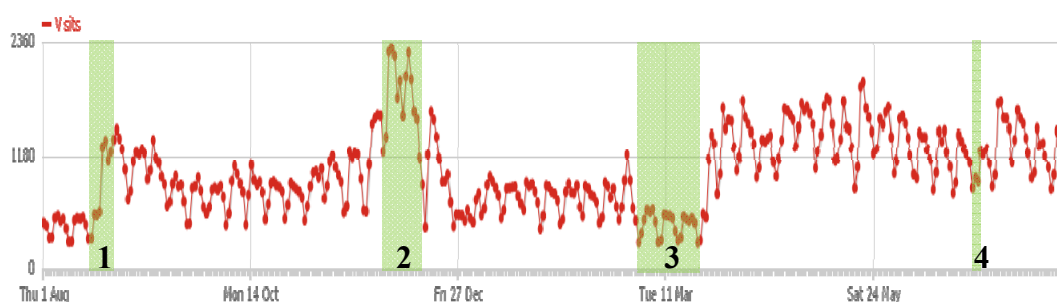
There have been several developments to the ADS user interface during 2013-14. Firstly, the Archives Facet tree has been updated to make it more in line with ArchSearch. This has also aligned the 'What' and 'When' facets with English Heritage controlled vocabularies. This included a lot of backend development and data cleaning. The saved search ability for MyADS users has been updated, with an 'email my search to a friend' option and the addition of a larger saved search button to make users more aware of the function. The Archive document search facility introduced last year has also been enhanced to create summaries of documents found in the search. This will become available to MyADS users in August 2014.

### Linked Open Data

The ADS LOD is continuing to get visitors and requests, even though very little work has been done to maintain or update the data since it was created in the STELLAR project. Some of the requests appear to be the result of Google and other search engines indexing the LOD, which is becoming commonplace now. The statistics show that general keywords ('Saltwood Tunnel', 'Negative Structural', etc) are bringing users directly to our LOD, which implies that the Google index is picking up our rich semantic data. This should also have a positive effect on our profile in Google and other search engines as more of our metadata is represented as LOD.

Overall there were c.75k requests made to our LOD data, which includes both requests for HTML representations and other serialisations. Our SPARQL endpoint only had 2k requests, down considerably from last year, but the type of SPARQL queries were more specific and meaningful than the previous 'identify yourself' queries last year.

### Access statistics



The ADS website had **370,866** unique visits in 2013/14. This is a significant increase on the 207,735 unique visits of 2012/13. The graph above presents the usage pattern for 2013/14 based on unique visits to the ADS website. The regular weekend dips in usage can be clearly seen, as well as a reduction of visits during the Christmas period reflecting general work patterns. The graph also clearly indicates several significant events that affected visit numbers which are listed below:

1. (2013-08-22): This increase in unique visits to the website is the result of the instigation of a direct access filter which recognises direct access views of PDFs

that have, in the past, bypassed the traditional ADS website and therefore the website statistics.

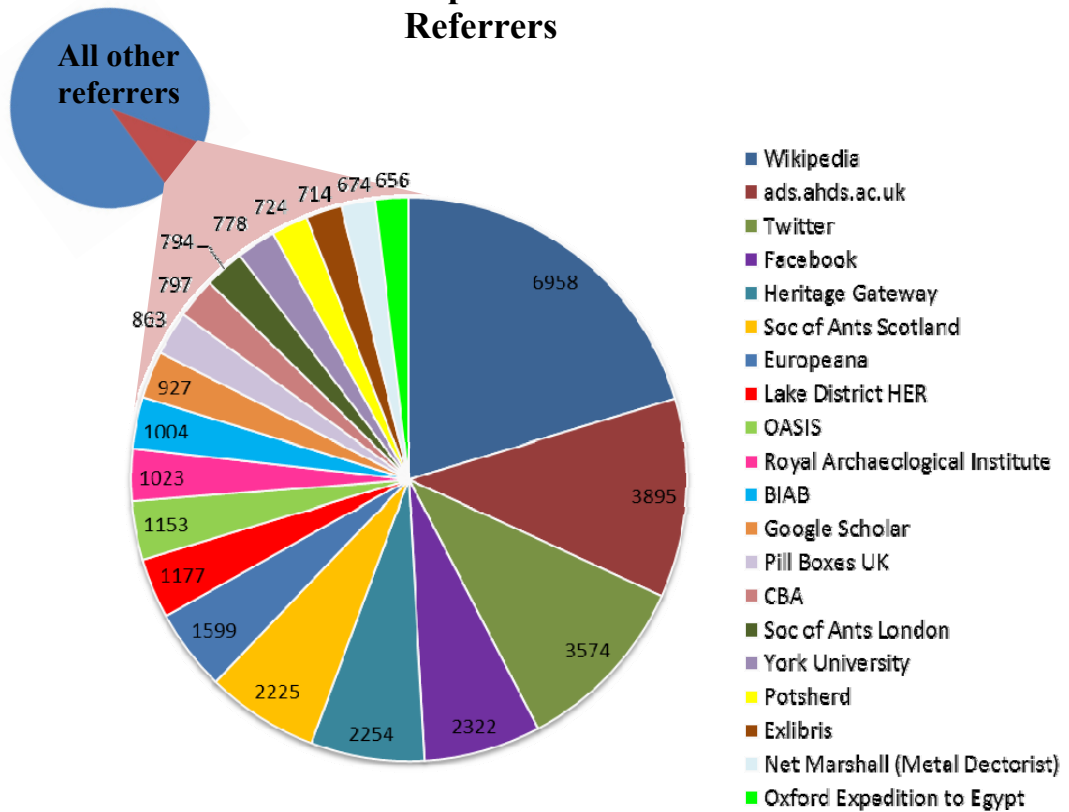
2. (2013-12-03): This unusual increase of visits in December may be the result of a number of factors including end of year academic deadlines and the Richard III MOOC.
3. (2014-02-27): The decrease in visits to the website here is a result of the creation of a custom variable in Piwik which inadvertently stopped recording Grey Literature Library visits as part of the main website statistics. This custom variable was turned off after one month and the visits to the website returned to a similar level as before the variable was turned on.
4. (2014-06-30): Slight decrease in visits as a server went down for four hours.

Although there has been a general increase in visitors to the website over the past year there has also been an increase in the number of visits that bounce out of the site after one page. This is probably as a result of our records becoming more and more visible in Google. This is further reflected in the 20% increase of visitors to the ADS website coming from search engines. These one page visits have, as a result, decreased the average visit duration and the average actions per visit. Despite this the percentage of return visitors to the website is still strong at 44% of all visits, with the average duration of a visit for a returning visitor doubling to nearly 7 minutes. The following figures represent overall usage of the ADS website in 2013/14 with last year's figures in brackets.

<b>370,866</b> (207,735)	Visits to the site (one individual with multiple page views and actions)
<b>48%</b> (35%)	Visits that bounce (left the website after one page)
<b>3 min 54s</b> (6 min 8s)	Average visit duration
<b>6.5</b> (10.7)	Average actions (page views, downloads, outlinks and site searches) per visit
<b>1,541</b> (2,022)	Max actions in one visit
<b>126,628</b> (94,898)	Returning visits
<b>44%</b> (46%)	Of all visitors are return visitors
<b>36%</b> (30%)	Return visit bounce
<b>6 min 54s</b> (8min 22s)	Average return visit duration
<b>10.6</b> (13.2)	Average actions per return visit
<b>2,206,308</b> (2,018,710)	Page views
<b>1,198,177</b> (997,734)	Unique page views
<b>52%</b> (65%)	Of all visits view two or more pages
<b>160,014</b> (174,717)	Downloads
<b>136,186</b> (152,861)	Unique downloads
<b>128,398</b> (89,739)	Direct entries, <b>34.6%</b> of visits (43%)
<b>166,786</b> (52,055)	From search engines, <b>45%</b> of visits (25%)
<b>75,595</b> (65,938)	From websites, <b>20.4%</b> of visits (32%)

Website referrals to the ADS come from a variety of sources and we actively encourage links to ADS resources. The pie chart below highlights the top 20 referrers to the ADS website and highlights our work to improve our visibility on social media, our collaborations with portals such as Europeana and services such as Google scholar and Exlibris.

