



Archaeology
Data Service

internet
archaeology



Annual Report 2022-2023



Reiter tombstone of Insus son of Vodallus,
Lancaster - ES30. CSIR187 © Elusive Sculptures
<https://doi.org/10.5284/1090382>

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Director's Foreword

The ADS has had an outstanding year on multiple fronts, both at home and overseas. Firstly, within the UK we are now firmly established as part of UKRI's digital research services with agreed ongoing support from AHRC. This has allowed us to invest in additional staff and equipment, to launch our new website, and to undertake major improvements to our online deposit system, ADS-easy. We have also been busy on the *Towards a National Collection Unpath'd Waters* project, and have launched the maritime portal, which has brought together data from all the national heritage agencies for the first time. In the future we hope to undertake a significant role supporting AHRC in the development of RICHeS, the Research Infrastructure for Conservation and Heritage Science. Meanwhile another core activity,

ensuring the dissemination and long-term preservation of the digital data generated by commercial archaeological contractors, has further expanded. We have agreed an additional ten-year programme of work to complete work on Phases One, 2a and 2b of High Speed Two (HS2), which will run from 2025-2035. As archaeological contractors adopt the ClfA Dig Digital recommendations we are also seeing a much wider take up for our archiving services and our growing team of archivists have been kept busy. At the international level we have been able to maintain a strong leadership role, despite the disruption created by Brexit. The second phase of ARIADNE has been concluded but already the underlying portal architecture is being rolled out in other projects, including *Unpath'd Waters*, and in the coming years it will be adapted to provide a major

improvement to our search interfaces. Our COST Action SEADDA is coming to a close, having had significant impacts, and working with the European Archaeological Consilium (EAC) we have encouraged the provision of digital archiving in many countries. We have been awarded a highly competitive COST Innovators Grant to extend this work, and have also set up a not-for-profit association under Belgian law, the ARIADNE Research Infrastructure (ARIADNE RI), to support our presence in Europe and to maintain and develop the ARIADNE portal. We are also soon to embark on a new four-year collaboration, working with the major European Research Infrastructures in the Arts and Humanities to enhance access to open data archaeology and heritage. Exceptionally, the UK is eligible for direct EU funding under this scheme, as the Commission recognised that it was important that European researchers had access to world-leading research infrastructures, wherever in the world they are hosted.



Preservation Services

A constant theme has been the iterative improvement of the ADS Collections Management System to streamline workflows for the increasing number of collections and files deposited.

Reviews of policy documentation undertaken as part of CoreTrustSeal renewal and an internal DPC RAM review led to further improvements including new [Assessment and Appraisal](#), and [Deaccession and data disposal](#) policies.

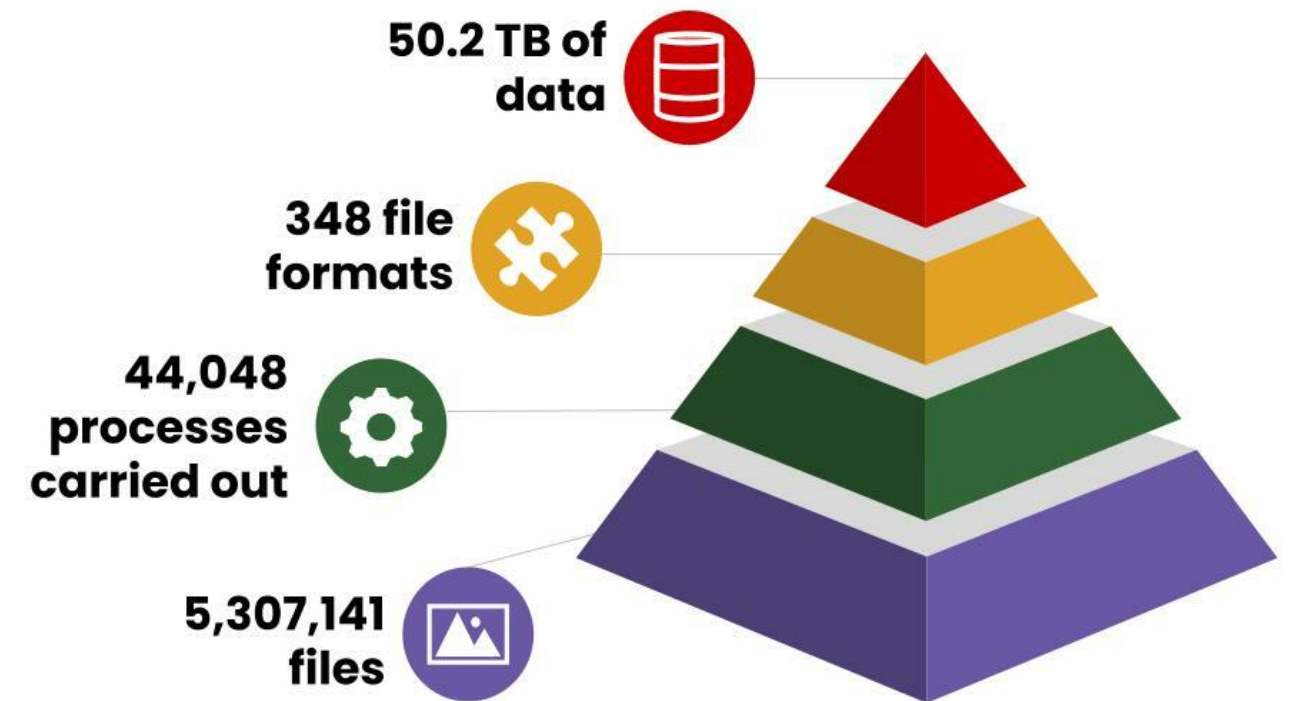
A key focus this year has been on maintaining a preservation watch on relevant software/hardware changes, especially via the [DPC Technology Watch reports](#), to assess any impact on ADS holdings. As a consequence, work has begun on a single Guideline/Instruction document for Pragmatic Audiovisual Preservation, incorporating actions from a review of the DPC Technology Watch Report. Work has begun on planning for a round of migrations, particularly on CAD files and the impact of numerous versions of AutoDesk. An assessment of holdings and versions has been completed and implementation of a large-scale automated migration is planned for the future.



Certification

The ADS submitted a renewal application of our CoreTrustSeal accreditation (2023-2025) in Spring 2023. The application is currently being reviewed, and we'll be sure to share the results with our users as soon as possible.

Archive Statistics



CATS Week & Continuing Development

Over the last year the membership of the Curatorial and Technical staff (CATs) has grown to record levels with new digital archivists joining the team. With the number of archives deposited also increasing it has become imperative that all staff are working to the same procedures and able to deal with a wide variety of archives and datasets. One solution has been to have designated 'archive sprints'

throughout the year where all archivists work in the same room and on similar types of datasets, for example geophysics. The team can thus share problems and solutions as they occur and identify improvements to procedures and policies. There have been five such sprints this year, with the team working through over 100 archives.

Collections Development

Collection Report

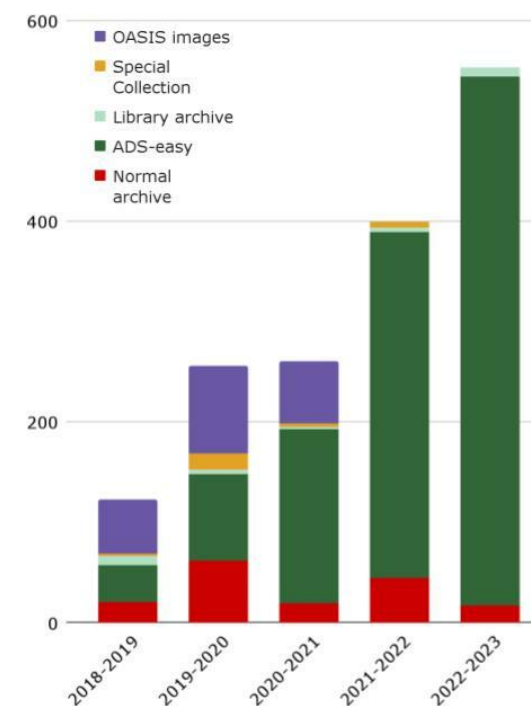
Once again ADS has had a record breaking year with 553 collections released but a staggering 1245 data collections deposited. This is 568 more data collections than were deposited last year. This record breaking year is a result of an 85% percent increase in usage of ADS-easy (820 deposits) and the deposit of 148 HS2 collections. In particular we have noticed a growth in the deposit of geophysics collections via ADS-easy, with over 100 such projects deposited in the last three months of the year and an increase in the submission of photogrammetry datasets. This year we have had 198 deposit enquiries for larger archives that would sit outside the standard ADS-easy deposit route.



