ARCHAEOLOGY DATA SERVICE

UNIVERSITY of York

FAIRifying the Archaeological Dataset:

Making Data Findable and Accessible... and Interoperable and Reusable

CIFA Annual Conference 2021, 21/04/2021

Dr Katie Green

Collections Development Manager, ADS

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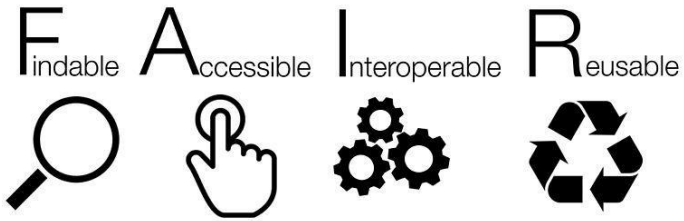


CORE TRUST SEAL

The Archaeology Data Service

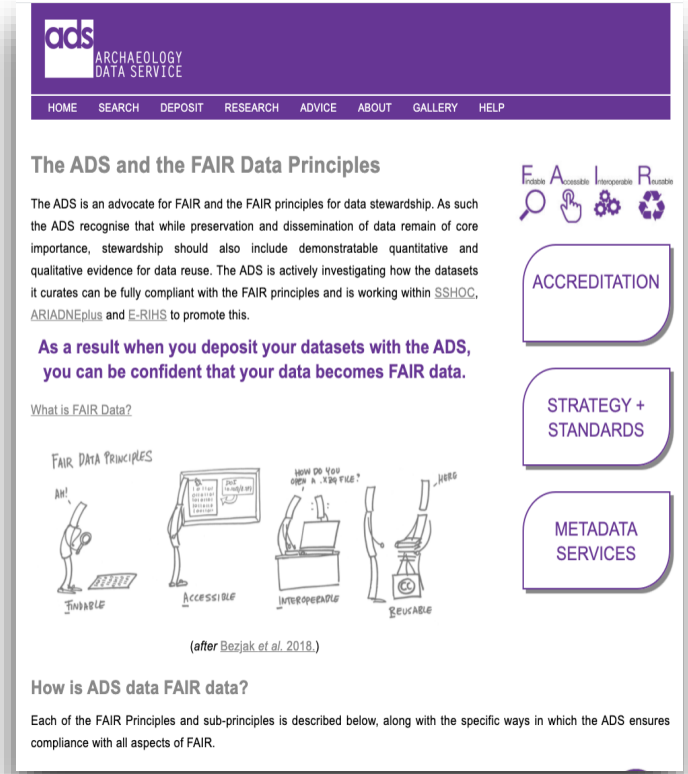
- Based at the University of York
- 1996 - present
- CoreTrustSeal Certified
- Provide Open Access data:
  - 1.4m metadata records of UK archaeology
  - > 62,000 UK reports
  - > 2000 international project archives
  - >15Tb of data
  - >2,000,000 files

ADS and the FAIR Data Principles

archaeologydataservice.ac.uk/about/adsFAIR.xhtml

The ADS:

- is an advocate of the FAIR principles;
- recognise that stewardship should include demonstratable quantitative and qualitative evidence for data reuse;
- is actively investigating how data it curates can be fully compliant with the FAIR and CARE principles
- is working within SSHOC, ARIADNEplus and E-RIHS to promote this.



How does ADS make your data FAIR?

FINDABLE

F1. (Meta)data are assigned a globally unique and persistent identifier

F2. Data are described with rich metadata

(defined by R1)

F3. Metadata clearly and explicitly include the identifier of the data they describe

F4. (Meta)data are registered or indexed in a searchable resource

FINDABLE

F1. (Meta)data are assigned a globally unique and persistent identifier.

- Digital Object Identifier (DOIs) persistent identifiers

DataCite
FIND, ACCESS, AND REUSE DATA

ads ARCHAEOLOGY DATA SERVICE

HOME SEARCH DEPOSIT RESEARCH ADVICE ABOUT HELP

Area A3, Castleward Phase 2, Derby. Archaeological Post-excavation Assessment (OASIS ID: wessexar1-328626)

Wessex Archaeology, 2020

Introduction
Downloads
Metadata
Usage Statistics

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wessex archaeology

Primary contact
Wessex Archaeology
Portway House
Old Sarum Park
Salisbury
SP4 6EB
UK
Tel: 01722 326867
Fax: 01722 337562

Send e-mail enquiry

Resource identifiers

ADS Collection: 3743
DOI:https://doi.org/10.5284/1078327
How to cite using this DOI

Introduction

Wessex Archaeology was commissioned by Ecus Ltd, on behalf of Lovell Partnerships Ltd, to undertake archaeological mitigation works comprising a strip, map and sample excavation on land off the corner of Carrington Street and Trinity Street, Derby, DE1 2RE. The Site covers 0.079 hectares and is centred on NGR 435835 335640.

