![ads Archaeology Data Service]

The Archaeology Data Service: enhancing digital skills for archaeologists

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The Archaeology Data Service

![ads Archaeology Data Service logo]

The Archaeology Data Service

- Accredited digital archive for UK heritage data
- 27 years of experience
- Data from UK-based projects (Industry and Higher Education).
- Archive of more than 3.5 million unique digital objects in 312 unique formats
- Hosted by Department of Archaeology, University of York
- For more information see Annual Reports
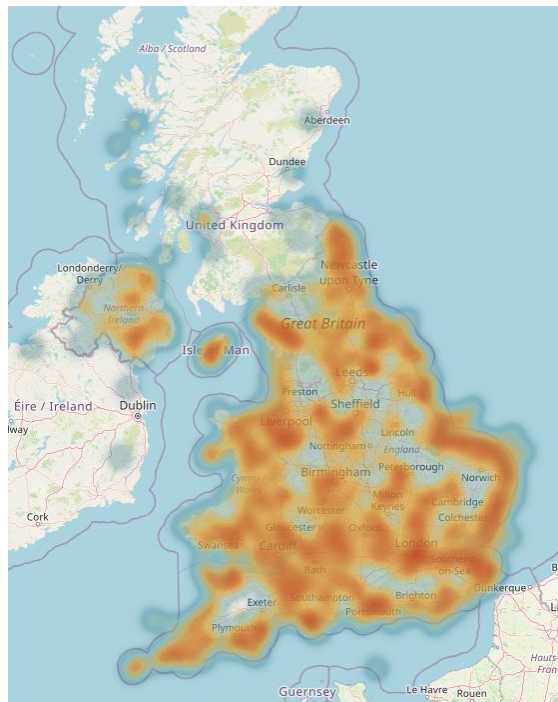
Heat map of ADS records from the Ariadne Portal

Rationale

Archaeology generates a lot of data (borne digital)!

Excavation is inherently destructive.

Historic notions of 'Preservation by Record' feed into moral and legal obligation to ensure data is preserved **and accessible**.

Worcestershire Historic Environment and Archaeology Service (2011) Wellington Quarry.
https://doi.org/10.5284/1000392

A brief history....

- **1st October 1996** - Founded as part of the Arts and Humanities Data Service
- **Late 90s** - Archiving services for research based projects in universities (AHRC, NERC, British Academy, Leverhulme Trust and more)
- **Late 90s/Early 2000s** - Funding model for commercial archaeology sector
- **March 2007** - AHRC withdraw funding from AHDS.
- **2008** -AHRC award 5-year transitional funding from 2008-13 to allow ADS to become self-sufficient.
- **2010** - ADS awarded Data Seal of Approval (only second UK repository to be internationally accredited).
- **April 2020** - ADS was awarded Core Trust Seal (only 6th accreditation granted in UK).
- **2021** - AHRC resumes digital infrastructure core funding for ADS (iDAH)

Introducing the ADS (today)

- Core activity is long term digital preservation of data.
- Datasets to support research and innovation.
- European Research interests
  - ARIADNE (2012–16) and ARIADNEplus (2019–23).
- Recommended repository for funding bodies (UKRI).
- Training and communications.

Introducing the ADS (people)

- **One** Director (Julian Richards)
- **One** Deputy Director
- **Three** Managers.
- **Four** Application Developers.
- **Eight** Curatorial + Technical staff (CaTs).
- **One** Internet Archaeology Editor.
- **One** Financial Administrator.

Expertise in multidimensional data

Data types

- Archaeology creates diverse range of data types
- ADS holds **312** unique data formats
- 3D data types - Terrestrial laser scanning, LIDAR (Light Detecting and Ranging), Satellite imagery, Photogrammetry, Virtual reality modelling, Polynomial Texture Mapping (PTM) and Reflectance Transformation Imaging (RTI)

3D data

■ Growing collections (objects, structures and landscapes)

■ Extensive work on data and metadata standards for 3D data (G2GP)

■ 3D viewer development (using 3D-HOP)

■ European collaboration (including CNR Pisa 3D Lab)

■ Integration with online publication

Webb et al. (2021) *Tracing the Past: analysing the design and construction of English medieval vaults using digital techniques* [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1084971