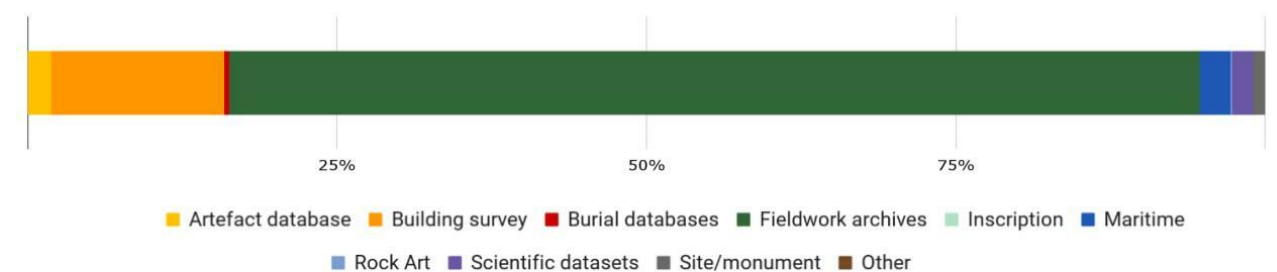
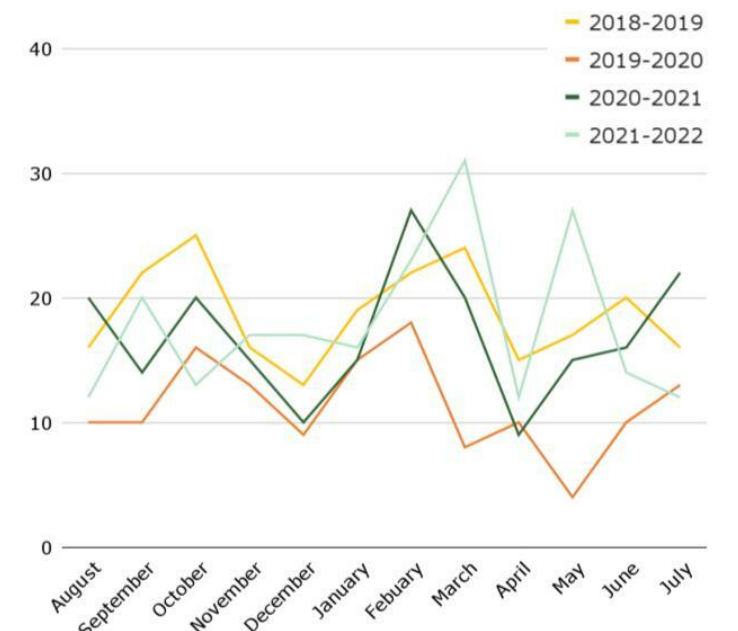
Collection Statistics



Deposits by Year



Enquiries by Year



Total Collections by Type

Collection Highlights

Excavation and Post-Excavation Data from Margetts Pit, Margetts Lane, Burham, Kent, 2009 <https://doi.org/10.5284/1106772>

In 2009 Wessex Archaeology excavated a number of Middle to Late Bronze Age inhumation and cremation burials, a Late Bronze Age field system and a substantial industry manufacturing armlets from mudstone. Analysis of this site will form part of a forthcoming publication in The Antiquaries Journal.



Shale armlet © Wessex Archaeology

Archaeological Excavations on the South Caucasus Pipeline Expansion Gas Pipeline, Azerbaijan 2013–2018 <https://doi.org/10.5284/1101054>



Aerial view of Kərpiclitəpə 2018 © David Maynard

From 2013–2018 an international team of archaeologists undertook excavations ahead of the construction of the SCPX pipeline, which crosses Azerbaijan towards Georgia. The archive consists of 49 excavation site reports and 6 specialist reports and accompanies an Internet Archaeology publication <https://doi.org/10.11141/ia.59.11>

HS2 Historic Environment Digital Archive <https://doi.org/10.5284/1113008>

As reported last year, the ADS continues to accession archaeological data from the HS2 project. This archive represents the initial landing page for datasets archived from the entire project including Phases One, 2a and 2b. As archives are accessioned by the ADS new releases will appear here.



© High Speed Two Ltd.

Discover Brightwater Project – <https://doi.org/10.5284/1106778>

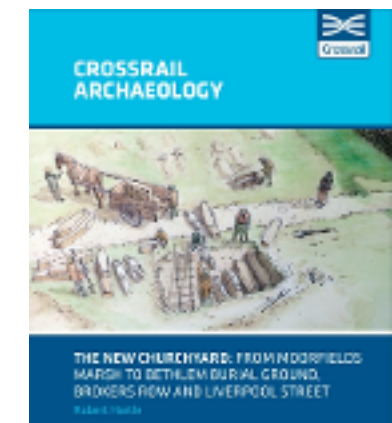
This photographic archive details a series of historic buildings recorded as part of the [Discover Brightwater Project](#), which was supported by the [National Lottery Heritage Fund](#). Located within the Skerne Valley, County Durham, these photographic surveys include a selection of farms, mills and Walworth Castle.



South facing elevation of Walworth Castle © Richard Carlton

Crossrail Archaeology Series <https://doi.org/10.5284/1107010>

This new library collection details the results of archaeological investigations conducted as part of the Crossrail project. These ten open access monographs include information about burial sites at Liverpool Street and geoarchaeological evidence on the lower Thames floodplain. The corresponding ADS archives are held here <https://doi.org/10.5284/1055125>.



Defying Convention: Devising New Approaches to Heritage Values in Valletta, Malta 2021–2022 <https://doi.org/10.5284/1106986>

This collection comprises a series of audio-visual data from interviews undertaken by the 'Defying Convention: Devising New Approaches to Heritage Values in Valletta, Malta' project. The project explored heritage value and significance from, or associated, with the city of Valletta, the historic capital of the Maltese Islands.



St. Frederick's Street Valletta. © Joshua de Giorgio

Featured Collection

Rapa Nui Landscapes of Construction Project

The [Rapa Nui Landscapes of Construction Project](#) was an [AHRC](#) (Arts and Humanities Research Council) funded collaborative project between the [UCL Institute of Archaeology](#), the [University of Manchester](#), the [University of Bournemouth](#), the Chilean National Parks Authority, Rapa Nui and the [Museo Antropologico, Rapa Nui](#).

The landscape of Rapa Nui (or Easter Island) is best known for the more than 1000 monumental statues known as moai, built by the ancestors of the Rapa Nui people. Despite its small size and remote location, Rapa Nui receives international attention from archaeologists and other researchers. Today, the island is protected as both a [UNESCO World Heritage Site](#) and a national park.



Trachyte moai (head)



Aerial view of Trench 1A/B

This project aimed to develop new interpretations for the organisation and meaning behind the construction of the moai statues, and to explore associated features such as statue quarries, transport roads, and ahu, the platforms on which these monuments stand. The project included a series of engagement activities working alongside the Rapanui National Parks (CONAF) and the Orkney Research Centre for Archaeology (ORCA), University of Highlands and Islands. The project ran from 2008–2015 and included a series of fieldwork seasons utilising different investigative methods including excavation, geophysical survey, 3D laser scanning, photogrammetry and aerial photography.

The [recently published archive](#) contains an extensive array of downloadable



Aerial photograph of Puna Pau

material that is available to reuse under a Creative Commons Licence. The [download](#) section includes:

- Project reports and publications: yearly reports produced by the project (in both English and Spanish) and a selection of publications.
- Excavation data: from excavations at Puna Pau in 2009, 2012 and 2013 including context registers, plans and context sheets.
- Survey data: raw geophysical survey data and plots of enhanced data, raw topographic survey points, walkover survey data.
- Project GIS: trench locations at Puna Pau and geophysical survey locations.
- Photographs, video and audio recordings: Working shots, finds, excavation photographs, panoramic images, survey photographs, aerial imagery, interviews.
- 3D data, including photogrammetry.