The work exposed the remnants of terraced housing comprising foundations, floor surfaces and other structural remains. To the rear of the houses, yard surfaces, outside toilets, drains and garden/property boundary walls were recorded. The housing was built, seemingly as three separate blocks, in the mid-19th century and was demolished in the early 1970s. Following demolition the local roads were widened, impinging on the footprints of the former buildings. Overall the arrangement of the exposed remains matches the layout of the Site as portrayed on historic maps and photographs.

The confirmed or likely location of a separate outside toilet could be identified for most of the houses. There was no definite evidence that the housing was not provisioned with these when first built. A possible soakaway, potentially for a more primitive type of sanitary provision such as a privy midden, was found sealed beneath a later toilet in one property, although this interpretation was not confirmed, and the feature may represent a drain instead.

No traces of any cellars were recorded, although it is proposed that these lay beneath the front portions of the houses, which were situated beyond the limits of the Site.

The earliest archaeological deposit seen on the site was mid-19th-century levelling material, which generally comprised a dirty yellowish brown sandy clay with fragments of brick/tile, typically 0.3–0.4 m thick. This likely represents redeposited natural, either imported to the Site, or arisings from the reduction of high ground within the Site itself.

Asbestos contamination prevented the investigation of the south-western quarter of the site.

The finds assemblage largely represents mid/late 20th-century material and was largely recovered from demolition rubble. No environmental samples were collected.

Census data from 1851 to 1911 reveals that the properties were the homes of the skilled working class

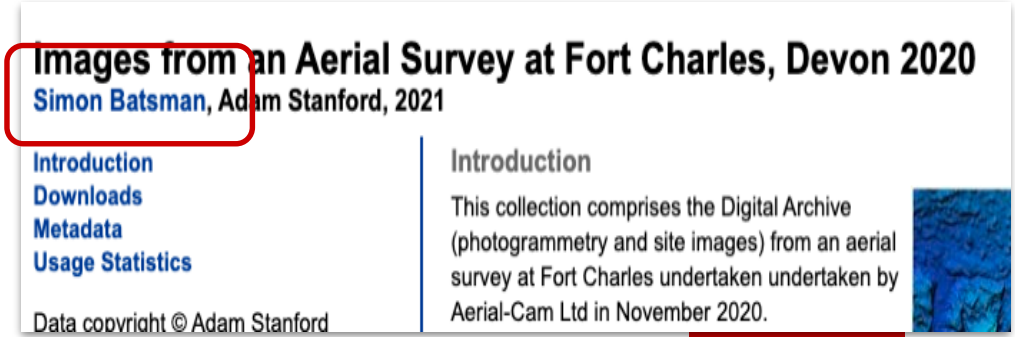
FINDABLE

F1. (Meta)data are assigned a globally unique and persistent identifier.

- Digital Object Identifier (DOIs) persistent identifiers
- ORCID IDs
- WikiData Q Codes

WIKIDATA

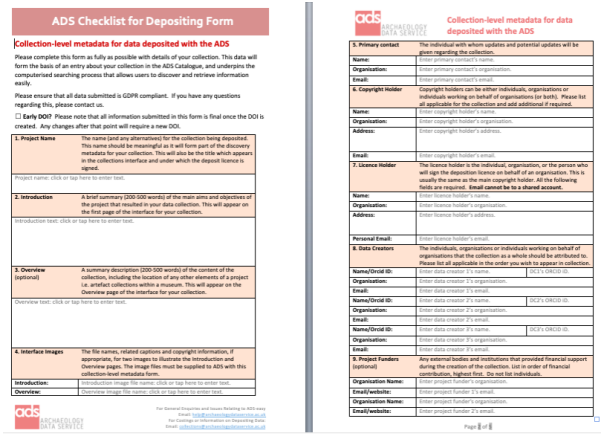
ORCID



FINDABLE

F2. Data are described with rich metadata

- Dublin Core Metadata Element Set (DCMES) plus DCMI recommended qualifiers.