## Top 20 Website Referrers



Visitors are accessing ADS primarily from English speaking countries as can be seen in the pie chart below. The placement of Italy as third in the top five locations of ADS visitors is an anomaly. Italy, when compared to larger European countries, has a significantly larger number of visitors than may be expected and more than double the number of visitors than English speaking Ireland. Italy also has the highest actions per page, the highest average time spent on the website and a lower bounce rate than any other country suggesting very targeted use of the website. This may be a result of the multiple European project partners ADS has in Italy and their active advertisement of ADS, but it may also be a result of the Roman Amphora Project Archive being used in teaching as high usage from Italy is often associated with high usage of this collection.



Roman Amphora is the most popular resource as the table below indicates with 323,422 page views. This resource is made up of many web pages providing short specific pieces of information and no downloads. The Grey Literature Library is the second most popular archive and the most popular collection that provides downloadable files.

Page	Pageviews	Unique Pageviews	Bounce Rate	Avg. time on page	Exit rate
<b>Roman Amphorae: a digital resource</b> <a href="http://dx.doi.org/10.5284/100021">http://dx.doi.org/10.5284/100021</a>	323,422	199,157	23%	43s	7%
<b>Grey Literature Library</b> <a href="http://archaeologydataservice.ac.uk/archives/view/greylit/">http://archaeologydataservice.ac.uk/archives/view/greylit/</a>	175,284	95,790	35%	1 min 5s	19%
<b>Defence of Britain</b> <a href="http://dx.doi.org/10.5284/1000327">http://dx.doi.org/10.5284/1000327</a>	88,131	40,486	25%	1 min 14s	16%
<b>Proceedings of the Society of Antiquaries of Scotland</b> <a href="http://dx.doi.org/10.5284/1000184">http://dx.doi.org/10.5284/1000184</a>	86,484	47,356	16%	1 min 11s	16%
<b>Medieval Archaeology</b> <a href="http://dx.doi.org/10.5284/1000320">http://dx.doi.org/10.5284/1000320</a>	35,923	20,654	24%	51s	17%
<b>The Archaeological Journal</b> <a href="http://dx.doi.org/10.5284/1018054">http://dx.doi.org/10.5284/1018054</a>	28,834	14,370	31%	1 min 2s	19%
<b>Oxford Expedition to Egypt: Scene-details Database</b> <a href="http://dx.doi.org/10.5284/1000009">http://dx.doi.org/10.5284/1000009</a>	24,765	13,964	30%	1 min 8s	14%
<b>CBA Research Reports</b> <a href="http://dx.doi.org/10.5284/1000332">http://dx.doi.org/10.5284/1000332</a>	20,225	13,701	38%	1 min 6s	28%
<b>Discovery and Excavation in Scotland</b> <a href="http://dx.doi.org/10.5284/1000284">http://dx.doi.org/10.5284/1000284</a>	14,849	9,554	40%	57s	29%
<b>London Archaeologist</b> <a href="http://dx.doi.org/10.5284/1000168">http://dx.doi.org/10.5284/1000168</a>	14,796	7,378	24%	45s	13%

**Registered users** for the website have now reached **5,623** compared with 3,571 this time last year; this is double the increase on the previous year. Registered users are predominantly from the UK as in previous years with a significant number from Italy as can be seen in the location of visitors to the ADS website as a whole.

As was seen last year, there has again been a slight decrease in the relative proportion of academic and commercial research, but increases in private research, family history, general interest and teaching and learning, suggests that the new users who have registered over the past year have primarily been from these sectors, indicating an increase in visibility to these groups.

### Selected user comments

The following selected user comments have been received through the Helpdesk email account, social media channels, surveys and MOOC comments.

*"I want to thank you and the ADS for the archival work and to commend Catherine and Jo for their help with the archival process. I was very pleased with their professionalism and willingness to put up with my idiosyncrasies. Yes, I do admit to them. They were kind, helpful, and patient. All I could ask and then some".* August 2013, email.

*"Thanks for that, we appreciate your work in making our reports available to all".* October 2013, email.

*"Thank you ever so much for published the two EBA burial datasets on the ADS – the pages look great. Thanks too for announcing the launch!"* October 2013, email.

*"Thanks very much for such a detailed and thorough reply. I've only just returned from leave myself and am very grateful for your prompt response. I shall follow your guidelines, and get back to you in the unlikely(!) event I will need any additional advice".* January 2014, helpdesk email.

*"This app is superb - really enjoying it. I travelled by Tube into London today marvelling at ancient sites....Finally, thank you so much for all the hard work that has gone I to this app. Just fantastic".* August 2013, helpdesk email.

*"Can I take this chance to thank you for an excellent and invaluable service".* November 2013, helpdesk email.

*"Thank you so much for your help. I downloaded this without difficulty, having tried several times in vain last night, from a different menu. You may quote me as a satisfied customer!".* December 2013, helpdesk email.

*"Just talked to a very helpful person at the Archaeological data Service @ADS\_Update about reports generated by our project going on OASIS."* January 2014. Tweet: <https://twitter.com/OpenLabRoadShow/status/427825897240928256>

*"Just found the Defence of Britain archive! It is amazing! Thanks @ADS\_Update! I will be going on mini adventures for years to come! #History".* Tweet: <https://twitter.com/StuartFeathers/status/456519111384637440>

*"@ADS\_Update thanks for tweeting some great stuff!"*  
Tweet: [https://twitter.com/BU\\_BAArchAnth/status/451826500707553280](https://twitter.com/BU_BAArchAnth/status/451826500707553280)

*"@ADS\_Update @EHArchaeology Interesting course about digital data and archaeology @UniofOxford <http://t.co/GM23G6zuQ8>"* Tweet: <https://twitter.com/LienLombaert/status/440561093774442497>

*"Brilliant new Archaeology iPad app out... @ArchBritApp from @ADS\_Update and @britishlibrary Find out more here: <http://t.co/psCSPptiOl>".* Tweet: <https://twitter.com/trumerz/status/375636265968091137>

*"@ADS\_Update @EHArchaeology Interesting course about digital data and archaeology @UniofOxford <http://t.co/GM23G6zuQ8>".* Tweet: <https://twitter.com/LienLombaert/status/440561093774442497>

*"Beautiful new Archaeology Britain iPad app now out: <http://t.co/wpWun9FUGl>, from @ADS\_Update and @britishlibrary @ArchBritApp".* Tweet: [https://twitter.com/up\\_joad/status/375616520031703040](https://twitter.com/up_joad/status/375616520031703040)

*"@willsmith700 I love them! The US is making headway with @DigArcRec & @OpenContext , but @ADS\_Update 's G2GP are great inspiration".* Tweet: <https://twitter.com/MjStrwy/status/392739610951815168>

*"I love @ADS\_Update 's work".* Tweet: <https://twitter.com/MjStrwy/status/392706716841684992>

*"Had some really interesting lectures on ADS. I spend many hours in the grey literature haha".* Tweet: <https://twitter.com/willsmith700/status/392740183721783296>

*"Delighted some of our reports are becoming readily available thanks to @ADS\_Update. <http://t.co/e5i00WYH4P>".* Tweet: <https://twitter.com/AddymanArch/status/433174907460268032>

*"I have been looking through the resources and loved the ADS site.....spent a good hour just browsing it!".* May 2014. Portus MOOC comments.

*"This is great... the Archaeology Data Service is so easy to search".* May 2014. Portus MOOC comments.

*"I used data and articles from the Archaeology Data Service extensively while working on my thesis; it was an invaluable resource for one of my areas of interest (Caledonia)".* May 2014. Portus MOOC comments.

*"I didn't know about ADS, it sure looks like a titanic effort".* May 2014. Portus MOOC comments.

*"Really impressed with the suggested link to the university amphora index. Really interesting and easy to use".* May 2014. Portus MOOC comments.

*"just looked at this site (University of Southampton Roman Amphorae: a digital resource) really easy to use and effective".* May 2014. Portus MOOC comments.

*"I found the Roman Amphorae search engine fantastic".* May 2014. Portus MOOC comments.

*"I have used ADS and the Pompei La Fortuna Visiva when I was studying my Diploma in archaeology several years ago. They are both excellent resources".* June 2014. Portus MOOC comments.

*"Archivists have always been helpful in providing advice".* July 2014. Survey.

*"Thanks for providing this resource and caring for it!"* July 2014. Survey.



## Internet Archaeology

As of July 2014, the journal has 80 overseas institutional subscribers in addition to the 141 UK HE/FE institutions who have signed up for access under the Jisc licence. The journal also has 581 individual subscribers, the majority of whom have purchased access to single articles.