Skull cave stone located at MAPSE, Museo Rapa Nui

Image credits - © Aerial-Cam Ltd, Bournemouth University, Orkney College, University of the Highlands and Islands, University College London

Featured Collection

Feeding Anglo-Saxon England (FeedSax): The Bioarchaeology of an Agricultural Revolution

The 'Feeding Anglo-Saxon England (FeedSax): The Bioarchaeology of an Agricultural Revolution' project was supported by the [European Research Council](#) (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement no. 741751). From 2017 to 2022, the [FeedSax](#) project, based at the Universities of Oxford and Leicester, assembled and interrogated a vast bioarchaeological dataset, providing a new perspective on this pivotal aspect of early medieval history.

This collection presents data in a searchable project database and map of sites, alongside an exported SQL database, spreadsheets and reports.

The [FeedSax Digital Archive](#) hosted by the Archaeology Data Service contains 123 files, including 26 radiocarbon dating reports, a technical paper on stable isotope variability, palynological syntheses, 215 pages of archaeobotanical analysis, and '[Haystack](#)': the project's core database comprising archaeological, archaeobotanical, zooarchaeological,

radiocarbon, and crop and animal isotope data. Haystack can be queried through an interactive map-based interface and sits alongside the complete raw datasets, which are also available to download.

Alongside this archive, an accompanying paper was published in *Internet Archaeology*. This data paper provides further information about the vast, multi-faceted archaeological dataset created as part of the project as well as its reuse potential to support further research.

McKerracher, M. et al. 2023 Feeding Anglo-Saxon England: a bioarchaeological dataset for the study of early medieval agriculture (Data paper), Internet Archaeology 61. <https://doi.org/10.11141/ia.61.5>

In addition to this archive, the FeedSax project has also created the [FeedSax Photographic Archive](#), hosted by the University of Oxford's Sustainable Digital Scholarship service. This database contains 6,599 microscope photographs of charred grains, constituting both a record of destructively analysed material and a resource for future geometric morphometric studies.

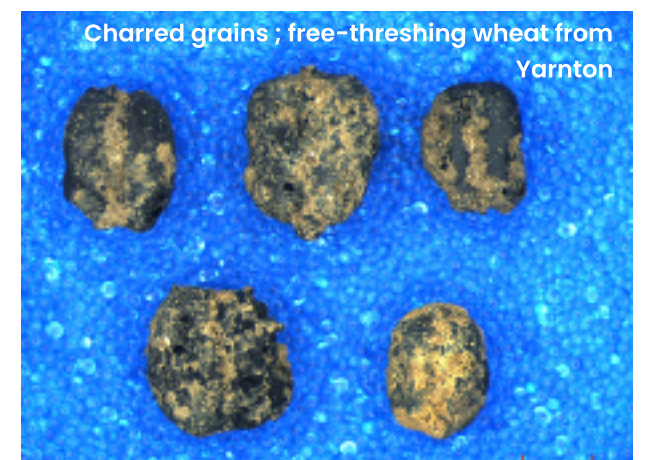
Image credits - Feeding Anglo-Saxon England project



Botanical survey in the open fields at Laxton, Nottinghamshire.



Taking peat/sediment samples using a Russian corer at Daisy Banks Fen, Oxfordshire



Resource Delivery

This year our key mechanisms for Resource Delivery, ArchSearch, Archives, Library, and Internet Archaeology continue to be well-used with nearly 725,000 visitors across all our resources. Our Archives application now provides access to over 3000 data rich archives and the ADS Library currently holds 136,831 journal articles and reports.

The focus year has been to better present and leverage the rich metadata supplied by deposits and augmented by ADS Staff as part of the new [Cataloguing Policy](#). Work is nearly complete on a new Collection metadata page that will better address the FAIR principles, meet accessibility requirements, and promote reuse and citation of ADS data.

The 1986 mural 'The Sad Tale of Pierrot' by Timothy Plant © The Archaeology Co.

<https://doi.org/10.5284/1102148>



Website User Statistics



723,953

Visitors



1,708,672

Page views



303,477

Downloads

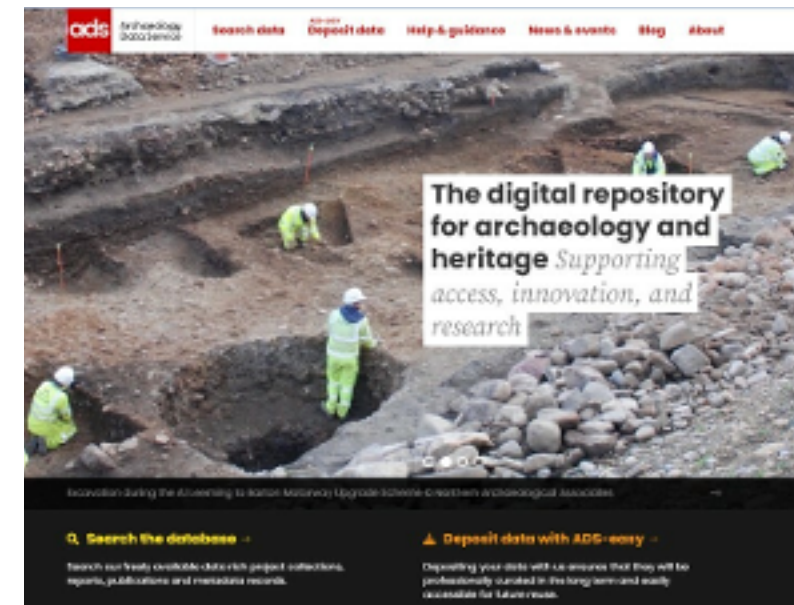
New ADS Website

The new ADS Website was launched this year on Monday 6th February 2023. It represents the culmination of two years of hard work by ADS staff and our website design team at Error Agency. Generously funded as part of the Arts and Humanities Research Council (AHRC) research infrastructure programme, the website has been redesigned to provide a more intuitive user experience and a clearer design to allow easier access to all the resources and information that the ADS offers. As part of this process much of the content of the website has been refreshed. A recent [blog post](#) details the changes and forthcoming features.

Highlights of the new website include:

- A more intuitive design making it easier for users to access all ADS resources.
- A more responsive website that can be displayed on different types of devices including tablets and smartphones.
- A News and Events section, a single place for all the latest news and forthcoming events from the ADS.

- Better links to our partner journal, Internet Archaeology, which can be accessed directly from the homepage.
- A redesign of our Instruction for Depositors (formerly the Guidelines for Depositors) to clarify our requirements for depositing data with the ADS.



Feedback on the new design has been positive. The website represents the first stage in an ongoing reinvigoration of ADS resources and services, with updates to both ArchSearch and ADS-easy currently in development.

Open Access Archaeology Fund

Established by Internet Archaeology and ADS in 2016, the [Open Access Archaeology Fund](#) was set up with the aim of supporting the publishing and archiving costs of researchers who have no means of institutional support. This year, thanks to kind regular and one-off donors, a further £1000 has been raised, which will enable us to support more applicants. Since its inception, the fund has raised almost £7000, which so far has been used to support four ADS digital archives and four Internet Archaeology articles.

We recently asked recipients how they felt about the opportunities the fund gave them.

"The Open Access Archaeology fund...helped me to publish my first paper. That was a huge motivation to keep on going. I hope one day I can give back to the fund, so that they can help someone else to have the same opportunity that I did."

Joel Santos (2022 applicant)

Donate or get Support!

Want to donate? You can donate to the Open Access Archaeology Fund here (one off donation or regular giving): <https://intarch.ac.uk/about/donate.html>

Need support? See our recent [blog post](#) for details on how to apply to the fund for support.

" [The fund] enabled the construction of the interface web-page of the digital archive, facilitating the exploration and re-use of the digital images deposited in ADS – something which would not have been possible to fund otherwise."