ADS Checklist for Depositing Form

Collection-level metadata for data deposited with the ADS

Please complete this form as fully as possible with details of your collection. This data will form the basis of an entry about your collection in the ADS Catalogue, and underpins the computerised searching process that allows users to discover and retrieve information easily.

Please ensure that all data submitted is GDPR compliant. If you have any questions regarding this, please contact us.

☐ Early DOI? Please note that all information submitted in this form is final once the DOI is created. Any changes after that point will require a new DOI.

1. Project Name	The name (and any alternatives) for the collection being deposited. This name should be meaningful as it will form part of the discovery metadata for your collection. This will also be the title which appears in the collections interface and under which the deposit licence is signed.
Project name: click or tap here to enter text.	
2. Introduction	A brief summary (200-500 words) of the main aims and objectives of the project that resulted in your data collection. This will appear on the first page of the interface for your collection.
Introduction text: click or tap here to enter text.	
3. Overview (optional)	A summary description (200-500 words) of the content of the collection, including the location of any other elements of a project i.e. artefact collections within a museum. This will appear on the Overview page of the interface for your collection.
Overview text: click or tap here to enter text.	
4. Interface Images	The file names, related captions and copyright information, if appropriate, for two images to illustrate the Introduction and Overview pages. The image files must be supplied to ADS with this collection-level metadata form;
Introduction:	Introduction image file name: click or tap here to enter text.
Overview:	Overview image file name: click or tap here to enter text.

Collection-level metadata for data deposited with the ADS

5. Primary contact	The individual with whom updates and potential updates will be given regarding the collection.
Name:	Enter primary contact's name.
Organization:	Enter primary contact's organisation.
Email:	Enter primary contact's email.
6. Copyright Holder	Copyright holders can be either individuals, organisations or individuals working on behalf of organisations (or both). Please list all applicable for the collection and add additional if required.
Name:	Enter copyright holder's name.
Organization:	Enter copyright holder's organisation.
Address:	Enter copyright holder's address.
Email:	Enter copyright holder's email.
7. Licence Holder	The licence holder is the individual, organisation, or the person who will sign the deposition licence on behalf of an organisation. This is usually the same as the main copyright holder. All the following fields are required. **Email cannot be to a shared account.**
Name:	Enter licence holder's name.
Organization:	Enter licence holder's organisation.
Address:	Enter licence holder's address.
Personal Email:	Enter licence holder's email.
8. Data Creators	The individuals, organisations or individuals working on behalf of organisations that the collection as a whole should be attributed to. Please list all applicable in the order you wish to appear in collection.
Name/Orcid ID:	Enter data creator 1's name. / ORCID's ORCID ID.
Organization:	Enter data creator 1's organisation.
Email:	Enter data creator 1's email.
Name/Orcid ID:	Enter data creator 2's name. / ORCID's ORCID ID.
Organization:	Enter data creator 2's organisation.
Email:	Enter data creator 2's email.
Name/Orcid ID:	Enter data creator 3's name. / ORCID's ORCID ID.
Organization:	Enter data creator 3's organisation.
Email:	Enter data creator 3's email.
9. Project Funders (optional)	Any external bodies and institutions that provided financial support during the creation of the collection. List in order of financial contribution, highest first. Do not list individuals.
Organization Name:	Enter project funder 1's organisation.
Email/website:	Enter project funder 1's email.
Organization Name:	Enter project funder's organisation.
Email/website:	Enter project funder 2's email.

Location	World region	British Isles and Ireland
	British Isles country	England
	English region	South West
	County	NORTH SOMERSET
	District	NORTH SOMERSET
	Parish	Pill and Easton-in-Gordano
	Place	Chapel Hill Lane
	Place	Pill
	TGN	World, Europe, United Kingdom, England, North Somerset, Pill [7457089]
Grid reference	OSGB	353350 175600
Grid reference	Latitude longitude bounding box	51.478178 -2.6732576 -2.6722920 51.477222
Subject	Event Type (England)	Evaluation
	Event Type (England)	Geophysical Magnetometer
	Event Type (England)	Geophysical Survey
	Library of Congress Subject Headings	Geophysics in archaeology
Project dates	Created From	16-JAN-2021
	Created To	16-JAN-2021
	First Released	19-APR-2021
Identifiers	OASIS ID	geoflo1-412611
Related information	Associated Publication	Chapel Lane, Pill, North Somerset Gradiometer Survey January 2021
Data types available	Geophysics	1 objects