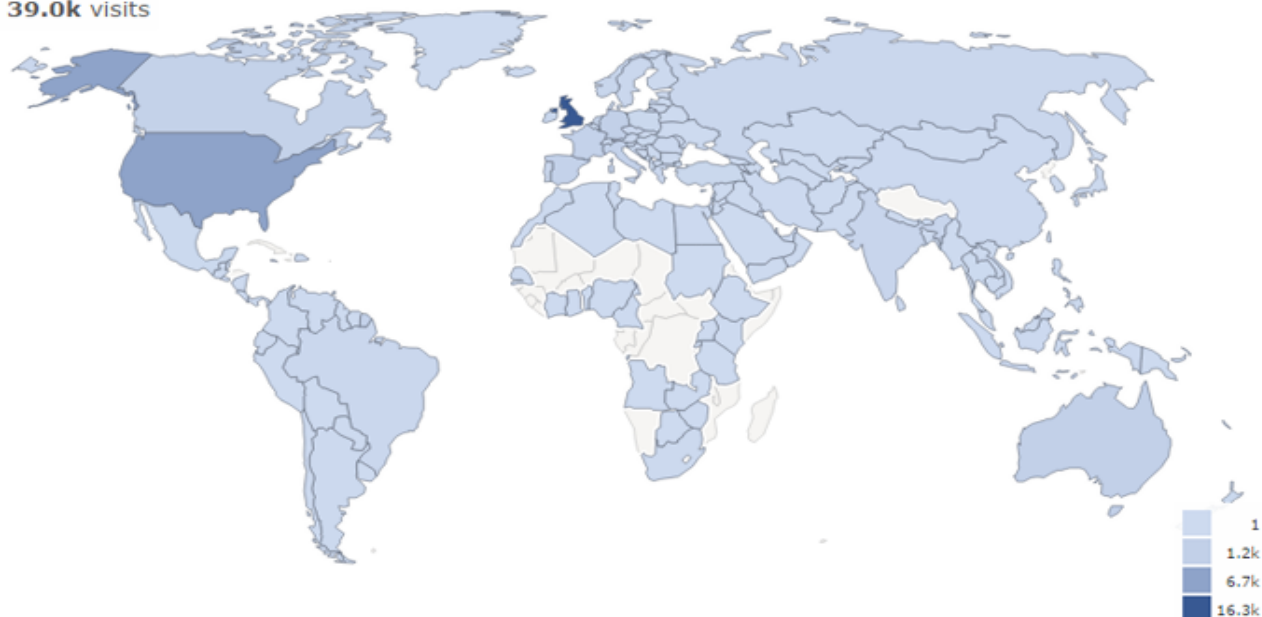
Content in all issues up to, and including, issue 23 is Open Access and there has been a considerable jump in usage of *Internet Archaeology*, serving over 39,000 unique visitors (29.5 in previous year). A range of between 150-200 visits occur each day but with the announcement of new articles, peaks of between 700 and 1,100 visits per day have been reached.

35% of visits to the journal are via direct entries (e.g. via personal bookmarks), 42% of visits arise via search engines, 22% of visits are links from other websites and 1% of visits from 3 targetted campaigns (e.g. via scheduled Tweets using Buffer).

The majority of readers come from UK, USA, Germany, Australia and Canada.

### Visitor Map

39.0k visits



*Selected author comments* (feedback from authors obtained in on-going anonymous survey (sent out after the publication of each article).

*“Very impressive level of support during the revision process and publication extremely efficient”*

*“[Feedback was] very helpful and constructive and helped improve the paper significantly”*

When asked how likely they were to publish in *Internet Archaeology* in the future, 73% of authors responded ‘very likely’. When asked if they would recommend publishing in *Internet Archaeology* to their peers and colleagues, 93% responded ‘definitely yes’.

## 8. Partnerships and collaboration

### United Kingdom

**HERALD:** Since January 2014 ADS staff have been engaged in the HERALD project. This represents the next stage of development of OASIS: a collaborative venture between the ADS and English Heritage to provide information about archaeological events and access to unpublished archaeological fieldwork reports or 'grey literature', especially those produced as a result of planning/development control related fieldwork. The main driver for this stage of the project is the need to capture user needs and understand the workflows and processes that need to be supported by any redesigned OASIS system. Any redevelopment of the form will be defined by the outcome of this stage of the project. Since the start of the project in January 2014 the ADS has concentrated on surveying many sectors of the profession about their use of the OASIS form and their potential engagement with event recording data. A Survey Monkey questionnaire was sent to ALGAO, IHBC, museums community, FAME, specialists, period societies, academics and English Heritage staff. In addition, telephone interviews have been undertaken with a subset of those surveyed. We have also used this opportunity to redesign the main OASIS site using wiki technology so that other organisations involved in the project more broadly can update the website remotely and help to keep their information up to date. At the same time we have established an OASIS blog which is regularly updated by ADS staff while others have been encouraged to submit postings.

**Roman Grey Literature, Reading University & Cotswold Archaeology:** The ADS have been involved from the beginning of the project, primarily in the design and construction of a spatial database to facilitate data collection and analysis by the University of Reading team. This desktop database is currently being rebuilt as a web-based interface to be publicly available at the end of the project. The interface will replicate the original tool used by the project team, and thus allow for advanced queries on facets such as site morphology, burial practices or zooarchaeological data to be constructed by the user.

## Rural Settlement of Roman Britain

Cotswold Archaeology, University of Reading, 2015

[Introduction](#)  
[Overview](#)  
[Query](#)  
[Usage Statistics](#)



ENGLISH HERITAGE

### Primary contact

Prof Michael Fulford  
University of Reading  
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PO Box 218  
Reading  
RG6 6AA  
England  
Tel: 0118 9318131  
Fax: 0118 9316718

### Resource identifiers

ADS Collection: 1352



### Search the database

[Submit query](#) [clear form](#)

Site name	<input type="text"/>	(enter any part of the site name)
Database ID	<input type="text"/>	(The Roman Rural Settlement project identifier)
Investigated by	<input type="text"/>	(enter any part of the organisation or personal name)
County	<input type="text" value="Leicestershire"/>	<input type="text" value="Leicestershire"/>
Fieldwork Type	<input type="text" value="Excavation"/>	<input type="text" value="Excavation"/>
Grey Lit?	<input checked="" type="checkbox"/>	(Tick this for all sites with grey lit sources)
OASIS?	<input type="checkbox"/>	(Tick this for all sites with grey lit sources disseminated through OASIS)
OASIS ID	<input type="text"/>	(OASIS reference)
HER Monument ID	<input type="text"/>	(HER monument ID)
HER Event ID	<input type="text"/>	(HER event ID)
Site Classification		
Major Site Type	<input type="text" value="Religious ritual and funerary"/>	<input type="text" value="mill"/>
Minor Site Type	<input type="text" value="enclosed"/>	<input type="text" value="mill"/>
Rural Settlement form	<input type="text" value="enclosed"/>	<input type="text" value="mill"/>
Non Domestic Structures	<input type="text" value="enclosed"/>	<input type="text" value="mill"/>
Site Details		
Building details	<input type="checkbox"/>	Multi-room building <input type="checkbox"/> Villa building <input type="checkbox"/> Aisled building <input type="checkbox"/> Masonry building <input type="checkbox"/>

An additional aspect of this interface is the use of web-mapping and to allow results to be viewed in their geographic and thematic context. The interface also allows for results to be downloaded in a range of formats, and where appropriate link to digital inventories and grey literature held online. It is hoped that this resource will be a highly valuable research tool for a wide range of users.

In addition to this work, the ADS has also been accessioning and archiving digital grey literature reports (not already held through OASIS) identified and collected by the project team. Each of these reports is, or will be, discoverable within the ADS Grey Literature Library (<http://archaeologydataservice.ac.uk/archives/view/greylit/>), assigned a Digital Object Identifier (DOI) enabling accurate citation, and classified according to English Heritage thesauri. At the time of writing the reports from the East, East Midlands, West Midlands and the majority of the Southeast have been collected, amounting to 1,029 records in the ADS library.

- We continue to support AHRC, NERC and MEDIN, including contribution of metadata to the NERC Data Catalogue Service (DCS) and MEDIN data portal, and as an accredited Data Archive Centre (DAC) we have continued to archive marine archaeological data sets.
- We have continued our involvement in a number of UK networks of digital archives, including the Digital Preservation Coalition and the Research Data Management Forum.
- We have continued to work with other heritage information bodies via FISH (the Forum for Information Standards in Heritage), HEIRNET (Historic

Environment Information Resources Network), the Bedern Group, and the AAF (Archaeological Archives Forum).

