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Taking care of your digital data:

The importance of long-term data management for archaeology, the social sciences and humanities

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British Institute in Eastern Africa Graduate Forum
Nairobi, 9 March, 2023

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CORE TRUST SEAL

Intro to the Archaeology Data Service

Domain Specific Digital Archive
Set up in 1996
Based within the University of York

Mission: Support research, learning and teaching with free, high quality and dependable digital resources.

- Digital preservation
- Free online access to data
- Guidance and support for data creators
- Research

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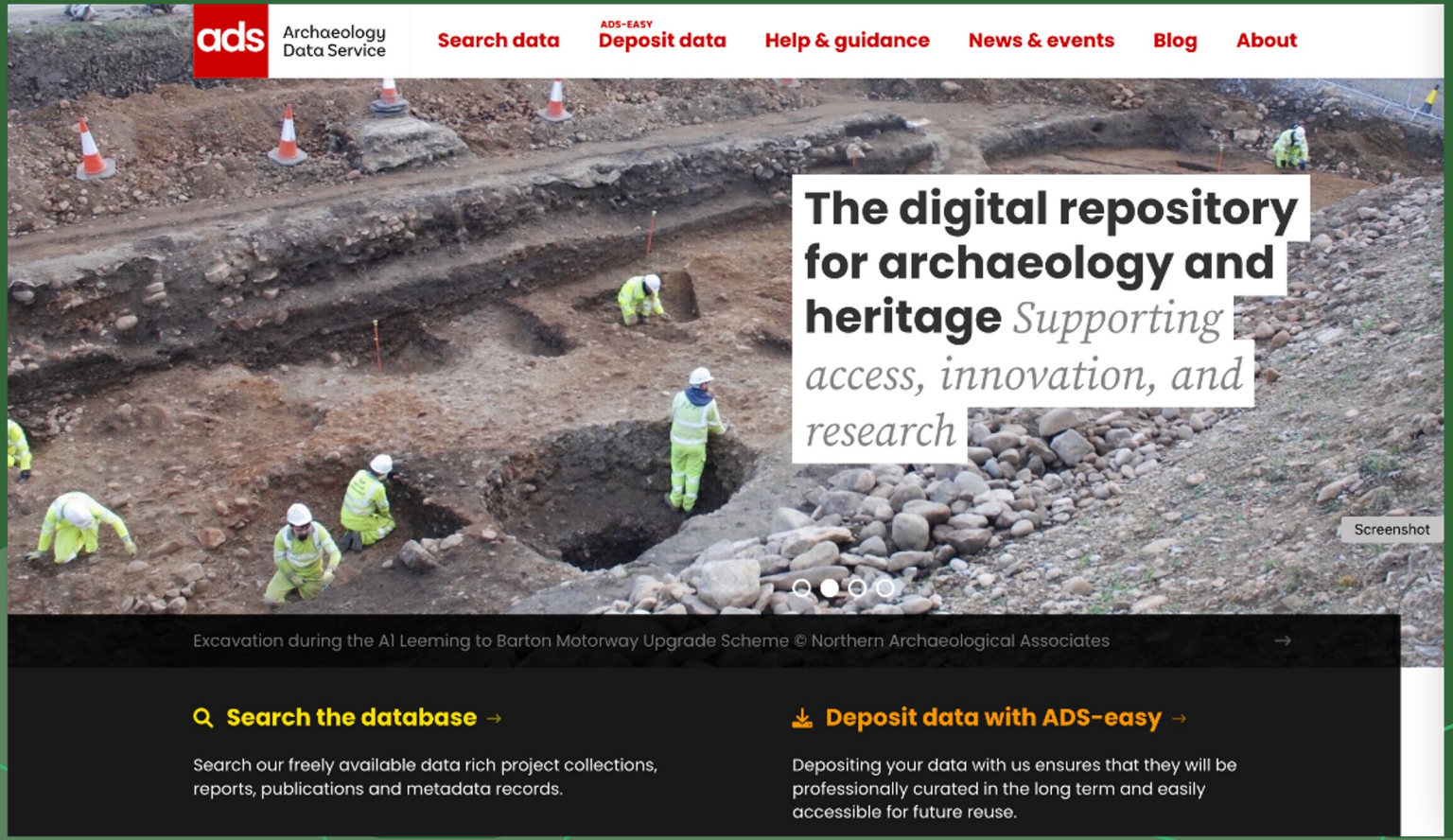

https://archaeologydataservice.ac.uk

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Intro to the Archaeology Data Service

What do we hold?