FINDABLE

F2. Data are described with rich metadata

- Dublin Core Metadata Element Set (DCMES) plus DCMI recommended qualifiers.
- Rich qualitative and technical metadata for all digital objects.
- Templates provided to ensure consistency

Data Type	Preferred File Format	Accepted File Format	Metadata Template Download Type	Example
Collection-level Metadata			Microsoft Word Open Office Document	
3D Models, Visualisation, and Virtual Reality	**Virtual Reality Modelling Language** .vrml **Wavefront OBJ File** .obj (+ .mtl + jpg textures)	**Adobe Portable Document Format (3D)** .pdf This is accepted for dissemination purposes only, it is not suitable for preservation of 3D data. **STL** .stl	Microsoft Excel Open Office Spreadsheet	
Audio	**Broadcast Wave Format** .bwf **Waveform Audio** .wav	**Advanced Audio Coding** .aac **Audio Interchange File** .aif **Flac** .flac **MPEG3**	Microsoft Excel Open Office Spreadsheet csv	

ARCHAEOLOGY DATA SERVICE **Example of completed metadata sheet for database files deposited with the ADS**

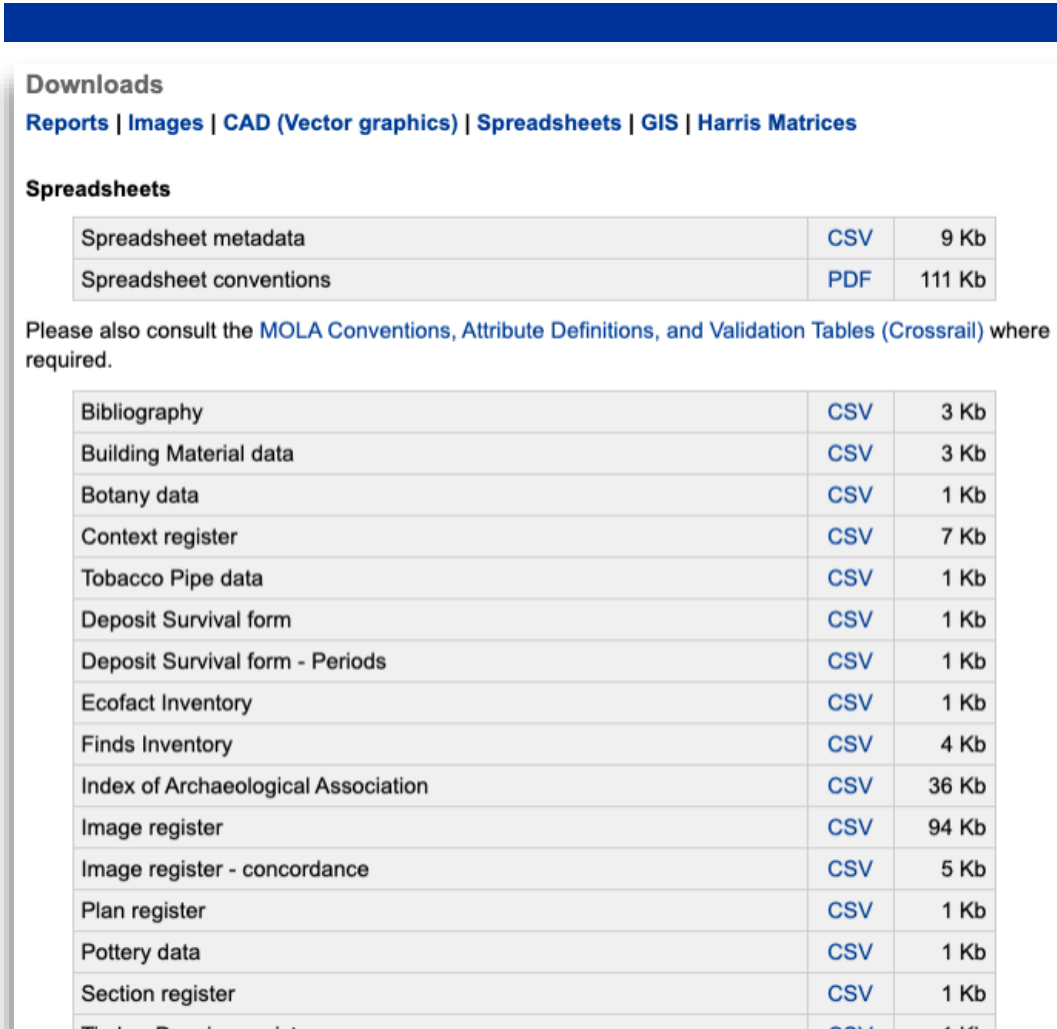
File Name	Title	Description	Creator (if more than one individual/organisation, add on a new row)			Copyright holder (if more than one individual/organisation, add on a new row)			Period of Creation	
			First Name	Last Name	Organisation	First Name	Last Name	Organisation	Start Date	End Date
Database1.mdb	Finds database for the discoveries at York Minster.	[database description]	Shaznay	Lewis		Shaznay	Lewis		10/11/2017	01/12/2018
			Melanie	Blatt	All Saints Associates			AS Consultants		
Contexts1.odb	Contexts for the excavations at York Minster.				Appleton Excavations			Appleton Excavations	01/09/2017	30/08/2018