- 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

Our three current European projects, all begun last year, are now in their planning phases. This is the critical period where the project, as outlined within the funding application, must be fully planned for successful implementation. We have been working hard through these processes and to build and/or improve good working relationships with over 60 European partners across these projects. There is some overlap between partners on each of the projects, some partners have worked with us previously, some are new to us, and some are new to European projects altogether. Taken as a whole, this represents the best of what European funding sets out to do; allow research to be carried out collaboratively by groups working at all levels of experience, with constantly changing roles and partners. ADS has a growing reputation as a good and experienced partner, as evidenced by the lead roles we are asked to take, and the number of funding applications in which we have been invited to participate.

As part of the LoCloud project, ADS hosted partners from Turkey, Greece, the Netherlands, Iceland, Czech Republic, Serbia and the UK. We also look forward to hosting all of the NEARCH partners in York in December.

Beyond building important partnerships and increasing our visibility within Europe, European projects represent our main avenue for research and development work. This allows ADS staff to be part of, and contribute to, research that is both at the forefront of our sector, and potentially useful to developing our core services.

## North America

The ADS continues to work closely with the Digital Antiquity consortium in the United States, and Julian Richards is a member of the Board of Directors, participating in quarterly meetings via Skype, and an annual face-to-face meeting in Arizona.

## Australia

The ADS is an international partner in FAIMS (Federated Archaeological Information Management System), and as a member of the FAIMS Board, Julian Richards reviewed the ongoing development of the FAIMS mobile platform throughout the year, as well as supporting the project in securing follow-on funding.

## **9. Research and development**

### SENESCHAL

Semantic ENrichment Enabling Sustainability of arCHAEological Links (SENESCHAL), a 12-month AHRC Follow-on Funding project led by the University of South Wales Hypermedia Research Unit, has now come to a successful conclusion. SENESCHAL brought the ADS into collaboration with English Heritage, RCAHMS and RCAHMW, and built on outcomes and tools from the previous AHRC-funded STAR and STELLAR projects. SENESCHAL sought to address the current lack of vocabulary control hindering the full potential of Linked Data. The main focus of

SENESCHAL was to create two important new resources. The first was to convert all the main controlled vocabularies used by English Heritage, RCAHMS and RCAHMW into SKOS-based RDF, and to make the results freely available. To help facilitate the use of the new vocabularies, the second resource was a lookup-widget which can be embedded in existing web-based recording systems. The SKOS vocabularies have had significant uptake, and have already become a highly regarded standard for comparison for international SKOS vocabulary development. ADS has incorporated the products of SENESCHAL into our internal CMS, allowing our metadata to be linked to the appropriate URIs (and thus published as proper Linked Data rather than string data) at the point of creation. This has become an important exemplar for a successful Linked Data cycle, as ADS is both consuming Linked Data from the SENSECHAL vocabularies and then publishing the enriched data as Linked Data from our SPARQL endpoint. This model is now planned for incorporation within the new HERALD iteration of OASIS.

### ARIADNE

Advanced Research Infrastructure for Archaeological Dataset Networking (ARIADNE) is a four-year EU FP7 Infrastructures funded project, coordinated by PIN at the University of Florence and ADS (Deputy Coordinators), and is made up of 24 partners across 16 European countries. ARIADNE has the goal of bringing together and integrating existing archaeological research data infrastructures, so researchers can use the distributed datasets and technologies as an integral component within archaeological research. As Deputy Coordinators, ADS continues to be heavily involved in the overall planning and management of the project across all 17 workpackages. Highlights of our involvement over the past year include the completion of our first two deliverables: the *Initial Report on Good Practices and Use Requirements* (for the design of the infrastructure). As the workpackage leaders for Transnational Access and Training, we successfully organised the two online transnational access provider workshops at EAA in Pilzen and CAA in Paris, and the first of the physical transnational access provider workshops at EVA in London. We have also overseen organising the first year of 'summer schools' held by the participating technical providers (PIN, CNR and ATHENA RC). In addition, ADS has played key roles in the development of other workpackages, bringing together and synthesising the results of the user needs survey, with the holdings of the content providing partners, and the resources available to the domain. From this work we have continued to help guide the direction of the development of the infrastructure as it moves through the planning phase. We have also continued to focus effort on good practices, Linked Data, and Natural Language Processing tasks.

### LoCloud

Local Content in a Europeana Cloud (LoCloud) is a three-year EU Competitiveness and Innovation Framework Programme (CIP) best practice network. LoCloud is coordinated by Norsk Kulturråd and is made up of 32 partners across 26 European countries. LoCloud follows on directly from the CARARE project (where ADS was also a partner) and EuropeanaLocal, another recently completed best practice network, which played an important role in ensuring the digital content provided by Europeana's local and regional cultural institutions were represented in Europeana. LoCloud will combine updated versions of the metadata mapping tools and methodology developed as part of CARARE, with cloud computing technology (along with other microservices), to help small-to-medium sized heritage organisations make their content discoverable within Europeana. In our role as aggregator for the UK, ADS will be providing additional metadata to make a larger part of our archives discoverable within Europeana, and helping a select group of other small data

providers within the domain to do so as well. As the leaders of the Dissemination and Exploitation workpackage, over the last year ADS has overseen the dissemination planning and implementation, including the planning of a major dissemination workshop to be held at the 18<sup>th</sup> ICOMOS General Assembly in Florence, during November 2014. ADS also hosted many of the content providing partners in York for a technical workshop in September.

### NEARCH

New Scenarios for a Community-involved Archaeology (NEARCH), is a five-year EU Culture Programme funded project, coordinated by the Institut National de Recherches Archéologiques Préventives (INRAP) in France, and is made up of 14 partners, across 10 European countries. NEARCH follows on directly from the ACE project (where ADS was also a partner), and aims to assess the implications of the recent economic crisis in the fields of Archaeology and Heritage, and to propose new ways of working and interacting, in particular within the different dimensions of public participation. Over the last year ADS has begun working with the organisers of the digital 'Day of Archaeology' to expand participation throughout Europe, starting in 2015. ADS has also begun working on mobile app development, which will help the public engage with historic records and archaeological resources, and in partnership with *Internet Archaeology*, has begun developing ideas for alternative forms of publication, adapted for different audiences. ADS is also overseeing the planning for hosting the upcoming NEARCH plenary meeting, to be held in York in December, which will include the first of the discussion workshops, titled *Archaeology and communication technologies: Enabling community involvement*.

### DADAISM

The kick-off meeting for a new 18<sup>th</sup> month project, which is part of the Digging into Data challenge, was held on 4 June 2014 in York. The DADAISM project brings together researchers from the diverse fields of archaeology (ADS, University of York), human computer interaction (University of York), image processing, image search and retrieval (University of Saskatchewan), and text-mining (University of Amsterdam) to create a rich interactive system to address the problems of researchers finding images relevant to their research. In the age of digital photography, there are thousands of images taken of archaeological artefacts. However, these images are currently greatly under-utilised for two key reasons. Firstly, the current paradigm for interaction with image collections is basic keyword search or, at best, a simple faceted search. Secondly, even if these interactions are possible, the metadata related to the majority of images is scarce in information relating to the content of the image and the nature of the artefact. DADAISM aims to use user-centred design methodologies to create an interactive system to support archaeologists' tasks of finding, organising, relating and labeling images as well as other relevant sources of information such as grey literature documents. ADS is acting as a liaison with the archaeological profession and the technical members of the team, providing the project with image and textual datasets, providing archaeological metadata expertise and archiving any new metadata created for the datasets as part of the project. The project is currently carrying out contextual interviews of archaeological professionals.

## **10. Service management**

During the year 1 August 2013 - 31 July 2014 the ADS had total income of £871,897 and total expenditure of £874,359, including £19,623 which was transferred to

reserves. An additional £19,623 was received as the ADS share of University of York overheads. A credit balance of £244,734 had been carried forward from the 2012-13 financial year, leaving a credit balance of £261,535 to carry forward to 2014-15. The majority of this relates to income received in advance of work undertaken, and it is planned that this will be expended during 2014-15. Additionally, £207,516 is now held in the ADS reserves account. The full accounts for 2013-14 are available as a separate document.

The internal management team held quarterly meetings to review finances, and all ADS staff met for project updates on a monthly basis, with separate meetings of the curatorial and technical staff to resolve specific issues. On 26 February 2014 we held a staff Away Day to inform the development of the ADS user interfaces, with follow-up meetings to work on the arising sub-projects. In addition, we have introduced an informal series of lunchtime staff seminars to look at blue skies developments.