ArchSearch: Online catalogue

indexing over 1.3 million metadata records including:

- ADS collections
  - 1000+ Project Archives
  - 77,000+ Unpublished Fieldwork Reports

Metadata aggregated from over 30 UK national and regional historic environment inventories.

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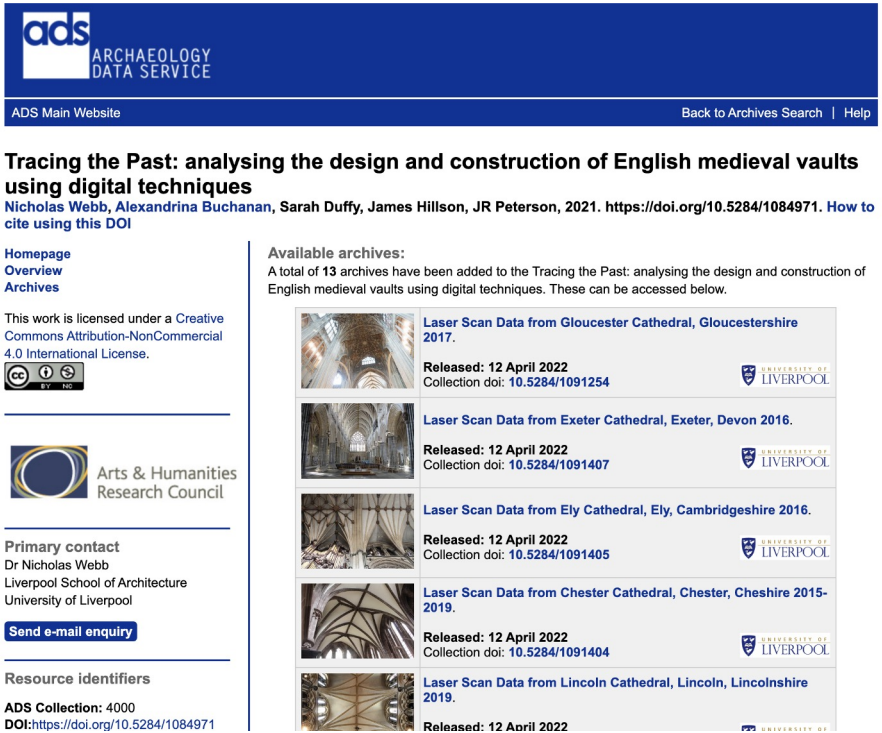
Intro to the Archaeology Data Service

What do we disseminate?

- Disseminate data we hold
- Provide integrated resource discovery across data we aggregate
- Also disseminate to other aggregators
  - OAI-PMH
  - Linked Data
  - Via Export



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Why do we need a Data Service for archaeology?

- Archaeological research is often non-repeatable (e.g. excavation destroys the archaeological site) so the data becomes primary data.
- Digital data is also fragile and requires long-term stewardship.
  - **This is why people who work with archaeological data are obsessed with preservation and data persistence.**
- Archaeological data is typically very heterogeneous and difficult.
- Archaeologists will use any kind of research tool or methodology if it helps to answer their research questions, so they are digital early adopters of a huge range of data types, including scientific data (so a good SSH case study).

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ARIADNE

Lessons from ARIADNE

- EU FP7 project under the ‘Infrastructures’ theme, including 23 European partners across 16 countries
- Four-year project: ended January 2017
- 17 Workpackages – primary deliverable: collection level metadata aggregation portal
- Coordinator: PIN Scri - Polo Universitario "Città di Prato” at the University of Florence
- Deputy Coordinator: ADS

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ARIADNE

Lessons from ARIADNE

- 9 ICT organisations
- 14 archaeological organisations
- 15 Associate partners
- External community building
  - Transnational access
  - Training events
  - Special interest groups

Internal Capacity Building

- Paper given in 2015 by partners in Slovenia and Ireland about “haves and have nots” for having an acceptable place for their archaeological data in the long term
- Even funded partners struggled to participate due to their own lack of infrastructure, and we were creating a gap between who could and couldn’t participate in projects like ARIADNE
- Plans were made to offer data management workshops to partners in their own countries - Austria and Slovenia both accepted

Data management workshops

Local ARIADNE partners worked hard to make sure governmental and institutional stakeholders attended, and took on understanding and presenting the state of play in their country.