Grazia A. Di Pietro (2019 applicant)

Internet Archaeology Update

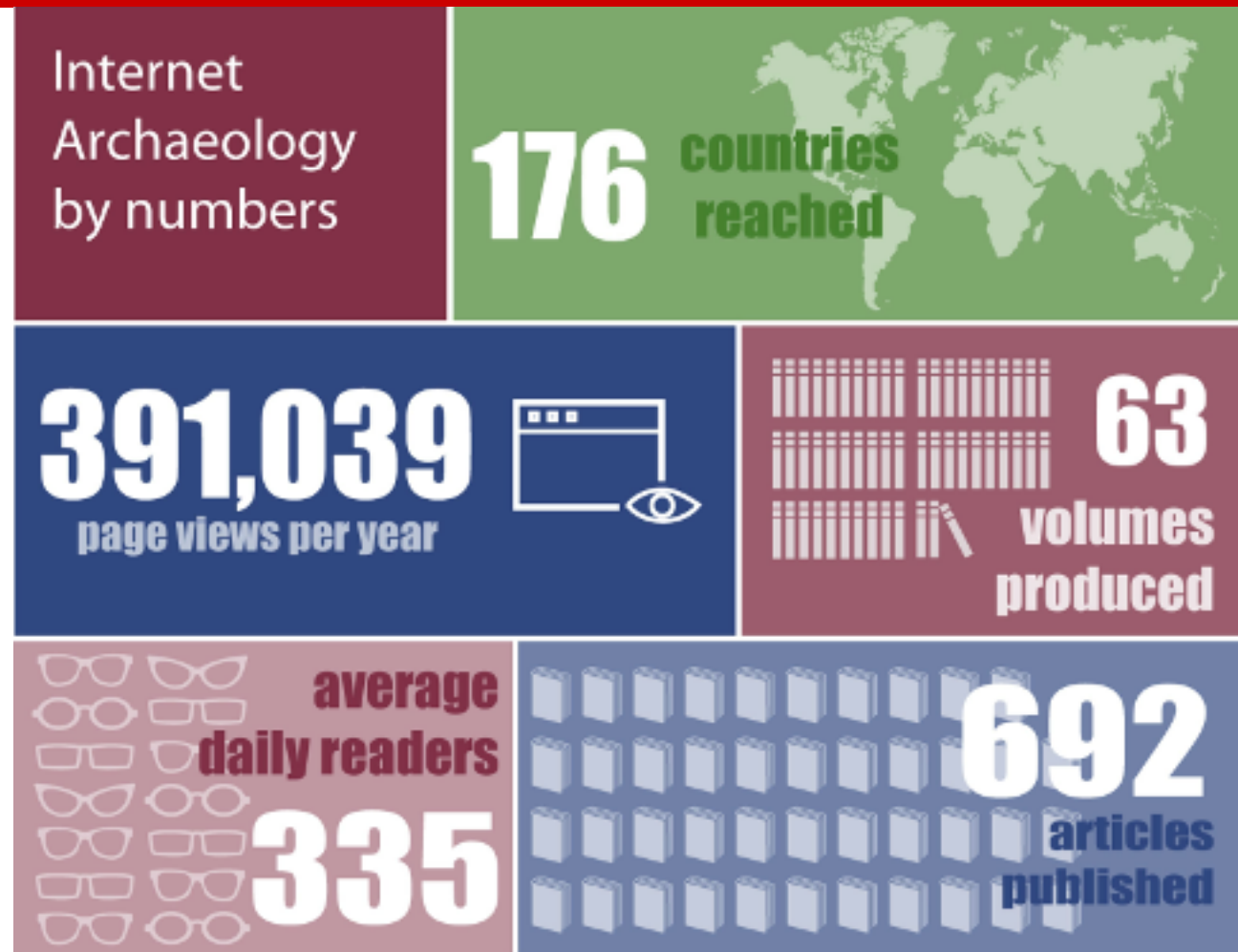
Over the course of the last 12 months, [Internet Archaeology](#) has published a further three issues (61, 62 & 63) – a total of 34 articles. The journal continues to be the publication venue for the [European Archaeological Council](#) (EAC) Heritage Management Symposium proceedings. This [blog](#) post details the continued work of Internet Archaeology on EAC Symposium proceedings. This year's issue was on the theme of [Archaeology and the Natural Environment](#), authored by archaeology and heritage managers from across Europe. We have also published further outputs and analyses from the COST Action SEADDA networking project (see Research & Development) to supplement the 2021 'state of the art' themed issue. More information and some article highlights can be found in this recent [news post](#) on the ADS website.

Internet Archaeology is well placed to sit at the intersection of the academic and commercial archaeology 'worlds' and we are seeing a marked increase in enquiries and proposals from the sector. In the last year, the journal has published 4 articles by authors from commercial units (CFA Archaeology, Wessex, Landsker Archaeology & Archaeology South-East).



Preserved Roman buildings in Aguntum (Austria) present their new look after the planting of wildflowers typical to the Alpine Region. From Picker, A. 2023 Introduction – Archaeology and the Natural Environment, Internet Archaeology 62. <https://doi.org/10.11141/ia.62.16> © Oliver Stöhr

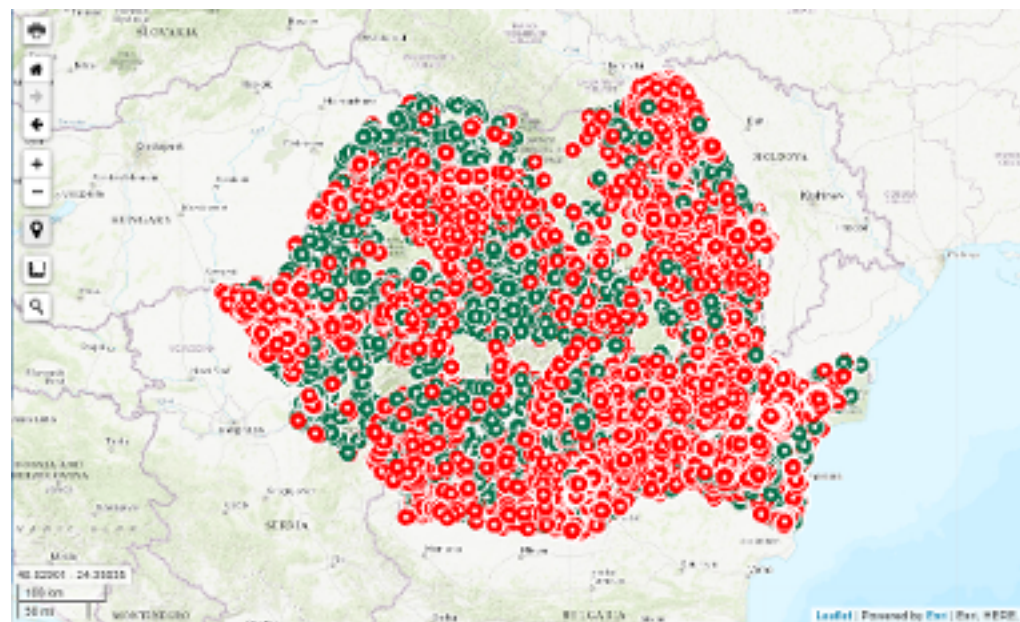




The journal is also working closely with ADS on aspects of HS2 dissemination, with the intention to publish both data papers (to act as a window onto respective digital archives) and longer

articles. The groundwork for these publications has been laid and we hope to start releasing them within the next few months when the archives are also ready.

The National Cultural Heritage Map Server . From Streinu, M. and Şandric, B. 2023 The State of the Art of Digital Archiving in Romania, Internet Archaeology 63. <https://doi.org/10.11141/ia.63.2>



The ancient theatre, National Park of Butrint National Institute of Cultural Heritage, Albania. From Miziri, E. et al 2023 Butrint National Park 'Integrated Management Plan' – Combining Natural Park with Cultural Heritage, Internet Archaeology 62. <https://doi.org/10.11141/ia.62.2>

"This graphic novel will be encouraging to other archaeologists and scholars of the past who wish to apply their creative imaginations to the material they unearth in archives, in the ground, and in the landscape. Students or interested readers who wish to refer to an imaginative and yet accurate representation of how archaeologists work may refer to the parts of this volume which illustrate that work. Finally, scholars of the industrial period may find the volume useful in imagining the past streetscape of Sheffield, as illustrated from archival and archaeological evidence."