Staffing levels have been relatively stable this year and we were able to retain Paul Young (until December 2014) as an additional applications developer focussing on enhancements to the Collections Management Systems and Jenny Ryder has been retained as a Digital Archivist. Neil Gevaux completed his 12-month IfA HLF Workplace Learning Bursary and has now been employed by the Department of Archaeology as a Computing Officer.

## Appendices

### (A) STAFFING LIST

J D Richards, Director  
T Austin, Systems Manager (until August 2013)  
M Charno, Lead Applications Developer  
T Evans, Digital Archivist  
N Gevaux, Digital Archivist (until October 2013)  
J Gilham, Digital Archivist  
K Green, Communications & Access Manager  
C Hardman, Deputy Director (Collections)  
R Moore, Digital Archivist  
K Niven, Digital Archivist  
J O'Brien, Digital Archivist  
D Page, Administrator  
J Winters, *Internet Archaeology* Editor  
H Wright, European Projects Manager  
L Xia, Applications Developer  
P Young, Web Developer



**(B) ADS MANAGEMENT COMMITTEE MEMBERSHIP**

Met on 01 October 2013 and 25 March 2014

Corresponding members are indicated with an asterisk

Tim Darvill OBE	Chair, Bournemouth University (until Oct 2013)
Sam Turner	Chair, University of Newcastle (from March 2014)
Mike Heyworth MBE	Vice-Chair, Council for British Archaeology
Jeremy Huggett	Vice-Chair, University of Glasgow
Diana Murray	Vice-Chair, RCAHMS
Gail Lambourne	Arts and Humanities Research Council
Peter Halls	Assoc for Geographic Information (until Oct 2013)
Gail Falkingham	ALGAO (Assoc of Local Govt Archaeol Officers)
Barry Cunliffe*	British Academy
Dan Pett*	British Museum
Nick Poole	Collections Trust
Marion Meek*	Dept of the Environment for Northern Ireland
William Kilbride	Digital Preservation Coalition
Keith May	English Heritage
Mike Evans	English Heritage (NMR)
Armin Schmidt	GeodataWIZ (until March 2014)
Anthony Sinclair	Higher Education Academy
Rebecca Jones	Historic Scotland
Edmund Southworth*	Manx National Heritage
David Cotton	MEDIN
Mark Thorley	Natural Environment Research Council
Gary Lock*	Oxford University
David Thomas	RCAHMS
Ortrun Peyn	Society of Antiquaries of London
Simon Gilmour/Erin Osborne-Martin	Society of Antiquaries of Scotland
Paul Miller	The Cloud of Data
Clive Orton	UCL, Institute of Archaeology (until October 2013)
Andrew Bevan	UCL, Institute of Archaeology (from March 2014)
Vince Gaffney*	University of Birmingham
Graeme Barker	University of Cambridge
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
Deborah Smith	PVC for Research, University of York

**(C) INTERNET ARCHAEOLOGY ADVISORY COMMITTEE**

Prof Mark Aldenderfer, University of California, Merced  
Mr Tony Austin, University of York (until August 2013)  
Mr Michael Charno, University of York (from September 2013)  
Mr David Bowsher, MOLA  
Prof Sir Barry W Cunliffe, University of Oxford  
Dr Graeme Earl, University of Southampton  
Harrison (Nick) Eiteljorg II Center for the Study of Architecture  
Dr Mike P Heyworth, Council for British Archaeology  
Dr Jeremy Huggett, University of Glasgow  
Dr Ian Johnson, University of Sydney  
Dr Hans Kamermans, University of Leiden  
Dr Francis P. McManamon, Digital Antiquity, Arizona State University  
Prof Franco Niccolucci, University of Florence  
Dr Alistair Paterson, University of Western Australia  
Prof Julian D Richards, University of York  
Pete Rowsome, Freelance consultant/ex-MoLAS  
Dr Seamus R Ross, University of Toronto  
Dr Claire Smith, Flinders University  
Roland Smith  
Prof Dean R. Snow, Penn State  
J Stephen Town, University of York  
Prof Dr Frank Vermeulen, University of Ghent  
Ms Judith Winters, University of York

## (D) LIST OF NEW COLLECTIONS RELEASED

**Worcestershire Historic Landscape Characterisation (HLC):** In July 2007, Worcestershire Archive and Archaeology Service began a two and a half year project, jointly funded by English Heritage and Worcestershire County Council, to characterise the historic landscape of Worcestershire through mapping and associated interpretive material. It forms part of English Heritage's national programme of Historic Landscape Characterisation.

**AustArch: A Database of Australian 14C and Luminescence Ages:** The AustArch dataset consists of 5,044 radiocarbon determinations from 1,748 archaeological sites across Australia. The dataset also contains a further 478 non-radiocarbon ages from optically stimulated luminescence, thermoluminescence, oxidisable carbon ratio, uranium-series, electron spin resonance, cation ratio dating, and amino acid racemization from 86 archaeological sites.

**Lacock Bridge:** The investigation of the road surface, at the junction with the north parapet of Lacock Bridge, to assess possible causes of movement. The findings of this exercise are published in the form of a project summary, report and photographs.

**Mount Wear House, Countess Wear Road, Exeter:** Mount Wear House is a Grade II Listed small, former country house lying a short distance to the south of the village of Countess Wear. Historical building recording at Mount Wear House was commissioned by the current owner of the property in advance of the complete refurbishment of the house and outbuildings.

**Land at Station Road, Honeybourne, Worcestershire (WSM49638):** An archaeological excavation was undertaken by Cotswold Archaeology in August-September 2013 at Land at Station Road, Honeybourne, Worcestershire. Alongside an archaeological earthwork survey was undertaken by Cotswold Archaeology in August 2013. This archive is deposited as part of the Museums Worcestershire collection.

**Land at Green Hedges, Claphill Lane, Rushwick, Worcestershire (WSM49639):** In August 2013 Cotswold Archaeology carried out an archaeological evaluation for Cala Homes (Midlands) Ltd on Land at Green Hedges, Claphill Lane, Rushwick, Worcestershire (centred on NGR: SO 8192 5392).

**Southampton, Former NXP Works (OASIS ID: oxfordar1-156064):** From the 18-27 March 2013, Oxford Archaeology carried out a trial trench evaluation on the site of The Former NXP Works in Southampton, Hampshire, on behalf of CgMs Consulting prior to the redevelopment of the site by Canmoor Projects Ltd.

**Cult, Religion and Pilgrimage. Archaeological Investigations at the Neolithic and Bronze Age Monument complex of Thornborough, North Yorkshire:** These five digital appendices supplement the published report on archaeological investigations at the Neolithic and Bronze Age monument complex of Thornborough, North Yorkshire. They both describe the results of two university field projects undertaken between 1994 and 2004 which completed geophysical prospection, topographic survey, and excavation.

**Wroxeter: The Webster Excavation Archive Project updated:** This archive comprises the database created as a curatorial and research tool during the post-

excavation and publication work on Graham Webster's excavations at Wroxeter 1955-1985.

**MOD Ratfyn to Bulford Electricity Distribution upgrade:** Wessex Archaeology was commissioned by Utility Consulting, on behalf of EDF Energy, to undertake an archaeological watching brief during the installation of a 33kv underground cable and overhead line works running from the Ratfyn Amesbury MOD electricity substation for approximately 2.5km towards Bulford Army Camp.

**Experimental Mapping of the Risk of Encountering Buried Archaeology on Aggregate Landscapes:** This project has built on a number of significant aggregate related projects funded in the Trent Valley under previous rounds of the ALSF. The significant corpus of archaeological knowledge gathered for this valley floor provides arguably the best (national) opportunity to develop and test a model for archaeological decision making with respect to risk and for the direct transfer of this knowledge to the minerals industry via the regional HER.

**Parks and Gardens Data Service:** The archive of the Parks and Gardens UK database, created in February 2014. The online database comprises some 7,300 site records; 2,100 people records; and more than 4,300 images including digitised maps, plans and photographs.

**Terrestrial mineral resource assessment: Northamptonshire:** The project was undertaken by Museum of London Archaeology and Northamptonshire County Council, as part of the Terrestrial Minerals Resource Assessment (TMRA) administered by English Heritage. The aim of the project was to map past, current and future mineral extraction areas in Northamptonshire.

**Extensive Urban Survey - South Gloucestershire:** This archive concerns areas of archaeological and historic importance in seven urban areas in South Gloucestershire: Chipping Sodbury, Hawkesbury Upton, Filton, Kingswood and Mangotsfield, Marshfield, Thornbury and Wickwar.