Data management workshops

- Level of interest was much higher than expected:
  - Pressure from funders to deposit data in an open repository
  - Pressure from institutions to deposit data in an open repository
  - Funding available; but no guidance
  - No appropriate options for archaeological data
  - Conversations continued about how to take expertise within ARIADNE and collaborate beyond current network
  - Working together was going to be critical to moving forward

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ARIADNE

Challenges for Archaeology

- Archaeological data often derived from non-repeatable interventions
- Digital data more fragile and subject to obsolescence
- Risk losing a generation of archaeological research – Urgency!

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SEADDA
Saving European Archaeology from the Digital Dark Age

COST Action SEADDA

Saving European Archaeology from the Digital Dark Age

- Funding (four years) for networking: meetings, training sessions, scientific missions, open access publications
- Members representing 35 countries (now 38) but also including Turkey, Pakistan, Israel, Japan, Argentina, USA, Canada

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SEADDA
Saving European Archaeology from the Digital Dark Age

Objectives

- Coordinate information collection to understand the current state-of-the-art regarding the preservation, dissemination and re-use of archaeological data.
- Develop a common understanding of international best practice for preservation, dissemination and re-use of archaeological data
- Foster knowledge exchange around international best practice for preservation, dissemination and re-use of archaeological data

SEADDA WG1: *Stewardship of archaeological data*

Objective: To bring together members with varying levels of experience to share their successes and challenges around the stewardship of archaeological data to create a sub-network. Practical and ethical considerations will be explored:

- Encouragements and resistances to sharing data and making it openly accessible within archaeology
- Who should be responsible in short and long-term for preservation
- The starting point for those who wish to begin or progress dialogue in their region or country.

National workshops!

SEADDA WG2: *Planning for Archiving*

Objective: To identify the practical and technical issues surrounding the creation of an appropriate repository for archaeological data

- Understanding hardware and software options
- Management structures
- Training of archivists
- The WG identifies existing best practice, changing future needs, and pragmatic technical and structural solutions.

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SEADDA WG3: *Preservation and Dissemination Best Practice*

Objective: Understand current international best practice for archiving and dissemination, and implementation by existing repositories.

- Open Archival Information System (OAIS) model
- The FAIR Principles
- Repository accreditation
- Cost modelling
- Dealing with data types
- Will bring together archaeological digital archivists to share current practice, and survey future trends to understand the changing archaeological and digital landscapes (domain and technology watch).

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SEADDA WG4: *Use and Re-Use of Archaeological Data*

Objective: To understand how to optimise archives and interfaces to maximise the use and re-use of archaeological data. To explore how archaeological archives can better respond to user needs, and ways to document and understand both quantitative and qualitative re-use.

- Explore barriers to re-use, such as IPR and licencing
- Explore design of underlying data structures and their interfaces
- Will focus on initiatives like the FAIR Principles and technologies that improve and optimise searching, issues around how data is created, organised and disseminated, different options for interface design, and developing best practice around qualitative re-use.

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Open Access Publications

- ***Internet Archaeology***
  SEADDA themed issue Digital Archiving in Archaeology: The state of the art
- 28 papers representing the current state of archiving in 28 nations and states.
- Also just published: Data Management Policies and Practices of Digital Archaeological Repositories

Digital Archiving in Archaeology: The State of the Art. Introduction

Julian D. Richards, Ulf Jakobsson, David Novák, Benjamin Štular and Holly Wright

Cite this as: Richards, J.D., Jakobsson, U., Novák, D., Štular, B. and Wright, H. 2021 Digital Archiving in Archaeology: The State of the Art. Introduction, *Internet Archaeology* 58. https://doi.org/10.11141/ia.58.23

The advent of ubiquitous computing has created a golden age for archaeological researchers and participating publics, but the price is a digital resource that is now in jeopardy. The archaeological record, in digital form, is at risk not simply from obsolescence and media failure,

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https://intarch.ac.uk/journal/issue59/2/index.html