Software used	Software version	Language	Entity relationship diagram file name(s)	Supporting documentation file name(s)
Microsoft Access	2013	English	ERDiagram_for_Database1.jpg	Abbreviations_for_Database1.pdf
Apache OpenOffice	4.1.5	English	ERDiagram_for_Contexts1.tif	Abbreviations_for_Contexts1.docx

FINDABLE

F2. Data are described with rich metadata

- Dublin Core Metadata Element Set (DCMES) plus DCMI recommended qualifiers.
- Rich qualitative and technical metadata for all digital objects.
- Templates provided to ensure consistency
- All metadata is displayed alongside data, with technical metadata downloadable in open formats.



Downloads

Reports | Images | CAD (Vector graphics) | Spreadsheets | GIS | Harris Matrices

Spreadsheets

Spreadsheet metadata	CSV	9 Kb
Spreadsheet conventions	PDF	111 Kb

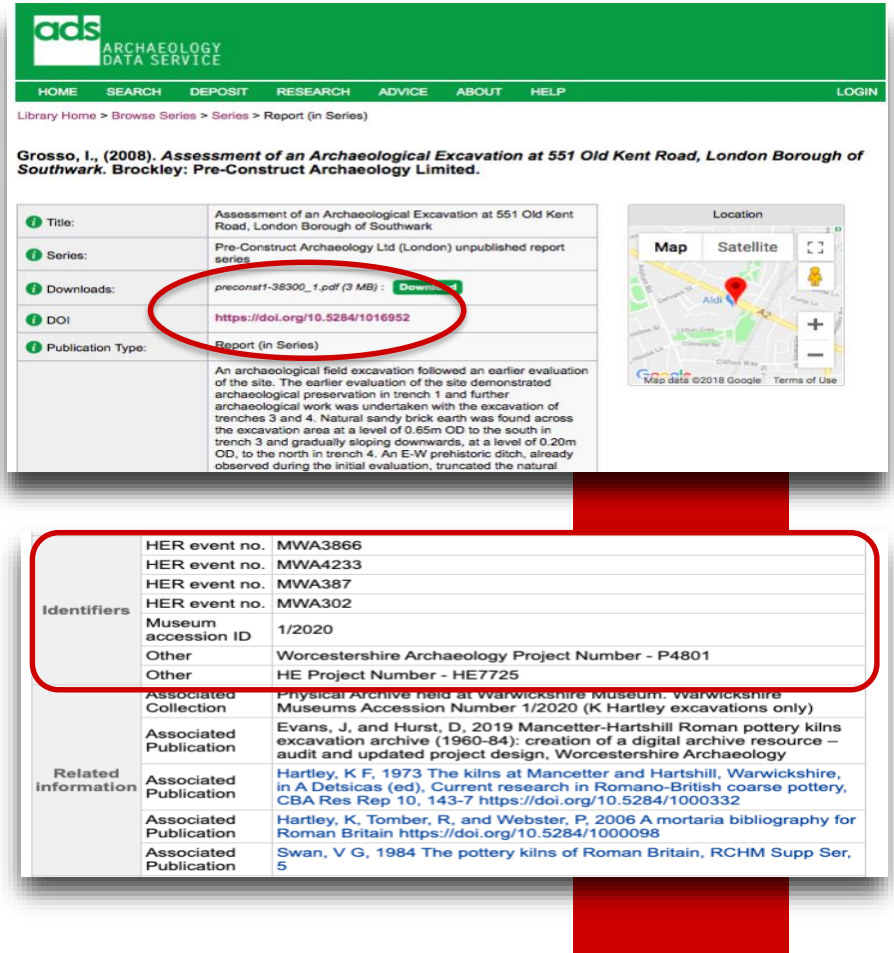
Please also consult the MOLA Conventions, Attribute Definitions, and Validation Tables (Crossrail) where required.