**Study Group for Roman Pottery Bibliography:** An online searchable bibliographic database could also be accessed by students and members of the public and would assist with training and continuing professional development within Roman pottery studies.

**Distribution and significance of urban waterlogged deposits in Berwick-upon-Tweed:** The project has studied the distribution and significance of urban waterlogged deposits in Berwick using evidence from archaeological and geotechnical (borehole) investigations. This data was used to create a GIS deposit model of the town's buried stratigraphy.

**Red Hone Cottage, Urchfont, Wiltshire:** Wessex Archaeology was commissioned by Positive Planning, on behalf of Paul Clark, to undertake an archaeological field evaluation ahead of development at Red Hone Cottage, Urchfont, Wiltshire.

**Area 5, Larkhill Camp, Wiltshire:** Wessex Archaeology was commissioned by Mansells Construction Services Limited to carry out an archaeological watching brief during development works at Area 5, LADG05, Larkhill Camp, Larkhill, Wiltshire.

**Land adjacent to 106 High Street, Great Cheverell, Wiltshire:** Wessex Archaeology was commissioned by John Stone, the Client, to carry out an

archaeological watching brief during groundworks undertaken for the construction of a single house on land adjacent to 106 High Street, Great Cheverell.

**The Old Rectory, River Street, Pewsey, Wiltshire:** Wessex Archaeology was commissioned by Quinlan and Francis Terry Architects on behalf of The Servants Fellowship International to undertake an archaeological watching brief during construction at The Old Rectory, River Street, Pewsey, Wiltshire.

**Rock Cottage, Chilmark, Wiltshire:** Wessex Archaeology was commissioned by WGDP Ltd, on behalf of Johan Denekamp, to undertake an archaeological field evaluation ahead of development at Rock Cottage, Chilmark, Wiltshire.

**Nunton Farm, Nunton, Wiltshire:** Wessex Archaeology was commissioned by Mr C Burrows, of Damen Associates Ltd to undertake an archaeological watching brief during construction at Nunton Farm, Nunton, Wiltshire.

**Druids Lodge Polo Club, Salisbury, Wiltshire:** Wessex Archaeology was commissioned by Druids Lodge Polo Club to undertake an archaeological evaluation in advance of development on land at Druid's Lodge Polo Club, near Salisbury, Wiltshire.

**Area 13 and Area 5, Larkhill Camp, Larkhill, Wiltshire:** Wessex Archaeology was commissioned by Aspire Defence Capital Works (the Client) to undertake an archaeological watching brief during development works at Area 13 (LACG13) and Area 5 (LADG05), Larkhill Camp, Larkhill, Wiltshire.

**Dendrochronology database updated:** This resource has been updated, and now contains over 3,300 tree-ring dates for buildings in the United Kingdom, ranging from cathedrals to cottages and barns. The database holds period, location and reference information for each record.

**National Monuments Record of Scotland update:** A reload of the National Monuments Record of Scotland adding over 54,000 new records bringing the total to over 311,000. Each is linked to the full Canmore record.

**The Archaeological Landscape of Frampton on Severn, Gloucestershire:** This archive combines the results of two ALSF projects in the vicinity of Netherhills Quarry, Gloucestershire.

**The Lyonesse Project: a study of the coastal and marine environment of the Isles of Scilly (OASIS ID cornwall2-58903):** The Lyonesse Project aimed to reconstruct the evolution of the physical environment of Scilly during the Holocene (11,700 cal BP to present) and investigate the progressive occupation of this changing coastal landscape by early peoples.

**Assessment of archaeological resource in aggregate areas in Bath and North East Somerset:** The project comprised an archaeological resource assessment of the aggregate producing areas of Bath and North-East Somerset (BANES). It was undertaken by Museum of London Archaeology in partnership with BANES District Council in 2010 and 2012, with funding from the Aggregates Levy Sustainability Fund, as administered by English Heritage.

**Rock View, Devon Consols, Gulworthy (OASIS ID southwes1-118728):** Archaeological monitoring and recording was undertaken by South West

Archaeology (SWARCH) during the groundworks associated with an extension and landscaping at No. 2 Rock View, Gulworthy, Devon. The proposed development site is adjacent to a listed building and lies in an area of archaeological significance within the Cornwall and West Devon Mining Landscape World Heritage Site.

**Cattewater Wreck Archive:** The Cattewater Wreck was discovered in 1973 during channel dredging in the Cattewater, Plymouth, Devon. The site was partly excavated between 1975 and 1978. The Cattewater Wreck Archive Project aimed to improve the long term care and management of the Cattewater Wreck Excavation Archive held by Plymouth City Museum and Art Gallery.

**Profiling the Profession:** Comprehensive Labour Market Intelligence for the archaeological profession has now been gathered for the fourth time in the series of Profiling the Profession studies.

**Silbury Hill:** English Heritage has been engaged in work at Silbury since May 2000 when a vertical shaft originally dug in 1776 re-opened up on the summit. The digital archive for the Silbury Hill Conservation Project reflects the work undertaken from 2000 to the remedial works in 2007/2008 and subsequent post-excavation research and analysis.

**Ancient mitochondrial DNA sequence and SNP data from Andaman and Nicobar museum samples:** The aim of this project was to reconstruct the maternal demographic history of the populations of the Andaman and Nicobar archipelagos using genetic profiles obtained from colonial era skeletal material and hair collections.

**The small finds from the Baths Basilica Wroxeter: a digital resource:** Between 1966 and 1990 the Baths Basilica at Wroxeter was excavated using methodology that resulted in the recovery of occupation sequences that extended into the seventh century AD.

**Pitcarmick Excavations 1993-5:** The Pitcarmick Project Archive contains the results of excavations between 1993 and 1995 of a sequence of buildings on high ground to the west of Strathardle, in the area designated as Pitcarmick North or Site 154-4B.

**Visualisation in Archaeology:** Visualisation in Archaeology (VIA) was a three year project to explore the philosophical and historical dimensions - and future prospects - of the visual presentation of archaeological knowledge.

**Carlisle Cathedral, Cumbria:** Excavations preceded the construction of an underground Treasury in 1988 and revealed archaeological deposits spanning the first and second millennia AD including Roman buildings, burials of Anglo-Scandinavian, medieval and post-medieval date.

**West Berkshire Aggregate Resource Assessment:** The final report of the English Heritage funded ALSF project examining the archaeological resource contained within aggregates producing areas.

**Sussex Archaeological Collections:** The articles for volume 149, alongside abstracts and supplementary data for volumes 150 and 151, have been added to the collection.

**Newport Medieval Ship:** The Newport Ship is the most substantial late medieval vessel excavated and recovered in Britain. The ship was discovered during development on the west bank of the River Usk in Newport, South Wales in 2002.

**London Archaeologist Volume 12:** The archive of the journal 'London Archaeologist' has been updated with all parts of Volume 12.

**Essex Historic Landscape Characterisation (HLC):** The Essex HLC project aimed to characterise the distinctive historic dimension of the current rural landscape and was carried out as part of the East of England Regional HLC project.

**North Yorkshire, York and Lower Tees Valley Historic Landscape Characterisation (HLC):** The North Yorkshire, York and Lower Tees Valley Historic Landscape Characterisation (HLC) Project was carried out between April 2005 and March 2010 and was undertaken to gain a better understanding of the surviving historic landscape character of the modern landscape.

**The CSA Propylaea Project:** The project, which began as an idea in 1999, was intended to create a unified digital (i.e. computer-based) resource concerning the Propylaea. The Propylaea is the magnificent entrance structure that has guarded the entrance to the Acropolis in Athens since shortly after the middle of the fifth century B.C.E.

**Drigg Burnt Mound, West Cumbria:** The results of an archaeological evaluation at the site of a putative Bronze Age hearth or burnt mound at Drigg, West Cumbria (SD 0450 9860), undertaken in October 2000 by Oxford Archaeology North.

**A Whole-site First-assessment Toolkit for combined Mineral Resource and Archaeological assessment in Sand and Gravel deposits:** An ALSF funded report examining site assessment tools for both mineral resources and archaeological remains.

**The Western Stone Forts Project: Excavations at Dún Aonghasa and Dún Eoghanachta:** Dún Aonghasa is one of the best-known archaeological monuments in the west of Ireland and stands at the cliff-edge on the island of Inis Mór, the largest of the Aran Islands off the coast of Co. Galway. The site is a late Bronze Age hillfort built ca. 1000BC and remodelled in the early Medieval period, possibly sometime around AD 800. It has been a National Monument in state care since the late nineteenth century.

