

Are atypical archives FAIR? Exploring Reuse in non-traditional digital archives.

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Thinking Outside of the Box: Sustainable futures for Atypical Archives

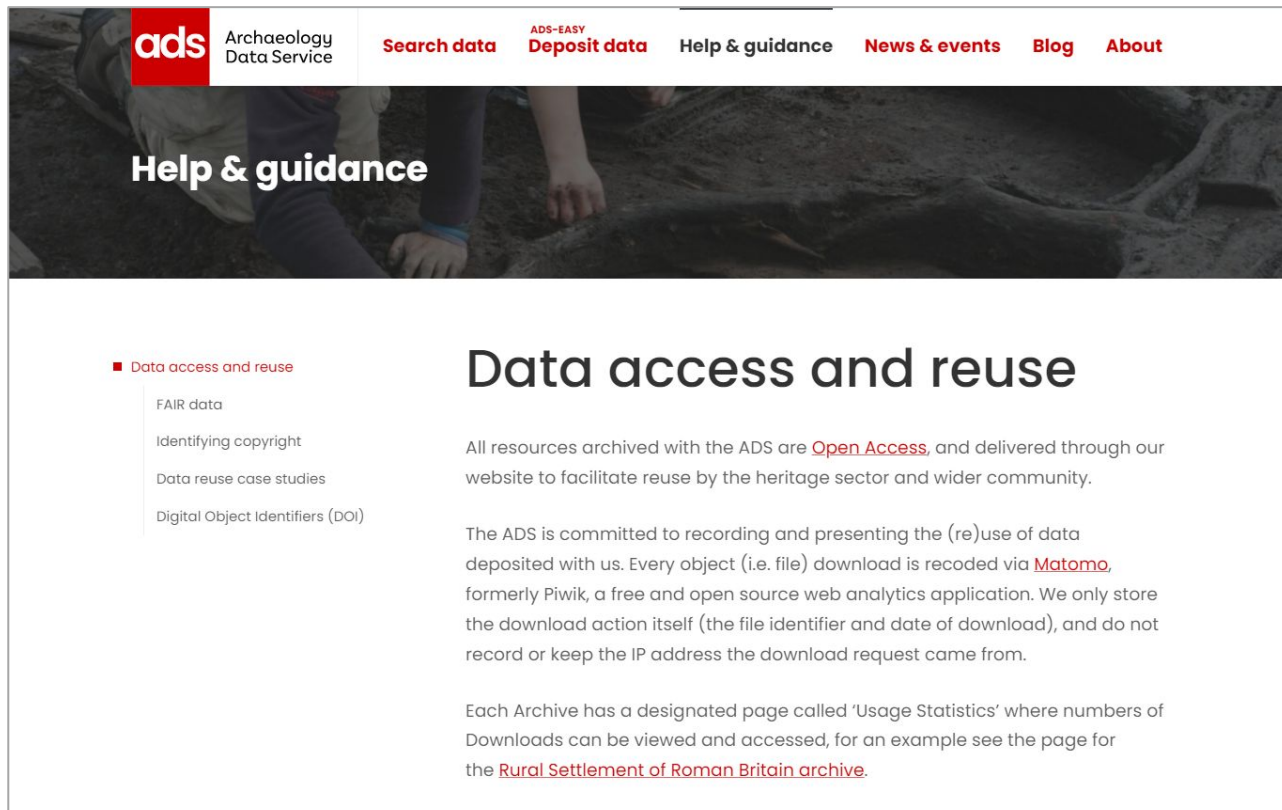
ClfA Conference - Nottingham - 19th-21st April 2023

FAIR Data



ADS: Data Access and Reuse

- Accredited digital archive for UK heritage data
- 27 years of experience
- 3.5 million unique digital objects in 312 unique formats
- Commitment to FAIR data and Open Access.



The screenshot shows the top navigation bar of the ADS website with links for 'Search data', 'Deposit data', 'Help & guidance', 'News & events', 'Blog', and 'About'. The 'Help & guidance' page is active, featuring a sidebar with a list of sub-topics: 'Data access and reuse' (highlighted), 'FAIR data', 'Identifying copyright', 'Data reuse case studies', and 'Digital Object Identifiers (DOI)'. The main content area is titled 'Data access and reuse' and contains three paragraphs of text.