Archaeology Data Service

internet archaeology

- Sibling publisher (linked via archive to ADS)
- Mesolithic shale pendant - Starr Carr, North Yorkshire
- 3D and RTI viewer built into online publication

Milner, N., et al.. 2016 A Unique Engraved Shale Pendant from the Site of Star Carr: the oldest Mesolithic art in Britain, Internet Archaeology 40.
https://doi.org/10.11141/ia.40.8

Guides to Good Practice

A brief history....
- ■ 1998-2002 Initial development (hard copy and online!)
- ■ Project based development
  - ● 2005-6 The Big Data project
  - ● 2006-9 Virtual ExploratioN of Underwater Sites (VENUS)
- ■ 2009-11 Revised Guides to Good Practice Project - major project
- ■ European Project development
  - ● 2012: ACE Project Case Studies
  - ● 2013-17: ARIADNE development

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Guides to Good Practice

■ Aim to "provide information on the best way to create, manage, and document digital material' produced via archaeology

■ Produced in collaboration with Digital Antiquity (tDAR - The Digital Archaeological Record)

■ Data collection, file types and metadata standards

■ 3d datasets including:
- Laser scanning
- Close-range photogrammetry
- UAV survey
- 3d models

SEADDA Cost Action

■ SEADDA (Saving European Archaeology from the Digital Dark Age) COST Acton

- Working Group 2 (Planning for Archiving)
- DPC (Digital Preservation Coalition) COPTR (Community Owned digital Preservation Tool Registry)
- COPTR edit-a-thon for 3D data - 16th November 2022

Training – past and future
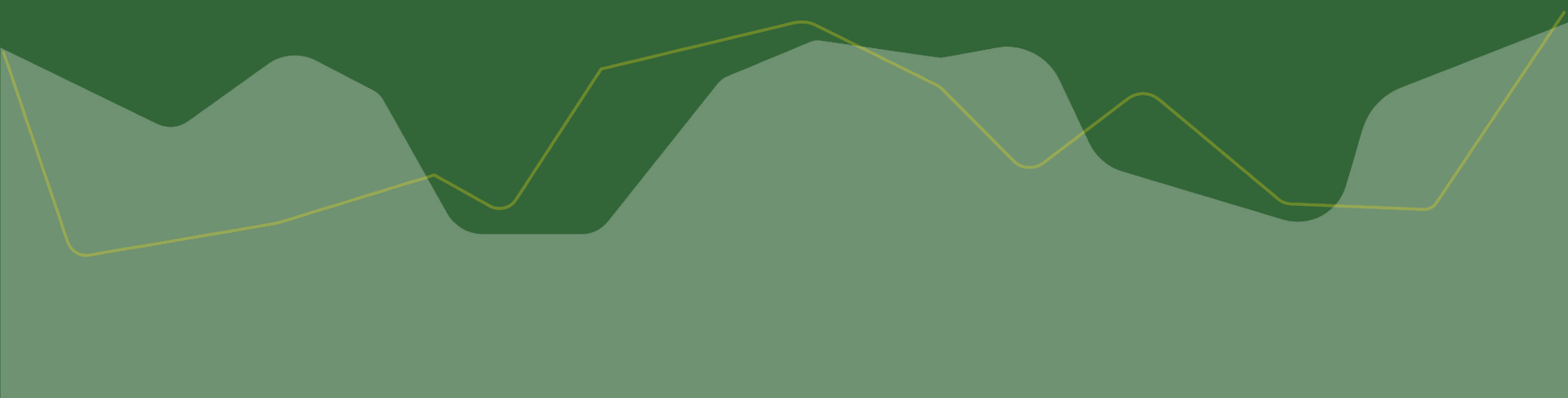
Training topics

- The importance of <u>preserving digital research</u> data in a Trusted repository
- <u>Data management</u> plans and research grant applications
- The <u>FAIR</u> and <u>CARE</u> data principles
- <u>Selection and Retention</u> of research datasets
- <u>Depositing data</u> with the ADS including special interfaces

https://archaeologydataservice.ac.uk/help-guidance/continuing-professional-development/