Katherine Fennelly on the Hollis Croft publication and archive, review in European Journal of Archaeology 26 [doi:10.1017/eaa.2023.11](https://doi.org/10.1017/eaa.2023.11)

Article Highlights

On the Discovery of a Late Acheulean 'Giant' Handaxe from the Maritime Academy, Frindsbury, Kent by Letty Ingrey, Sarah M. Duffy, Martin Bates, Andrew Shaw and Matt Pope

<https://doi.org/10.11141/ia.61.6>

During a programme of planned archaeological work ahead of construction of a new school, a very large flint handaxe was found in fluvial deposits thought to date from the MIS 9 interglacial. It is currently the 3rd largest handaxe known to be found in Britain. Its size and distinctive symmetrical elongated tapering tip is typical of a type known as a ficron, a form that may have had a specialised function in early human society, or relate to specific human groups, or even human species. This article, released to widespread international television and news coverage, presents the metrical data for the artefact and some initial comparison with similar artefacts from the British Palaeolithic and links the reader to the data in a digital repository.



Forthcoming:

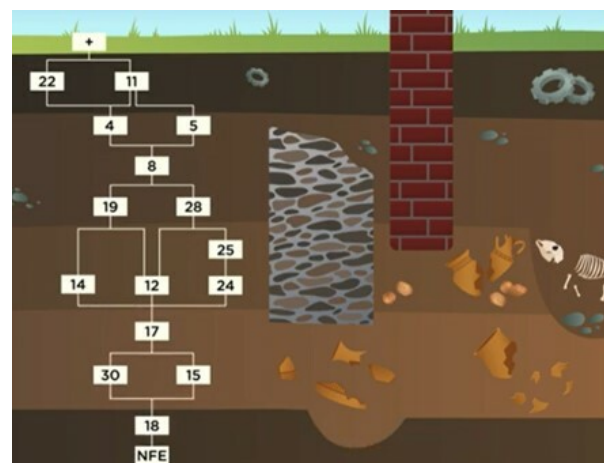
Mints not mines: a macroscale investigation of Roman silver coinage

Going back to re-analyse their own data from the original digital archive released in 2015, the authors propose that lead from the west Mediterranean was used exclusively to refine silver at mints in the West, and that an unknown lead supply (possibly from Macedonia) was mixed with western lead. The paper focuses on identifying mints rather than geological sources using compositional analysis.

Stratigraphic Analysis and The Matrix: connecting and reusing digital records and archives of archaeological investigations by Keith May, James S. Taylor and Ceri Binding

<https://doi.org/10.11141/ia.61.2>

This article presents outcomes from The Matrix project, which has looked at problems caused by the lack of standardised approaches to digital archiving of archaeological data using the case study of stratigraphic and phasing data. The stratigraphic matrix analysis prototype software tool 'Phaser' is also introduced alongside an animated explainer on how archaeologists use stratigraphy.



Forthcoming:

A Medieval Drawbridge Pit and the Stories it Tells Us, Excavations at Pontefract Castle, 2019-2020

Wakefield Metropolitan District Council commissioned [DigVentures](#) to undertake a programme of archaeological investigations as part of the Gatehouse Project, a community-focused archaeological research project based at Pontefract Castle, West Yorkshire. The social impact of the archaeological investigations, including project outcomes for heritage, for people and for the community, have been analysed and published [in an earlier article](#) in the journal. This new article will focus on the archaeological evidence recovered during the excavations, and conclusions drawn about the construction and chronology of the gatehouse.

A North-Western Habitat: the Paleoethology and Colonisation of a European Peninsula (a comprehensive analysis of excavations in Pin Hole Cave, Creswell Crags) by Rogan D.S. Jenkin

<https://doi.org/10.11141/ia.61.1>

This article (and associated digital archive) were in preparation when the author passed away. Despite many publications dealing with the Creswell Caves more broadly, Pin Hole Cave has not previously been comprehensively published so getting this work into the public domain was important to Rogan who, as a former curator, had dedicated much of his life to Creswell. While some planned changes were not possible, we have endeavoured to complete it to the best of our ability in the hope that it can still be a fitting tribute to the man and his passion for the archaeology of Creswell.

A Quick Buck: An Early Licensed Whisky Distillery at Blackmiddens Farm in the Cabrach by Darroch D.M. Bratt and Peter Bye-Jensen

<https://doi.org/10.11141/ia.61.3>

Blackmiddens/Buck is the only farm distillery excavated in the Highlands and Islands. The site represents a short-lived period of distilling in the Scottish Highlands in which whisky-making operated in a legitimate commercial capacity as a complement to a larger agricultural unit. The research published in this article (complete with 3D model) give insight into this short but vital transitional phase in the history of whisky-making in the region.

Blackmiddens during excavation from the south in 2021 © Peter Bye-Jensen

Resource Discovery

In 2022/23 work has continued on planning for a replacement for the current [Archsearch catalogue](#). As reported last year, the replacement will be based upon a local customised instance of the [ARIADNE Portal](#), which was successfully used for the Unpath'd Waters interface discussed elsewhere in this report. This new interface will create a single point of entry for users to cross-search ADS Archives (rich data collections) and the holdings of the ADS Library (journal article and grey literature). Following the ARIADNE approach it will be based around a map, as well as allow users to search on keywords, data creators, and time periods. It is anticipated that this



The Keep at Hedingham Castle
© Colchester Archaeological Trust

interface will be deployed over the 2023/24 reporting period. Current search interfaces for ADS Archives and the ADS Library will remain in place, with the Library resource currently undergoing some key improvements requested by depositors and users.

A facet of this work has been to review a pilot new approach to resource discovery. An [API for OASIS](#) - funded through Historic England's HIAS Programme - allows users of the system programmatic access to records. We will be undertaking a review of uptake later this year, as well as a separate survey to assess the need for more APIs for ADS holdings.

- 4
OAI PMH Targets
Archives, Articles, Journals, OASIS Reports.
- 9
Web Mapping Services in Heritage Gateway
Excavation Index, Exeter, Greater London, Historic Milestones, Lake District, Merseyside, Parks & Gardens, Yorkshire Dales, Web Mapping Service.
- 11
External Aggregators
Ex-Libris, EBSCO, ARIADNE, EUROPEANA, UKRDDS, MEDIN, DES, Heritage Gateway, The Keeper's Registry, MOLA, BBC, The National Archives Discovery Portal.
- 1.5m
Linked Data Triples
Roman Amphora (5648 triples), Archives (1,559,912 triples), Chartex (76,168 triples).



On 31 December 2022 the second phase of ARIADNE was brought to an extremely successful conclusion, following a gala dinner in Florence earlier in the month. The highlight of the project has been the further development and extension of the [ARIADNE portal](#), which now provides access to almost four million archaeological resources, covering four continents, over forty countries, and ranging from the earliest hominids to the archaeology of the Cold War. The data aggregation task was led by the ADS, based on our experience in earlier projects gained over two decades. The final review report from the European Commission concluded that the "Project has delivered exceptional results with significant immediate or potential impact". To ensure that the portal is sustained and that further data can be added, the ADS has taken the lead role, working with the University of Florence, to found a not-for-profit membership association, established under Belgian law as an *Association Internationale sans but lucratif* (or AISBL). Julian Richards and Franco



Niccolucci signed the statutes for the new ARIADNE Research Infrastructure (ARIADNE RI) in Belgium in November 2022. Over 30 former ARIADNE partners and associate partners have already joined, and the ARIADNE RI will hold its first general meeting in September 2023.



Prof Franco Niccolucci, Dr Paola Ronzino and Prof Julian Richards at the ARIADNEplus Gala Dinner, Florence, 2022

Advisory Services

This year ADS staff have continued to actively promote best practice in digital archiving and data management, and provide expert advice to our user groups through attendance at both international conferences such as EAA and CAA

and closer to home through various forums. The ADS continues to undertake outreach activities across the world and staff at the ADS have delivered a number of training events over the last 12 months.