**Oxford Archaeological Plan:** The Oxford Archaeological Plan (OAP) is a project that brings together two initiatives: The Urban Archaeological Strategy project and the Historic Landscape Characterisation project. Both are intended to help local authorities develop the available evidence base for the historic environment to support informed management.

**Heslington East Excavation Archive:** This archive project relates to archaeological evaluation, assessment and analysis of the 115 hectare site at Heslington East (SE643510). The site lies approximately 3.5km south east from the centre of the historic city of York and is the location of a new campus for the University of York. The site has evidence for human settlement from the Bronze Age through to the late Roman period, with some earlier prehistoric activity, and will allow us to understand, in more depth, the landscape and settlement history of the Vale of York.

**Extensive Urban Survey: Cheshire:** The Historic Environment Team of Cheshire County Council, in partnership with English Heritage, carried out a survey of the archaeological potential and historic development of 37 historic towns of Cheshire, Halton and Warrington. The survey was divided into three phases - data gathering, assessment and strategy.

**Burdale: an Anglo-Saxon settlement on the Yorkshire Wolds:** The Anglian settlement at Burdale (SE 875623) is situated in the main Thixendale-Fimber valley, 2km south-east of Wharram Percy and was selected for investigation as part of a University of York research project to investigate Anglo-Saxon and Anglo-Scandinavian settlement on the Yorkshire Wolds.

**Cottam A: a Romano-British and Anglian Settlement in East Yorkshire:** This archive concerns excavations and associated field-walking and metal-detecting at the site known as Cottam A. This Romano-British ladder settlement, to the north-west of the present-day Cottam Grange Farm, became the renewed focus of activity in the Anglian period.

**Cowlam: Anglian Settlement in East Yorkshire:** This archive concerns an evaluation at Church Farm, Cowlam, by M. Hummler, J.D. Richards and S.P. Roskams undertaken as part of a University of York student training programme. Magnetometer and resistivity survey revealed a number of features corresponding with a concentration of Anglo-Saxon metalwork recovered D. Haldenby.

**Somerset and Exmoor Historic Landscape Characterisation (HLC):** The HLC project for Somerset and Exmoor National Park (NP) was carried out between 1999-2000. The project developed a method of identifying the historic landscape character of the present-day landscape, defining the landscape through a series of attributes, primarily the morphology of field boundaries, as well as processes of enclosure and measurement of past landscape changes.

**Haltwhistle War Memorial Hospital Archaeological Building Recording (OASIS ID gbbuildi1-129159):** An archive of digital photographs from the recording of Haltwhistle War Memorial Hospital, Westgate, Haltwhistle, Northumberland, undertaken by GB Building Solutions.

**South Gloucestershire Aggregate Resource Assessment:** An Archaeological Resource Assessment of the Aggregates Producing Areas of South Gloucestershire was undertaken by Cotswold Archaeology in 2009 and 2010. The project was funded by English Heritage, through the Aggregates Levy Sustainability Fund (ALSF).

**Chalcolithic and Early Bronze Age Burials in Northeast England:** This project examined the evidence for Chalcolithic (or Terminal Neolithic) and Early Bronze Age mortuary practices in Northeast England (c. 2500-1500 BC) using the records of mortuary deposits from nineteenth and twentieth century AD excavations. The research involved the acquisition and analysis of detailed contextual information on 355 mortuary deposits from 150 different sites in the region. This archive consists of a dataset derived from existing publications and grey literature on these mortuary deposits, combined with summarised results from the osteological assessment or re-assessment of human remains from the period currently curated by Tyne and Wear Museums, and radiocarbon dating of selected remains from those collections.

**Osteological Analysis of Early Bronze Age human skeletal remains in Tyne and Wear Museums:** Much of our understanding of Early Bronze Age burials in the North



East of England is derived from excavations which took place in the late nineteenth and early twentieth centuries. In order to judge the reliability of existing information on the human remains recovered, and to provide additional detailed information, Michelle Gamble carried out osteological re-analysis of the human remains from several Early Bronze Age burials from the North East of England.

**Number 1 Poultry (ONE 94):** The site of 1 Poultry is located near the Bank of England, in the heart of the City of London. During the 1990s, one of the largest excavations in the City recovered a remarkable archaeological sequence from the 1st to the 20th century AD. This was augmented by findings from nearby sites at Bucklersbury, Lothbury, Lombard Street, 72-75 Cheapside, 76-80 Cheapside, 36-37 King Street and Mansion House.

**La Grava: The Archaeology and History of a Royal Manor and Alien Priory of Fontevrault:** The site of La Grava (known locally as Grove Priory) lies on the border between historic Bedfordshire and Buckinghamshire, south of Leighton Buzzard. Much of the core of the site and elements of its associated field closes was excavated in advance of quarrying between 1973 and 1985, making it one of the most extensive projects on a monastic/manorial site in the UK in the 20th century.

**Anglo-Saxon Graves and Grave Goods of the 6th and 7th Centuries AD: A Chronological Framework:** This archive makes material collected and produced under the English Heritage-funded project 'Anglo-Saxon England c. 570–720: the chronological basis' available as an online database as well as in downloadable form. It also contains figures which were too large to include in the publication.

**Quarry Farm, Ingleby Barwick:** The digital archive from an archaeological excavation conducted in advance of a housing development on the site of Quarry Farm, Ingleby Barwick, Stockton-on-Tees. The project established the presence of a Roman villa, with a winged corridor main building, associated villa buildings, and an extensive associated settlement and enclosure system covering an area of about four hectares.

**Combe Down Stone Mines:** Between 2000 and 2009 Oxford Archaeology carried out an archaeological recording action during the stabilisation of the post-medieval underground stone mines at Combe Down, Bath. The mines, which primarily date from the mid 18th to early 20th centuries, had begun to collapse endangering the stability of the settlement above and OA's works were part of a major engineering project which stabilised and ultimately in-filled the mine.

**Archaeological landscapes of east London: six multi-period sites excavated in advance of gravel quarrying in the London Borough of Havering:** Six multi-period archaeological sites investigated in advance of gravel extraction in the London Borough of Havering, between 1963 and 1997, form the basis of a landscape history of the locality. Significant monuments include an Early Neolithic ring ditch. The Bronze Age and Iron Age were periods of woodland clearance followed by intensive landscape utilization and settlement. Two fortified enclosures date from the period of the Roman conquest. A number of Roman farmsteads were occupied until the late 4th century; some of these sites were also inhabited during the Early Saxon period. Significant medieval remains included a farmstead and a manorial enclosure.

**Gloucestershire Historic Landscape Characterisation Project:** This archive contains the results of two historic landscape characterisation (HLC) projects. The first of these, undertaken between 1997 and 1999, covered the Cotswolds AONB

while the second, undertaken between 2000 and 2002, covered the remainder of the county of Gloucestershire together with the Wye Valley AONB in the counties of Herefordshire and Monmouthshire.

**(E) CONFERENCES & PRESENTATIONS**

<b>Date</b>	<b>Conference name and location</b>	<b>ADS staff member and presentation title if relevant</b>
<b>2014</b>		
22 July	<b>DPC Briefing Day: 'Virtualisation &amp; Preservation'</b> , Cambridge	Attended by Jenny O'Brien
15 July	<b>Parliamentary Office for Science and Technology/RCUK Exhibition</b> , Houses of Parliament, London	Exhibition stands by Catherine Hardman
15 July	<b>Archaeological Archives Forum, Working Group meeting</b> , Birmingham	Attended by Katie Green
14 July	<b>University of York Big Data Day</b> , York	Presentation by Catherine Hardman
12 July	<b>Digital Heritage 2014</b> , York	Attended by Judith Winters, Holly Wright, Julian Richards
11 July	<b>Heritage Jam</b> , York	Attended by Holly Wright
10-11 July	<b>Centre for Digital Heritage summer school</b> , York	Presentation by Katie Green and Catherine Hardman 'Research Data Management: Lessons learned'
9 July	<b>HER Forum</b> , London	Presentation by Catherine Hardman 'The HERALD project'
4 July	<b>SMA Committee meeting</b> , London	Presentation by Catherine Hardman 'Digital Archiving and information management with the ADS'
24 June	<b>DPC Planning Day</b> , York	Attended by Catherine Hardman
19 June	<b>The rural settlement of Roman Britain: Southwest Seminar</b> Exeter	Presentation by Tim Evans 'Digital Dissemination Strategies'
16 June	<b>NI Environment Agency</b> , Belfast	Presentation by Catherine Hardman 'Digital Archiving at the ADS'
4 June	<b>DADAISM kick off meeting</b> , York	Attended by Katie Green, Julian Richards, Michael Charno
4 June	<b>ARA AGM</b> , London	Presentation by Catherine Hardman 'SIPs, DIPs and other acronyms; the implementation of OAIS in the ADS'
4 June	<b>ALGAO HER Committee</b> , Birmingham	Presentation by Jo Gilham 'Introduction to HERALD'
30 May	<b>IfA Archaeological Archives Group AGM</b> , Birmingham	Presentation by Catherine Hardman 'Selection and retention of digital data'
22 May	<b>Derbyshire Museums</b> , Matlock	Presentation by Catherine Hardman
14 May	<b>TACOS</b> , York	Attended by Katie Green, Catherine Hardman, Judith Winters
6 May	<b>RCUK day for SMEs at STFC</b> , Didcot	Presentation by Catherine Hardman 'Open Big Data at the ADS'
25-26 April	<b>CAA2014</b> , Paris	Presentations by Michael Charno 'ADS Resources Online', Catherine Hardman 'Strategy for the future? Present practice in on line archiving of archaeological data', Judith Winters ' ' and Julian Richards 'The development of data sharing and open data in archaeology'