Archaeology Data Service

ADS-EASY

Search data Deposit data Help & guidance News & events Blog About

Help & guidance

- Data access and reuse
 - FAIR data
 - Identifying copyright
 - Data reuse case studies
 - Digital Object Identifiers (DOI)

Data access and reuse

All resources archived with the ADS are [Open Access](#), and delivered through our website to facilitate reuse by the heritage sector and wider community.

The ADS is committed to recording and presenting the (re)use of data deposited with us. Every object (i.e. file) download is recorded via [Matomo](#), formerly Piwik, a free and open source web analytics application. We only store the download action itself (the file identifier and date of download), and do not record or keep the IP address the download request came from.

Each Archive has a designated page called 'Usage Statistics' where numbers of Downloads can be viewed and accessed, for an example see the page for the [Rural Settlement of Roman Britain archive](#).

<https://archaeologydataservice.ac.uk/help-guidance/data-reuse/>

Data reuse (not really...)



- Archaeologists are increasingly depositing and sharing their data
- BUT low levels of data reuse (Huggett [2016](#), [2017](#), [2019](#), Sobotkova [2018](#))
 - Including at the ADS (Huggett [2018](#), 94-95)
- Not restricted to digital archives (Merriman and Swain 1999, 259–260)
- Key question - what are we using this data for?
- Tracking doesn't take into consideration other reuse potential (altmetrics)

Why reuse archaeological data?



- Archaeology a destructive process
- Professional standards and ethical obligations
- Increasingly a requirement
- Data collection is time consuming, costly and (sometimes) boring!
- Reproducibility
- Improve your own skills
- Data integrity - *“Reuse of data is the single surest way of maintaining the integrity of data and tracking errors and problems with it” (Richards)*



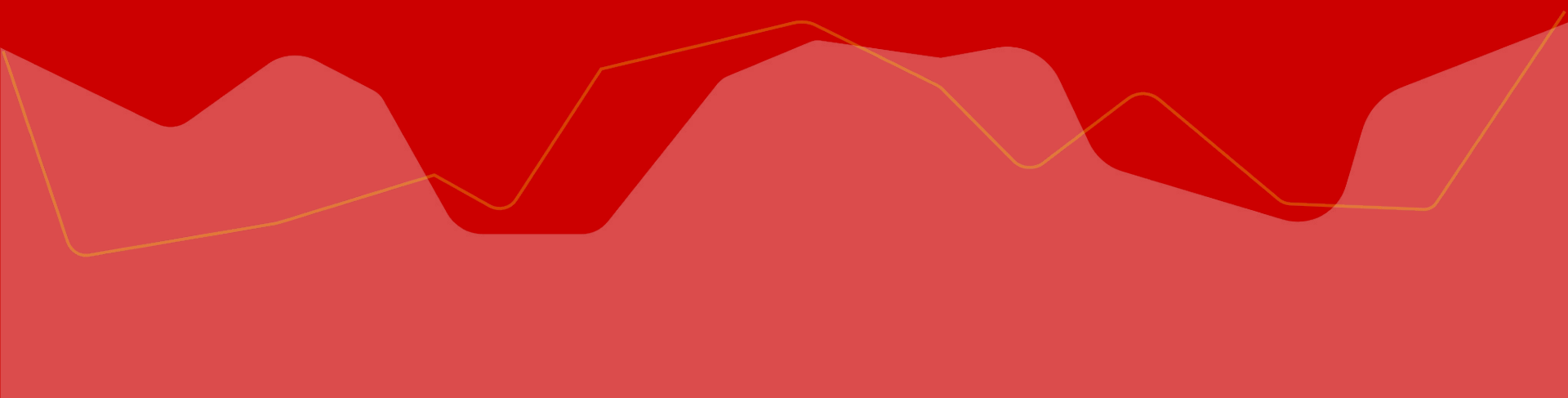
Barriers to Data Reuse

- Trust!
- Social factors (legitimacy)
- May take longer than data creation (effort)
- Digital literacy
- Ineffective communication

Garstki, K. (2022). Teaching for Data Reuse and Working toward Digital Literacy in Archaeology. *Advances in Archaeological Practice*, 10, 177–186. <https://doi.org/10.1017/aap.2022.3>

Sobotkova, A. (2018). Sociotechnical Obstacles to Archaeological Data Reuse. *Advances in Archaeological Practice*, 6(2), 117–124. <https://doi.org/10.1017/aap.2017.37>

What about atypical archives?