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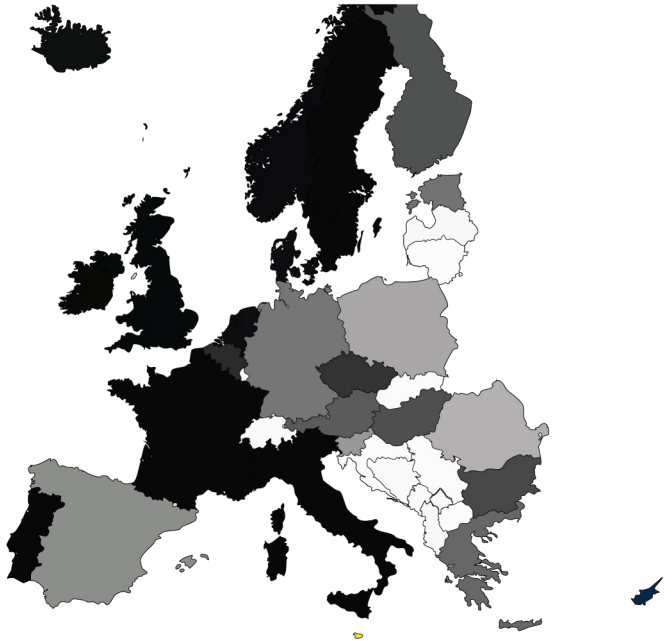
ARIADNE

ARIADNEplus

- 41 partners
- 28 countries
- Majority are archaeological partners
- Extending thematic coverage
- Expanding participation



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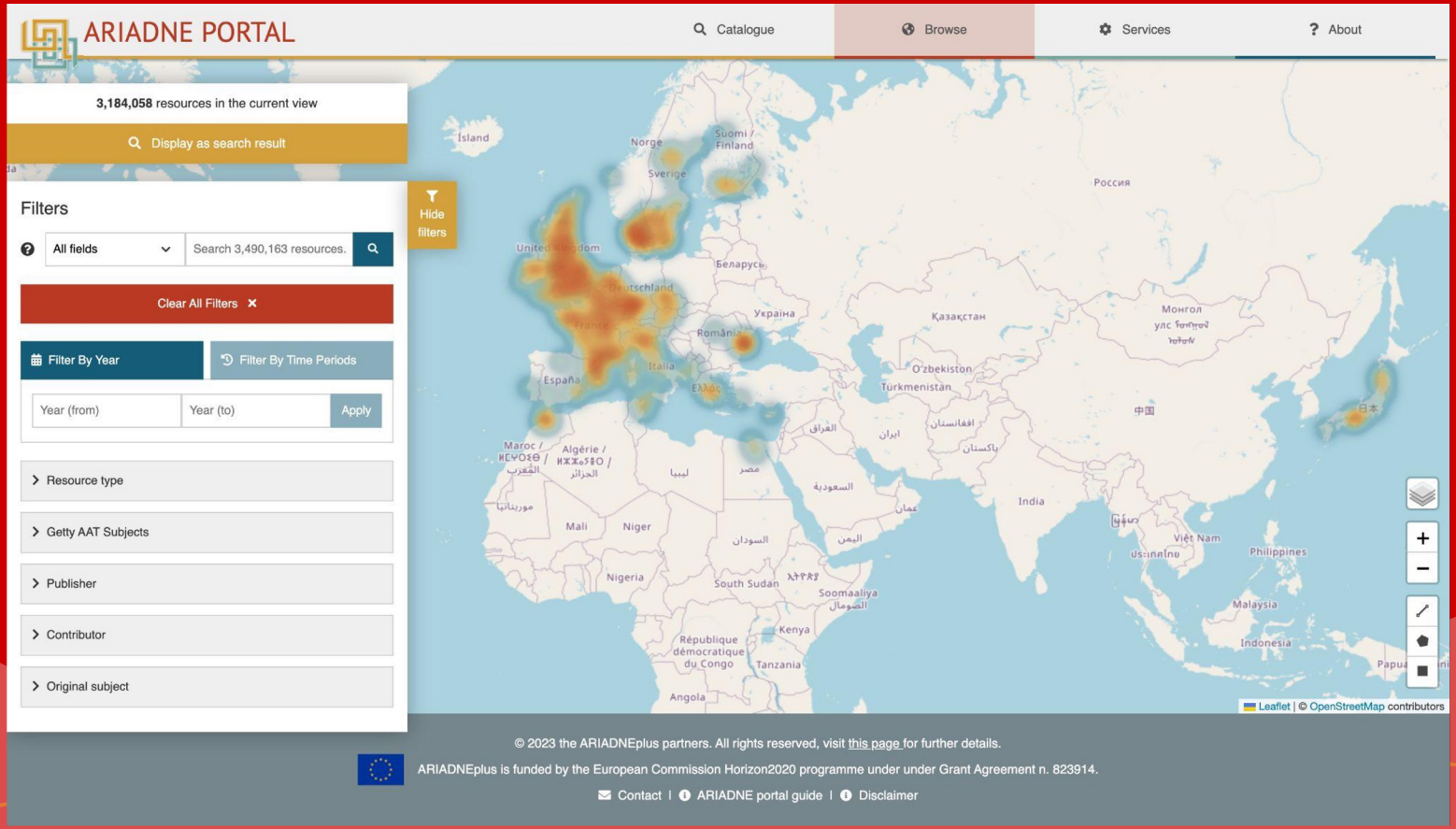