Memberships

List of committees and groups in which the ADS has a representative:

- Archaeological Archives Forum
- ClfA Information Management Group
- Community Standards for 3D Data Preservation Forum
- Digital Antiquity Board of Directors
- DPC Bit List Council
- DPC Research and Practice subcommittee
- Historic Environment Information Resources Network / Forum on Information Standards in Heritage
- MEDIN Communications Group
- MEDIN Historic Environment Data Archive Centre
- World Data System

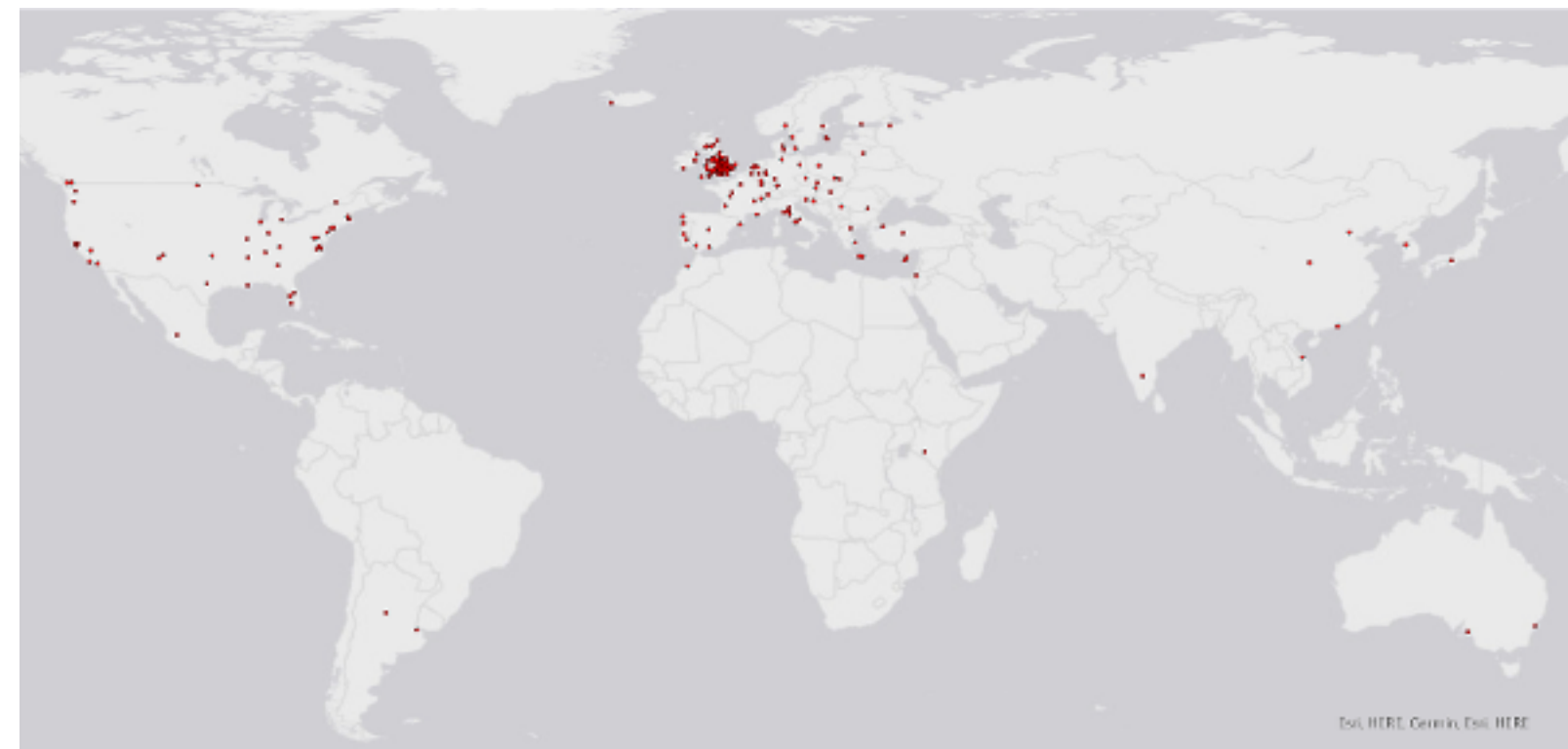
Outreach

The ADS continues to undertake outreach activities across the world. A highlight this year was the [Linked Pasts conference](#), which was hosted in November 2022 by the ADS and the COST Action [Saving European Archaeology from the Digital Dark Age](#) (SEADDA) at the University of York. The Linked Pasts symposium brings together scholars, heritage professionals and other practitioners with an interest in Linked Open Data as applied to the study of the ancient and historical world.

ADS Staff also presented at a number of conferences across Europe. These

included the [Computer Applications in Archaeology](#) (CAA) International Conference in Amsterdam, Chartered Institute of Archaeologist (ClfA) conference in Nottingham and both the European Association of Archaeologist (EAA) conference and the [Archives and Records Association](#) (ARA) conference in Belfast. Many of these presentations are available to download from the [ADS website](#).

The map below shows the locations of events that the ADS has attended since 1998. A full list can be found on our [Outreach page](#) of the website.



Training Events

Staff at the ADS have delivered a number of training events to our users over the last 12 months. In November and December 2022 we hosted a series of participants from across the UK and Europe as part of the ARIADNEplus Transnational Access Scheme. This Winter School, delivered online over four weeks, was divided into four thematic sessions including Introducing the Archaeology Data Service, Data Management, Digital Preservation and Quality Assurance & Data Reuse. A second online session was held for staff members for the British Institute of East Africa in February and March of this year. The training course introduced BIEA staff members to current digital preservation and data management best practices for archaeological data

and to help them apply these practices to BIEA collections.

In July, we visited Canterbury Christ Church University to deliver a workshop on data management for researchers in the School of Humanities. This half day workshop provided researchers with a comprehensive understanding of data management practices and how to apply them to their own research projects, including how to create a data management plan for research funding applications. This course will be rolled out to a wider audience as part of our commitment to encourage best practice in data management for archaeological researchers across the UK. Further details on these courses will be coming soon.



Developing Standards

As highlighted in last year's annual report, the new [Instructions for Depositors](#) have been undergoing development as a key component of the ADS website redesign. This year has seen the public release of these new Instructions, which will provide visually refreshed, clearer, and more streamlined information for those wishing to deposit data with ADS.

Internally, curatorial and collections staff have continued to review and revise ADS ingest and archiving procedures and to look at improving our working practices. Regular monthly meetings have facilitated this process and allowed input from our growing number of curatorial staff. A recent outcome of this process has been a reassessment and change to how we archive and provide access to tabular data such as spreadsheets and databases. Behind-the-scenes work has looked to develop greater standardisation of the applications used by ADS staff to work with data and work has continued in improving our approach to fixity and data integrity checking, with ADS staff sharing our approach with colleagues in NERC data centres in June 2023.

Wider developments focused on how

ADS disseminates data have seen a recent 'sprint' to update the underlying web page templates used to display collections and their associated metadata. This process has involved incorporating greater functionality into the templates, enhancing existing viewers like 3DHOP with the capability to show layered 3D models as well as adding elements such as audio playback, keyword filtering, and greater structuring to the standard 'download' pages. Additionally, a redesigned collection metadata page utilising the new website style will soon be available allowing clearer and more extensive access to collection metadata. Look out for these new pages in the coming months.

In terms of external developments, the end of last year saw the release of the publication from the previously-reported collaboration involving ADS staff (amongst others) and the University of Bristol Theatre Collection. The [guidance document](#) on 3D data resulting from the three-day 'book sprint' is now available online alongside a [blog post](#) documenting the sprint itself.

The end of 2023 also saw ADS curatorial staff participate in a second

[SEADDA COPTR edit-a-thon](#) looking at documenting formats and tools relating to processing and archiving geospatial data. Externally ADS continues to draw on expertise regarding data standards, with staff both attending and presenting at a number of DPC events over the last twelve months. ADS involvement with DPC has continued to grow and, from the start of 2023, ADS staff have taken up positions both on DPC's [Research and Practice sub-committee](#) and on the [Bit List Council](#). ADS staff have also been involved in the focus group for a forthcoming DPC guide on Digital Preservation Documentation (to be released in September 2023).

Curatorial Policy

Following on from last years' work on enhancing the CMS and implementing a policy on cataloguing, this years' focus has been visualising our metadata to understand gaps and biases. This has led to the creation of an internal tool called Collections Care, which provides a Dashboard style view of Collections metadata according to defined criteria, as well as a customised search interface. This interface allows the Curatorial team to ensure that all data released meets a minimum standard as defined in the Cataloguing Policy. Work in forthcoming years will focus on allowing batch-updating of records.



Supporting Reuse

As an advocate for the FAIR principles for data stewardship, the ADS continues to explore the reuse of data held within our collections. We now host more than 3000 collections and more than 100,000 records through OASIS, however, the levels of reuse of these vast datasets remains low. This issue of data reuse is challenging, however, we continue to participate in opportunities to research this important topic, including this year, as a key partner in the Transforming Data Reuse in Archaeology ([TETRARCHS](#)) project (discussed below).