What is typical?

- Common deposit? – digital archive from evaluation / excavation
- Contents?
 - Text files (WSI, final report through OASIS)
 - Images (photos of trenches)
 - GIS files (shapefile of site extent and trench locations)
 - Site records (registers, contexts sheets, drawings)
 - Metadata (collection level and object level information about data archived)

ads Archaeology Data ServiceBack to Archives Search | Help

ADS Main Website

Digital Archive from an Archaeological Evaluation at Above Hedges, Pitton, Wiltshire, April 2017

Oxford Archaeology (South), 2023. <https://doi.org/10.5284/1105834>. [How to cite using this DOI](#)

Introduction


[Downloads](#)


[Metadata](#)

[Usage Statistics](#)

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Introduction

This digital archive contains: images, GIS, site records and a report from an archaeological evaluation at Above Hedges, Pitton, Wiltshire. The work was undertaken by Oxford Archaeology (South) on 22nd April 2017. The evaluation consisted of a single trench measuring 20m by 1.8m which ran through the centre of the site in a NW-SE direction. The trench represented a c 2% sample of the development area, and it was positioned to investigate one of the linear features seen on the aerial photographs.

The trench was dug by a mechanical excavator fitted with a toothless bucket in spits down to the first archaeological horizon. The exposed surface was sufficiently cleaned to establish the extent of the archaeological remains. Thereafter, excavation proceeded by hand using mattocks and trowels.

A sufficient sample of each identified feature was excavated and recorded in plan and section. The trench plan was drawn at a scale of 1:100 and the feature sections were drawn at a scale of 1:20. The absolute heights of all principal strata and features in meters above Ordnance Datum (m OD) were surveyed and recorded on the drawings.

Excavation and recording was undertaken as outlined within the WSI (OA 2017). The evaluation revealed two parallel ditches which appeared to follow the NE-SW alignment of a linear 'cropmark' seen on aerial photographs of the Site. These ditches truncated the edge of a possibly man-made platform, constructed of chalk and clay, which raised the ground level in the north-west side of the field. One of the ditches also cut through an earlier pit. Dating evidence from the ditch and pit fills suggests that the features were medieval in date. The ditches also appear to date the putative platform to the medieval period, though its function is uncertain. There was little evidence of post-medieval disturbance and the site has the potential to contain further remains relating to the medieval settlement at Pitton.



Trench 1 backfilled

Oxford Archaeology (South) (2023) Digital Archive from an Archaeological Evaluation at Above Hedges, Pitton, Wiltshire, April 2017 [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1105834>

‘Still atypical or becoming more typical?’

What is atypical?

- Specialist data formats- geophysical survey, 3d models (photogrammetry, Lidar, [laser scanning](#)), digital video and audio.
- Spatial data - [Lea Valley Mapping Project](#)
- Large scale infrastructure projects - HS2, [A1 Leeming to Barton Motorway](#), [Crossrail](#)
- Bespoke databases - [pottery](#), [archaeobotanical data](#)



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>

encourage

How do atypical archives ~~exacerbate~~ the lack of data reuse?

- Atypical data formats
 - More difficult to archive
 - Specialist skills to utilise
 - Fewer experts to reuse data
- Atypical projects (e.g. HS2)
 - Extensive datasets
- Atypical databases
 - Specific use cases
 - Data wrangling required