Training methods

- Different audiences (academic, commercial)
- Bespoke content using key topics
- Online and in person sessions (including visits to organisations/institutions)
- Mixed method pedagogical approach (lectures, hands-on sessions, discussions etc.)
- Resources available open access
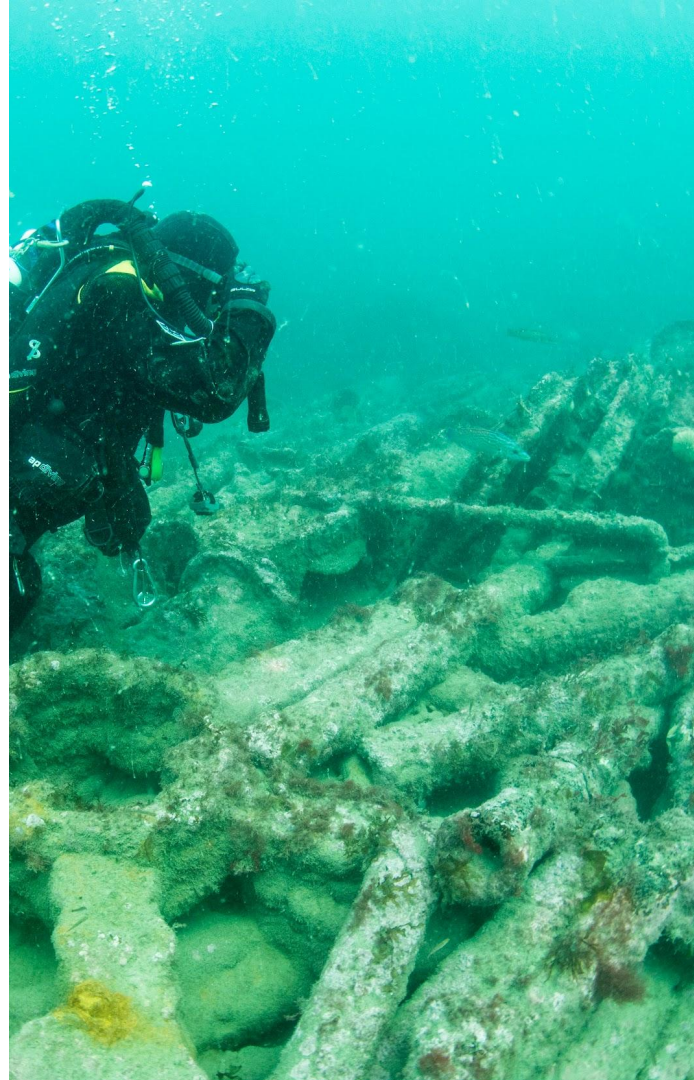
Continuing Professional Development (CPD)

- Professional bodies - Chartered Institute for Archaeologists (CIfA)
- e.g. 'Data management for archaeology - CIfA CPD workshop'
  - Importance of good data management
  - Critically analyse archaeological data set
  - Available advice and standards
- Special Interests Group - Archives
- Dig Digital - https://www.archaeologists.net/digdigital (advice, planning)

https://archaeologydataservice.ac.uk/help-guidance/continuing-professional-development/past-workshops/data-management-for-archaeology/

Ariadne Transnational Access

- Funded through the [ARIADNEplus Project](#)
- Participants from across Europe (UK, Germany, France, Portugal, Spain, Italy) from different organisations (Academia, National agencies)
- ADS focused on Data Stewardship; Topics include the ADS, Data Management, Digital Preservation, Quality Assurance, Data Reuse
- Four week course (online) - mixed methods including lectures, discussion sessions, background reading, presentations.

Looking to the future

- AHRC National Infrastructure for digital innovation and curation for arts and humanities (iDAH) funding
- Digital Archive Audit:
  - Targeted 435 AHRC grant holders between 2012–2021
  - Approx 35% deposited with ADS (or appropriate archive)
  - Over 50% interested in training opportunities
- Funded role: Training and Communications Manager
- Task: Deliver training courses in data management

Future plans

- Varied pedagogy - mixed methods approach
- (Re)develop resources to correspond to key learning topics - open access via ADS website
- Collaboration with other iDAH organisations (e.g. British Library)
- Link into existing open access resources e.g. The Turing Way, DARIAH, Data Carpentry
- Continued bespoke approach - training must suit audiences
- Disciplinary perspective useful but broader interdisciplinary topics should be considered

Thank you!

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