We also continue to take an active part in Working Group 4: Use and Re-Use of Archaeological Data within the SEADDA Cost Action and develop new projects in the UK to make previously inaccessible datasets more FAIR. Moreover, we have reinvigorated our communications strategy to explore new ways to disseminate knowledge about both new and pre-existing collections that could be reutilised in a number of interesting and different ways.

Communications Review

A full review of ADS communications channels was undertaken in January 2023. This review examined all current formal interaction channels with external audiences and focused on reviewing existing communication strategies and methods, and offering recommendations to support the ADS' priorities for 2022-2023. The recommendations from this review are in the process of being implemented including utilising the new ADS website as a conduit for news and events information, reorganising existing methods and internal documentation and streamlining processes for our various communication methods.

These methods include the reinvigoration of the [ADS newsletter](#). The communication strategy will be reviewed on a biannual basis to improve methods and appeal to new audiences.

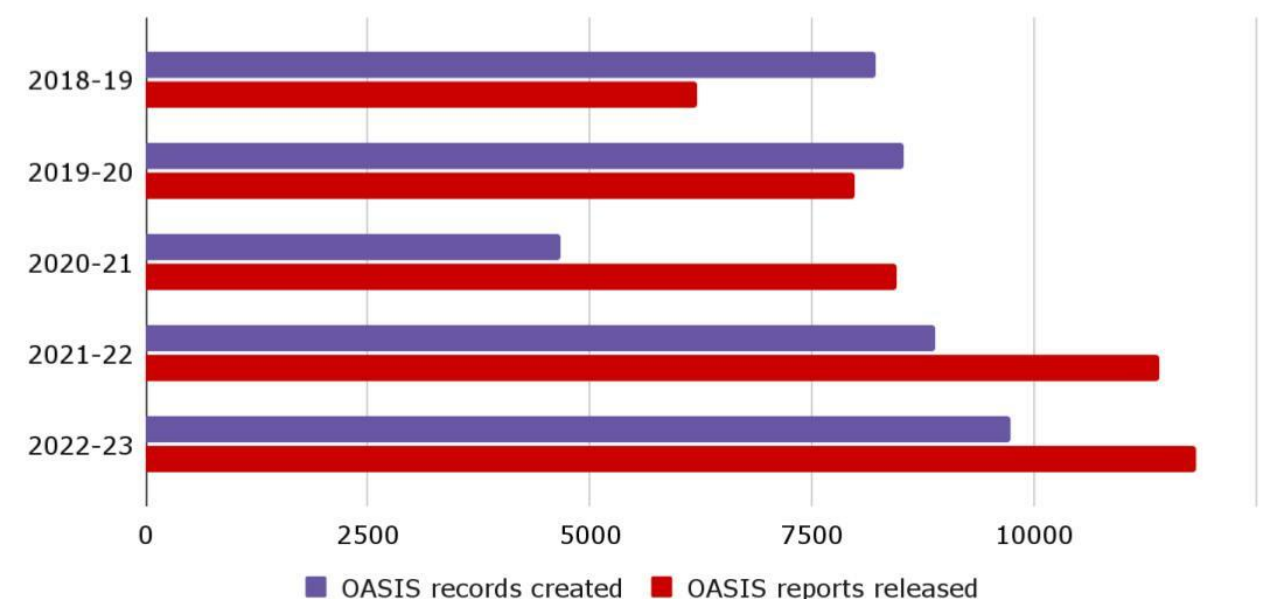


OASIS

Between November 2022 and January 2023 all Scottish OASIS records were migrated over to the new system, and in March 2023 the last elements of the old OASIS application and database were retired. There are now over 116,000 records within the OASIS database for England and Scotland, with an average of 750 new records being added every month. There continues to be a considerable number of reports being released into the ADS Library, with over 70,000 OASIS derived reports publicly accessible. There has been a renewed



focus on promoting OASIS reports within the Library, with a new search interface expected to be deployed later in 2023.



"A huge well done to you and your team for the big tidy up you've been performing in the background. A monster task! The ADS grey literature library is a wonderfully useful resource for the sector, so I hope the effort feels worth it"

ADS Library User

Research & Development

Research and development remains at the core of ADS activity, and helps maintain our international leadership in digital preservation and reuse through participation in both UK and International collaborative projects. ARIADNEplus has now concluded and SEADDA will finish shortly. However, we are delighted to have been awarded two new grants which will continue their work. Our proposal for SHADE was one of only five COST Innovators Grants to be funded, across all disciplines, and will run for 12 months from November

2023. We are also delighted to have been awarded European Commission funding for a new four-year project: ATRIUM (Advancing FrontTier Research In the Arts and hUManities) in a proposal led by DARIAH and incorporating CLARIN, OPERAS, and the ARIADNE RI, as the four core key research e-infrastructures for the Arts and Humanities. ATRIUM will commence in Jan 2024, with the ADS leading on Transnational Access training, and incorporation of archaeological data types.

Rewilding Prehistoric Britain

Work has continued on the [Rewilding Later Prehistoric Britain project](#), funded through the UKRI Future Leaders Fellowships programme and led by Anwen Cooper from the University of Cambridge and Oxford Archaeology. The ADS has built a database for the project team to record

palaeoenvironmental data relating to Bronze and Iron Age compiled from legacy records held by archaeological units. The database will be publicly available at the end of the project. Work has also continued on developing a specialist palaeoenvironmental recording module for OASIS.



Western side of Hambeldon Hill from the floodplain of the River Stour. © Cambridge University Collection of Aerial Photography & Historic England



Funded by the Collaboration of Humanities and Social Sciences in Europe ([CHANSE](#)) initiative over three years, Transforming data rE-use in ARCHaeology ([TetrARCHs](#)) began in October 2022. The project is led by Museum of London Archaeology (MOLA) and the ADS. Other partners include Vilnius University, Lithuania; Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti, Slovenia; Lund University, Sweden; the University of Antwerp and Ghent University, Belgium.

TETRARCHs is assessing effective forms of reuse, both for archaeological researchers and for wider audiences, using compelling narratives based more directly on archaeological data, looking at the entire archaeological

workflow, starting with data capture in the field. TETRARCHs is exploring archaeological data collection at different scales: from whole landscapes, to single sites, to individual objects using airborne LiDAR, 3D scanning, digital field drawing and photography. The ADS is playing a significant role in TETRARCHs, with contributions across the project, and leading the workpackage on Repository Experimentation.

The ADS organised the kick-off meeting in York in October 2022 and a full-day session at the CAA conference in Amsterdam in April, 2023. ADS staff attended and contributed to the first CHANSE meeting in Estonia in June, 2023. ADS staff also participated in the experimental fieldwork undertaken at the site of the primary TETRARCHs case study; the Neolithic site of Toumba Serron in northern Greece in July, 2023.



TETRARCHS partners in front of King's Manor, at the project kick-off meeting in November, 2022.



We are now in the final year of the COST Action [SEADDA](#); a four-year networking project funded by the COST Association. The final year has been very active, including organising national workshops in France, Romania, Turkey and Serbia, with a final workshop scheduled for Norway at the end of August 2023. Our final project meeting was graciously hosted in Brno by the Institute for Archaeology of the Czech Academy of Sciences in June 2023. We were also able to add to the 26 contributions in the special issue in *Internet Archaeology Digital Archiving in Archaeology: The State of Art*, with contributions from a further six countries, expanding the baseline of information about digital archiving around the world. A range of additional

publications are forthcoming, including the results of the survey work on reuse, a synthesis of the *State of the Art* publications, a documentation and comparison of the workflows of the established digital repositories holding archaeological data, and the impact of the SEADDA project generally. SEADDA is now coming to a very positive end, further evidenced by the successful application for follow-on funding in the form of a COST Innovators Grant called Sharing Heritage and Archaeological Data Effectively (SHADE), which will continue the capacity building work of SEADDA for a further year, while bolstering the new ARIADNE RI.

SEADDA members at the final workshop in Brno hosted by the Institute for Archaeology of the Czech Academy of Sciences



Historic England Reference Collections

In Spring 2023, a new project began in partnership with Historic England to develop an online database to host historic environment reference collections. The project will build the database and web application to host and manage archaeological pottery fabric type series in England, following the standard developed by Historic England. The application will be seeded

with an exemplar dataset, and build in features which enhance the Findability, Accessibility, Interoperability and Reusability of the resource such as controlled vocabularies developed by the [Forum of Information Standards in Heritage](#) (FISH), and the ability to link out to open access online publications and fieldwork reports, as well as other key online resources.