24 April	<b>ALGAO AGM</b> , London	Presentation by Jo Gilham 'Introduction to HERALD'
23-28 April	<b>SAA2014</b> , Austin, Texas	Presentation by Holly Wright 'Finding the context: A European perspective on representing and interpreting spatial data from archaeological fieldwork as Linked Open Data'
9-11 April	<b>IfA2014</b> , Glasgow	Presentation by Holly Wright 'Navigating Collaborative European Projects in Archaeology, IfA Conference'. Attended by Katie Green
7-9 April	<b>Digital Preservation Training Programme</b> , University of London	Attended by Jenny O'Brien
6 March	<b>Archaeological Archives Forum</b> , Belfast	Attended by Catherine Hardman and Katie Green
5 March	<b>Bedern Group Meeting</b> , Belfast	Attended by Catherine Hardman and Katie Green
5 March	<b>The rural settlement of Roman Britain: West Midlands Seminar</b> , Birmingham	Presentation by Tim Evans 'Digital Dissemination Strategies'
3-4 March	<b>ODCE Digital Data workshop</b> , Oxford	Presentations by Katie Green 'Digital data and the archaeological record', 'Tools for deposition: OASIS and ADS-easy' and 'Digital preservation standards'. Judith Winters 'Publishing data on the web: models and new directions' and 'Exploring online data publications'. Michael Charno 'Introduction to linked open data' and 'Linked data case study: the Roman Amphora Project'
25 February	<b>YOHRS Seminar</b> , York	Presentation by Julian Richards 'Forget about the carrots, we need more sticks' and Holly Wright 'Learning to Share: Has the rise of social media changed the way we think about sharing our research data?'
20 February	<b>Social Media Workshop</b> , Oxford	Presentation by Katie Green 'What to keep? How to keep it? Criteria for the appraisal and selection of social media outputs for digital archiving'
12-13 February	<b>Digital Past</b> , Llandudno.	Attended by Katie Green, Presentation by Judith Winters
30 January	<b>CDH Kick-off Meeting</b> , York	Presentation by Holly Wright 'European Projects at the ADS'
16-17 January	<b>NEARCH project meeting</b> , Gothenburg	Presentations by Michael Charno 'Mobile App Development at ADS' and Holly Wright 'Day of Archaeology in European context'
9-11 January	<b>EU/Africa meeting</b> , Casablanca	Presentation by Julian Richards 'Digital Data in archaeology: long term preservation and access – the work of the ADS'
<b>2013</b>		
10 December	<b>HER forum</b> , York	Attended by Holly Wright, Kieron Niven, Catherine Hardman, Jo Gilham, and Michael Charno

29 November	<b>DPC planning meeting</b>	Attended by Catherine Hardman
28-29 November	<b>LoCloud Meeting</b> , London	Attended by Holly Wright and Julian Richards
26th November	<b>FISH strategy meeting</b> , Edinburgh	Attended by Julian Richards
15 November	<b>Research Seminar</b> , York	Presentation by Julian Richards - 'Experimental Data Publication and Citation in Archaeology...as previously only seen at CERN'
11-13 November	<b>CHNT</b> , Vienna	Presentation by Michael Charno
11 November	<b>Worcestershire Museums and Curators Worcester</b> , Worcester	Presentation by Catherine Hardman
11 November	<b>Navigating Oceans of Data with MEDIN</b> , London	Poster Presentation by Katie Green
7-9 November	<b>ARIADNE Workshop</b> , Pisa	Attended by Julian Richards
30 October	<b>Roman Grey Literature Project</b> meeting, Southampton	Attended by Tim Evans
30 October	<b>AFC Seminar</b> , Cambridge	Presentation by Katie Green 'Data Management, Digital Preservation and the Archaeology Data Service'
29-30 October	<b>AHRC/EPSRC Science and Heritage Conference</b> , London	Presentation by Catherine Hardman - 'Sustaining the impact of UK science and heritage research'
28 October	<b>DataCite Client Meeting</b> , London	Attended by Catherine Hardman
22 October	<b>FISH, TWG</b> , London	Attended by Kieron Niven
6-18 October	<b>ODIN codesprint and first year conference</b> , CERN	Presentation by Catherine Hardman 'The ADS: Data preservation and persistent identifiers in UK archaeology'
7-8 October	<b>ARIADNE Infrastructure for Multimedia Data Workshop</b> , Pisa	Presentation by Jenny Ryder 'Multimedia at the ADS'
2-3 October	<b>Lidar Workshop</b> , Edinburgh	Attended by Kieron Niven
12-13 September	<b>LoCloud Project Workshop</b> , York	Organised by Holly Wright
4-8 September	<b>EAA</b> , Pilsen, Czech Republic	Presentation by Holly Wright 'You say tomato, I say pomodoro. How archaeological thesauri are coming together across the UK and Europe'. Presentation by Julian Richards 'The economics of archaeological research infrastructures'
4 September	<b>ARIADNE Data Management Planning and Online Resources for Archaeology Workshop</b> , Pilsen, Czech Republic	Presentations by Holly Wright 'ARIADNE: Examples of Archaeological Data Online'
3-4 September	<b>Research Data Management Forum</b> , Oxford	Attended by Katie Green
1 September	<b>DAI</b> , Data Licencing Workshop, Berlin, Germany	Presentation by Catherine Hardman 'Licencing at the ADS: the good the bad and the ugly'
20 August	<b>FISH Meeting</b> , York	Attended by Holly Wright and Kieron Niven
13 August	<b>DCC e-Infrastructures Workshop</b> , Warrington	Attended by Katie Green

## (F) PUBLICATIONS

- Hardman, C. and Green, K. (2014) 'Preserving Our Digital Heritage: The Work of the Archaeology Data Service at the University of York.' *Forum Yorkshire*. Vol 2. 115-120.
- Hardman, C. and Richards, J. D. (2013) 'Digital Curation at the Archaeology Data Service' in *Archäologie und Informationssysteme*. Niedersachsen. No. 42. 76-78.
- Moore, R., Hardman, C., Xia, L., & Richards, J. (2013) 'ADS easy: an automated e-archiving system for Archaeology'. In *Archaeology in the Digital Era. Papers from the 40th Annual Conference of Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton, 26-29 March 2012*, Earl, G., Sly, T., Chrysanthi, A., Murrieta-Flores, P., Papadopoulos, C., Romanowska, I., & Wheatley, D. (eds.), Amsterdam University Press: Amsterdam.
- Moore, R.H. and Evans, T.N.L. (2013) 'Preserving the Grey Literature Explosion: PDF/A and the Digital Archive' *Information Standards Quarterly*, 25 (3), 20-27.
- Niccolucci, F. and Richards, J.D. (2013) 'ARIADNE: Advanced Research Infrastructures for Archaeological Dataset Networking in Europe', *International Journal of Humanities and Arts Computing* 7.1-2, 70–88, 2013.
- Richards, J.D., K. Niven and S.Jeffrey (2013) 'Preserving our Digital Heritage: Information Systems for data management and preservation' in Ch'ng,E. and Gaffney,V. (eds.) *Visual Heritage in the Digital Age*, Springer-Verlag, London, 311-326.