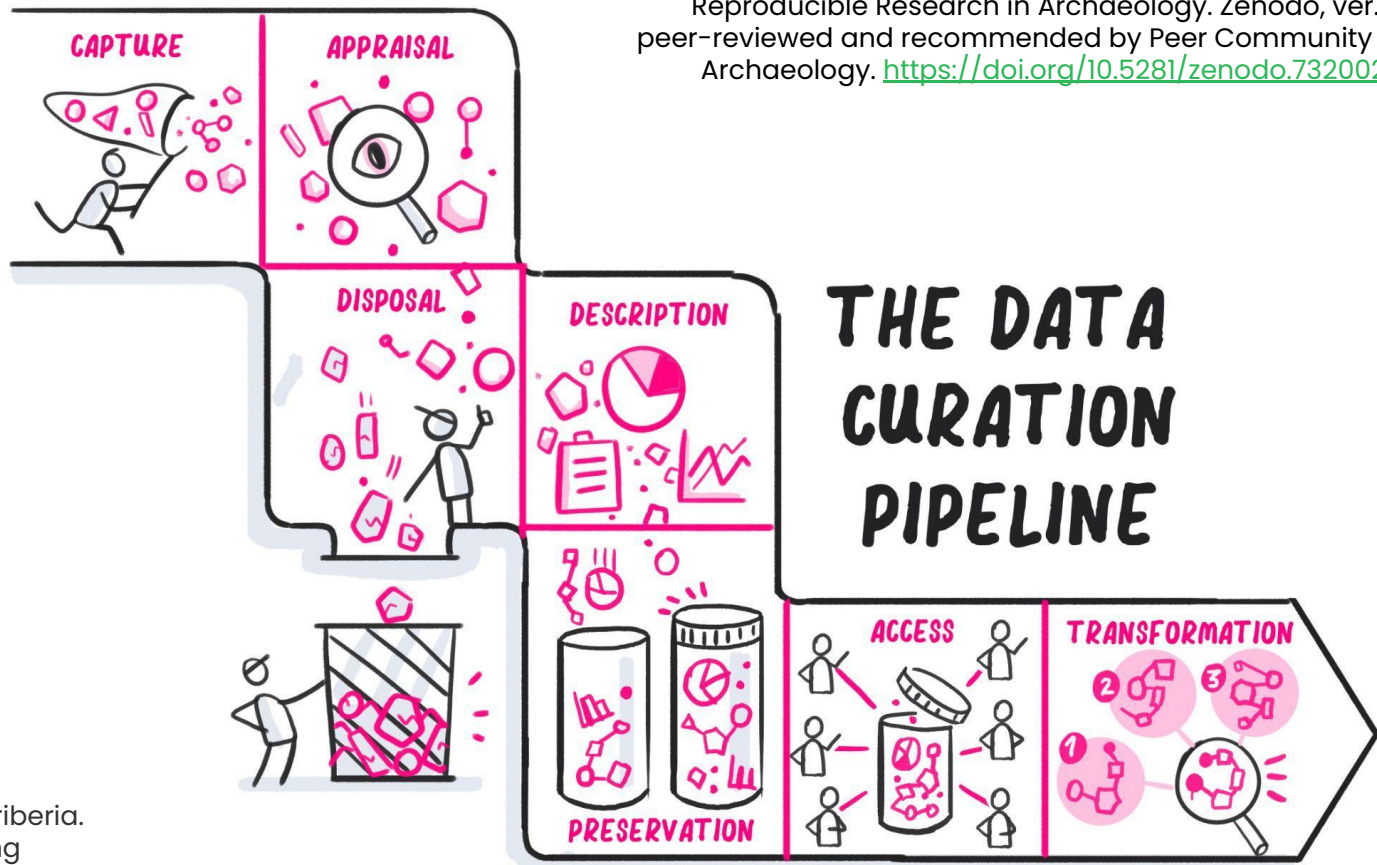
Necessitates creative display
(3DHOP)