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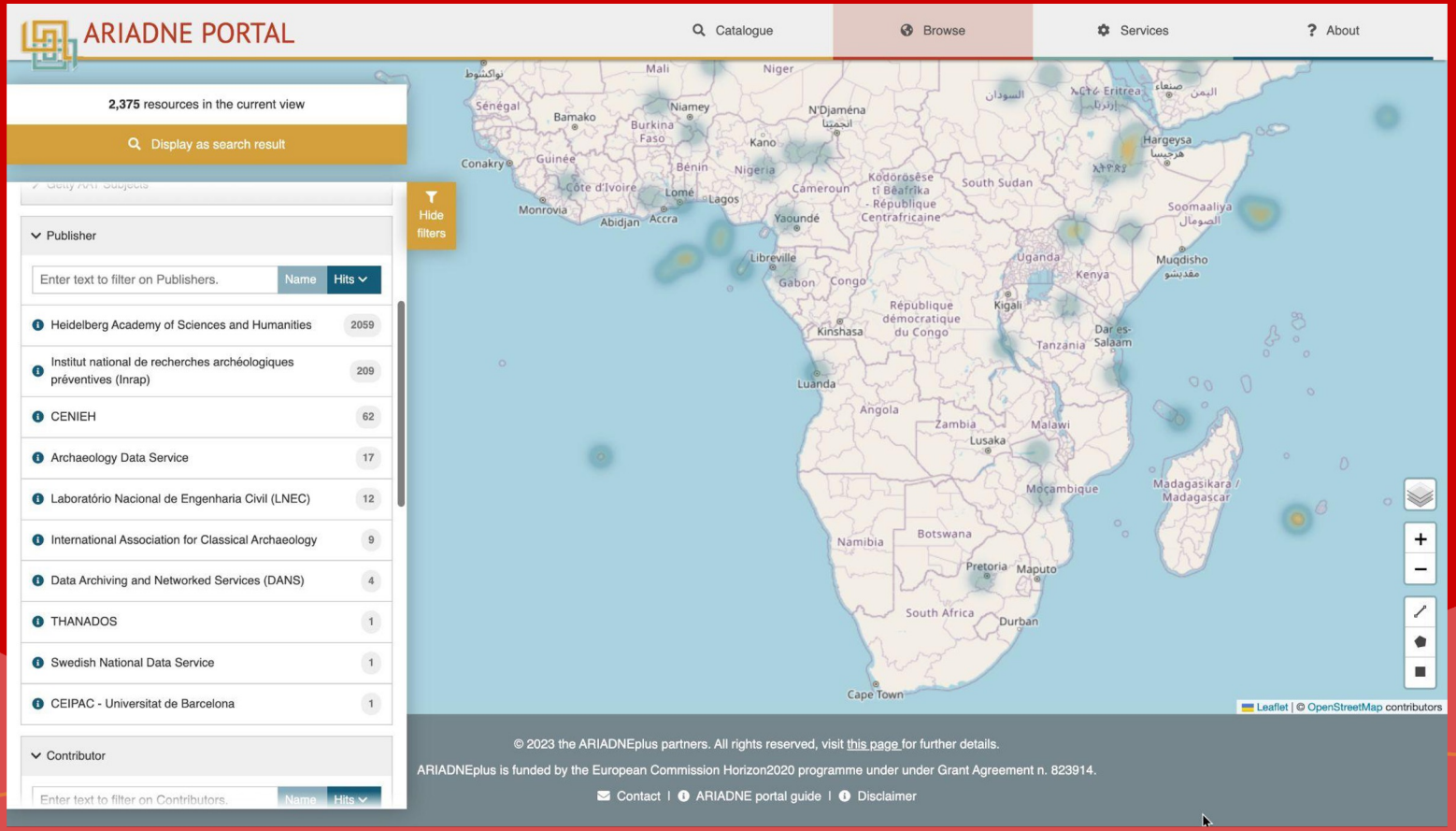