Mancetter-Hartshill mortaria stamp die (potter 24)
<https://doi.org/10.5284/1079019>



Project Radiocarbon

Funded by the AHRC, this project has been extended to continue into 2023/24 so as to allow more time for data collection across historic collections of radiocarbon data from the islands of Ireland and Britain. The end of the project is now scheduled for Spring 2024, where a new interface will be launched that will present the results of

the project and allow users to cross-search and download the radiocarbon dates compiled by the project team. It is anticipated that the online resource will be annually updated with more results as compiled by partners including Historic England and Historic Environment Scotland.

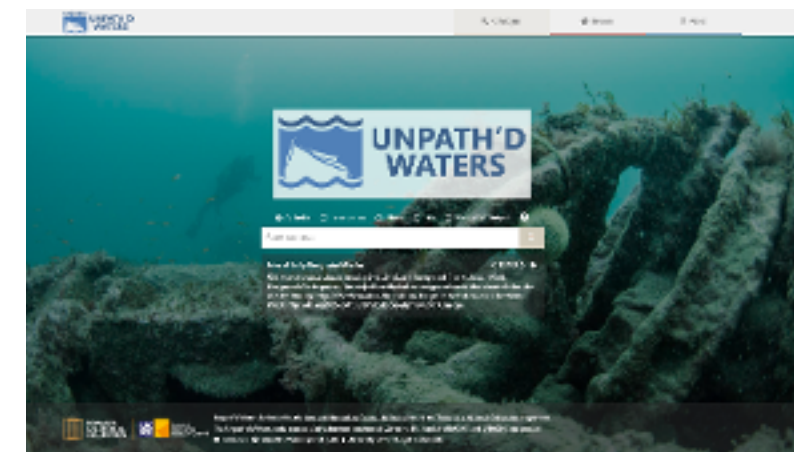


Photographs of the Newport Medieval Ship during excavation.
© Newport Museums and Heritage Service.



Unpath'd Waters is a multi-institutional project, which aims to provide online access to the UK's rich maritime heritage. It is led by Historic England, and funded by the Arts and Humanities Research Council (AHRC) as part of the [Towards a National Collection](#) (TaNC) programme. The role of the ADS is to characterise and aggregate the diverse datasets. On 26 April 2023 we launched the [Unpath'd Waters portal](#) at the TaNC conference at the British Museum. The portal allows users to, for the first time, search a shared and cross-searchable online catalogue of marine data, including the national records of England, Scotland, Wales, Northern Ireland and the Isle of Man, as well as marine fieldwork reports and archives held by the ADS. The portal reuses the triple store and portal architecture developed in ARIADNE, and has allowed ADS to test our plans for the combined replacement of our separate Archives and ArchSearch search interfaces. Work on Unpath'd Waters will continue in 2023-24, adding additional resources, including the [CITIZAN](#) intertidal zone dataset, and the

archive for the wreck of the Mary Rose, and working with the University of Southampton to provide access to AI-enhanced metadata to improve the search results.



Top: The barque Thorne, ran aground off Port Jack in the Isle of Man in 1890 © Manx National Heritage

Bottom: The Unpath'd Waters Portal

Management Services

Archaeology Audience Network

The ADS continues its partnership in The [Archaeology Audience Network](#) (AAN), which is funded by the Culture Recovery Fund from the Department for Digital, Culture, Media & Sport (DCMS) and awarded by the National Lottery Heritage Fund. The project is working to create a more accurate picture of the audiences that public and community archaeology attracts and engages within England and make the results freely accessible online. Data created during the project by the project partners will be archived with the ADS following the completion of the project.

This year the ADS has undertaken several events to support the project. In January 2023 we hosted a [workshop](#): 'Archives and Audiences: Engaging Public and Community Archaeology with the ADS', which brought together AAN partners and other practitioners who engage in public and community archaeology. It explored the resources held and produced by the ADS and what they may offer both practitioners and the audiences that they engage with. In May and September we also hosted

two workshops, in conjunction with colleagues from the Council for British Archaeology (CBA) and Museum of London Archaeology (MOLA), on 'Accessing Archaeology Online'. The first workshop explored the audience's of public and community archaeology and focused on how and why participants currently access archaeological data, while the second was a hands-on workshop looking at how to use the ADS resources. A third online workshop, exploring lessons learnt and future priorities is scheduled for October.



The first 'Accessing Archaeology Online' workshop held at Kings Manor © Nicky Garland



Financial Review

During the financial year 1 August 2022 - 31 July 2023 the ADS and Internet Archaeology had total income of £1,238,075 and total expenditure of £916,673. This represents a very strong financial performance for the second year running, reflecting further growth in archiving of the digital outputs of commercial archaeology, continued

support from AHRC, and strong research grant performance. We have once again taken the opportunity to increase our reserves account balance by £71,430 to £308,141. The outlook for 2023-24 continues to be positive, with several new research grants coming on stream.



Staffing

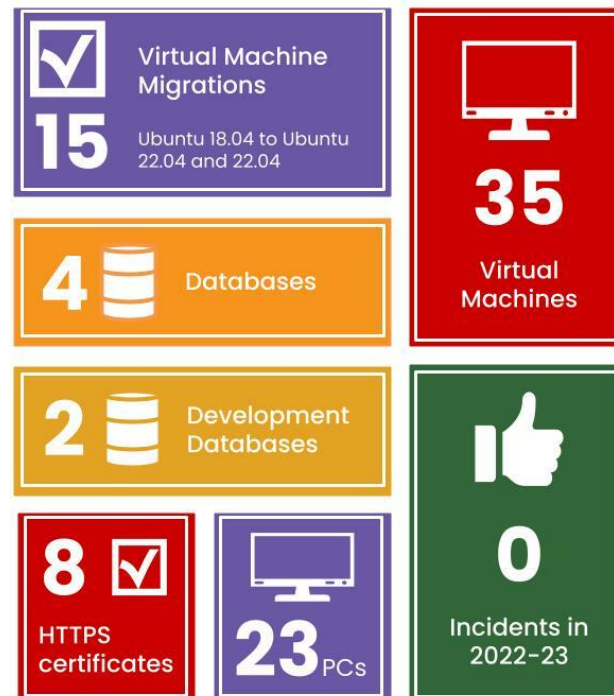
Over the last 12 months, we have welcomed a few new faces to the ADS Team. In February 2023 Adam Fox was appointed as a Web Applications Developer to work on a new generation of interfaces for special collections. [In August 2023](#) we also appointed Valeria Carrillo Garza and Marco Brunello as Digital Archives Assistants. Richard Paxford also joins as a digital archives assistant for the next six months as maternity leave

cover for Becky Hirst. We wish Becky and her family well and look forward to welcoming her back in the new year!

In May 2023 we said farewell to Jamie Geddes, one of our Digital Archives Assistants, who is staying at the University as a support assistant working on the Virtual Learning Environment. Everyone at the ADS wishes Jamie in his new role and hopes he visits us at Kings Manor soon.

Systems Management

Our new website was launched during the last year. Three Virtual Machines (VMs) were migrated from ubuntu 18.04 to ubuntu 20.04 and eleven were migrated from ubuntu 18.04 to ubuntu 22.04. One new VM was also created. We continued to update our servers to the latest versions during the VM migration process, e.g. tomcat and apache. Eight HTTPS certificates were renewed for our domains. During the last year, Historic Milestones and Merseyside data were re-imported into Archsearch and the Heritage Gateway web application. We refreshed several of the data sets in the ARIADNE web application. We purchased two high powered Windows PCs to run programs that use a lot of computer resources during the year.



Office move and refurbishment

One of the most significant changes in recent history occurred over August–September 2022, with the ADS moving from their old offices into the King’s Manor refectory building. Over the course of the year the space has been reimagined into an open plan office that allows space for collaborative working in a beautiful historic building. We are grateful to AHRC for financing the purchase of new office equipment and ICT hardware.



ADS Annual Report 2022-23



St Michael's, Doddiscombsleigh, Devon © Oliver Creighton
<https://doi.org/10.5284/1102072>