Necessitate creative query
interfaces

Encourages skills that enable
replicability / reuse in the future

Lessons from open research

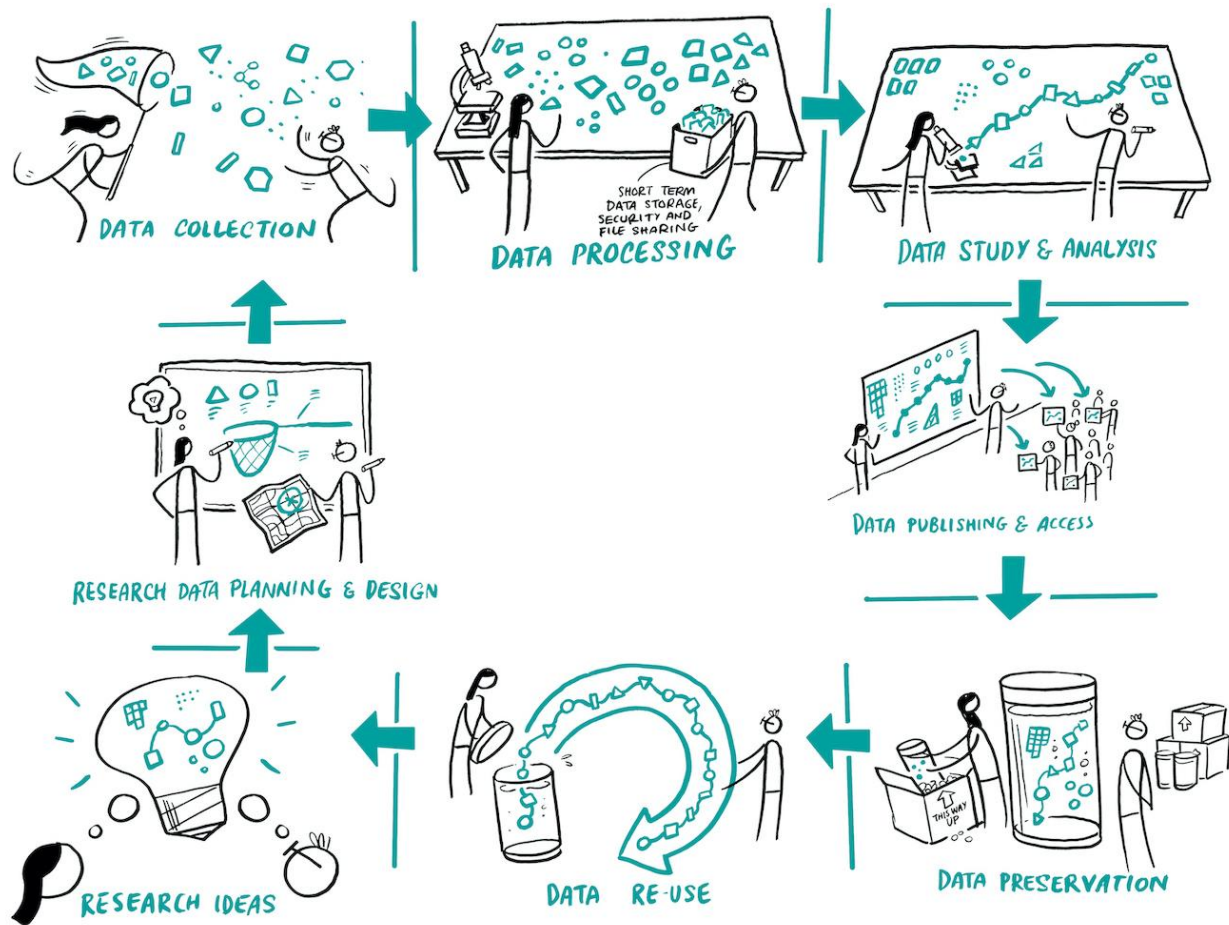
The Turing Way Community, & Scriberia.
(2023). Illustrations from The Turing
Way: Shared under CC-BY 4.0 for reuse.
Zenodo.
<https://doi.org/10.5281/zenodo.7587336>



Karoune, E., and Plomp, E. (2022) Removing Barriers to Reproducible Research in Archaeology. Zenodo, ver. 5 peer-reviewed and recommended by Peer Community in Archaeology. <https://doi.org/10.5281/zenodo.7320029>

How can we encourage reuse of atypical archives?

- Technical considerations
 - Despite recent successes continue to encourage digital transparency in metadata and archives (not complete – an ongoing process)
- Planning for reuse (what could this be reused for?)
 - Metadata for reuse? Wider contextual information
- Expand beyond traditional definitions of reuse (reinterpretation, quantification)
 - Creative reuse – e.g. [TETRARCHs Project](#), [Avebury Papers](#)
 - Requires collaboration within and beyond the sector.
- Digital literacy
 - Link into existing training materials and/or create bespoke training materials for archaeological contexts
 - Technical skills to ‘reuse, repurpose, remix, recycle or recontextualize’ (Huggett 2018)



Reuse as part of the data cycle

The Turing Way Community, & Scriberia. (2023). Illustrations from The Turing Way: Shared under CC-BY 4.0 for reuse. Zenodo.

<https://doi.org/10.5281/zenodo.7587336>



Archaeology
Data Service

Thank you!

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@ADS_Update

Presentation available from
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