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Relationship between BIEA and ADS

Started working with together in 2015 to archive primarily photographic collections from two sites:

- **Aksum in Ethiopia**
- **Kilwa Kisiwani in Tanzania**

Available Collections:

A total of **2** collections in the British Institute in Eastern Africa Image Archive Archive are available from the ADS. These are listed below.

British Institute in Eastern Africa Digital Archives: Aksum
Creators: Neville Chittick
The Digital versions of images and slides from the excavations directed by Neville Chittick in northern Ethiopia from 1972-74 as well as David W. Phillipson's research from the excavations he directed at the ancient Ethiopian capital in 1993-97, and a 1902 Deutsche Aksum Expedition. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

Collection doi: **https://dx.doi.org/10.5284/1090372**

British Institute in Eastern Africa Digital Archives: Kilwa Kisiwani
Creators: Neville Chittick
The Digital versions of images and slides from excavations at Kilwa Kisiwani. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

Collection doi: **https://dx.doi.org/10.5284/1090373**

Now expanding to become the *British Institute in Eastern Africa Image Archive*

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British Institute in Eastern Africa Image Archive

British Institute in Eastern Africa, 2016. https://doi.org/10.5284/1038987. How to cite using this DOI

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Resource identifiers

ADS Collection: 1965
DOI:https://doi.org/10.5284/1038987
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BRITISH ACADEMY

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Forthcoming Collections:

A total of **5** collections in the British Institute in Eastern Africa Image Archive Archive have been deposited with the ADS and will be made available in due course. These are listed below.

British Institute in Eastern Africa Digital Archives: Hamo Sassoon Collection
Creators: Hamo Sassoon
Digitised photographs, letters, notes and drawings donated to the BIEA by Hamo Sassoon's wife following his death. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

British Institute in Eastern Africa Digital Archives: John Sutton Collection
Creators: John E G Sutton
The Digital versions of images and slides from donated by John sutton to the BIEA. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

British Institute in Eastern Africa Digital Archives: Somalia
Creators: Neville Chittick

British Institute in Eastern Africa Digital Archives: Engaruka
Creators: Peter Robertshaw, Hamo Sassoon, Vesa Laulumaa, John E G Sutton, Ari Siiriäinen
The Digital versions of photographs, drawings, and fieldwork notes from the numerous archaeological surveys conducted by the Institutes former Director, J. E. G. Sutton, and from the excavation undertaken in 1986 by Peter Robertshaw in 1964 and 1966. Three further seasons of archaeological survey and excavation were undertaken between 2001 and 2003 by a team from University College, London (UCL) and the BIEA in collaboration with a project led by Ari Siiriäinen and Vesa Laulumaa from the University of Helsinki and the BIEA collection contains material from this work as well, including some photographs of excavations made by the Finnish team. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

British Institute in Eastern Africa Digital Archives: Konso
The Digital versions of images and slides from excavations at Konso. This collection is part of the British Institute in Eastern Africa's Digital Archive Series.

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re3data.org
http://doi.org/10.17616/R3MW23
Archaeology Data Service

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Ongoing Work

- **Five collections now being archived and available soon**
- **Working with a student to digitise the Sassoon Collection**
- **Creating a resources for the BIEA to manage their digital collection**
- **Working with the BIEA Librarian in Nairobi on developing data management strategy (visit in March)**

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BIEA data within BIRI

- ADS consulting with BIRI about how best to make the BIEA resources available
- Primed for BIRI sharing, but specifics to be worked out

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Thank You!

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