Bibliography	CSV	3 Kb
Building Material data	CSV	3 Kb
Botany data	CSV	1 Kb
Context register	CSV	7 Kb
Tobacco Pipe data	CSV	1 Kb
Deposit Survival form	CSV	1 Kb
Deposit Survival form - Periods	CSV	1 Kb
Ecofact Inventory	CSV	1 Kb
Finds Inventory	CSV	4 Kb
Index of Archaeological Association	CSV	36 Kb
Image register	CSV	94 Kb
Image register - concordance	CSV	5 Kb
Plan register	CSV	1 Kb
Pottery data	CSV	1 Kb
Section register	CSV	1 Kb

FINDABLE

F3. Metadata clearly and explicitly include the identifier of the data they describe

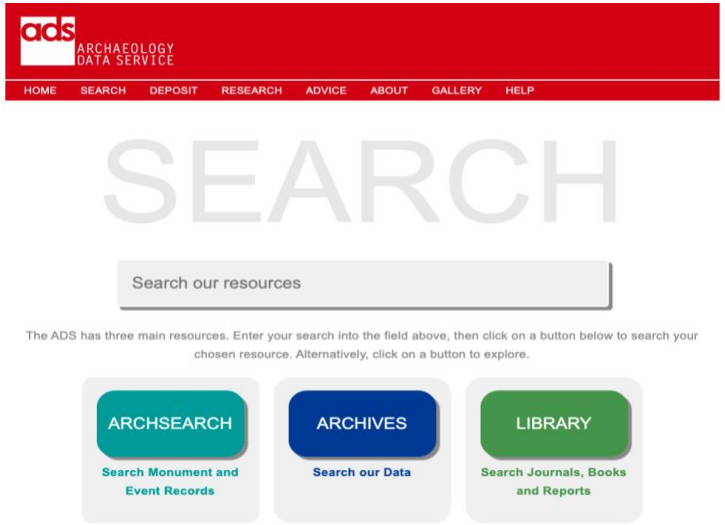
- Persistent identifiers are displayed, alongside data, within each archive interface.
- Use additional or supplemental identifiers relating to the dataset that link to external repositories, agencies or resources (physical, as well as digital collections).

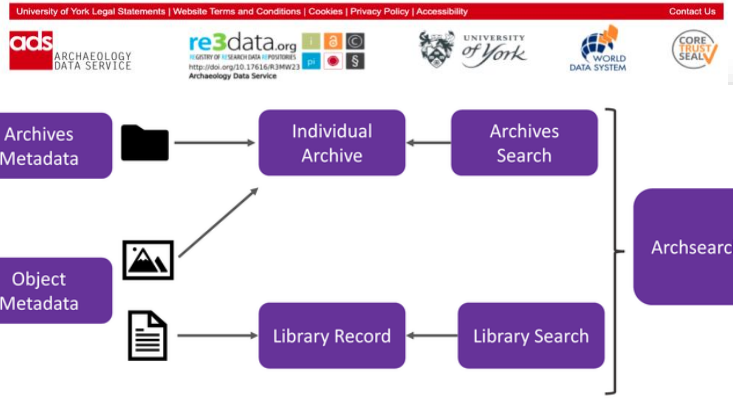


FINDABLE

F4. (Meta)data are registered or indexed in a searchable resource

- ADS datasets are findable through ADS's own indexes and catalogues
- **But** data will only be as findable as the quality of the metadata provided.



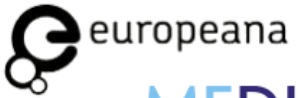


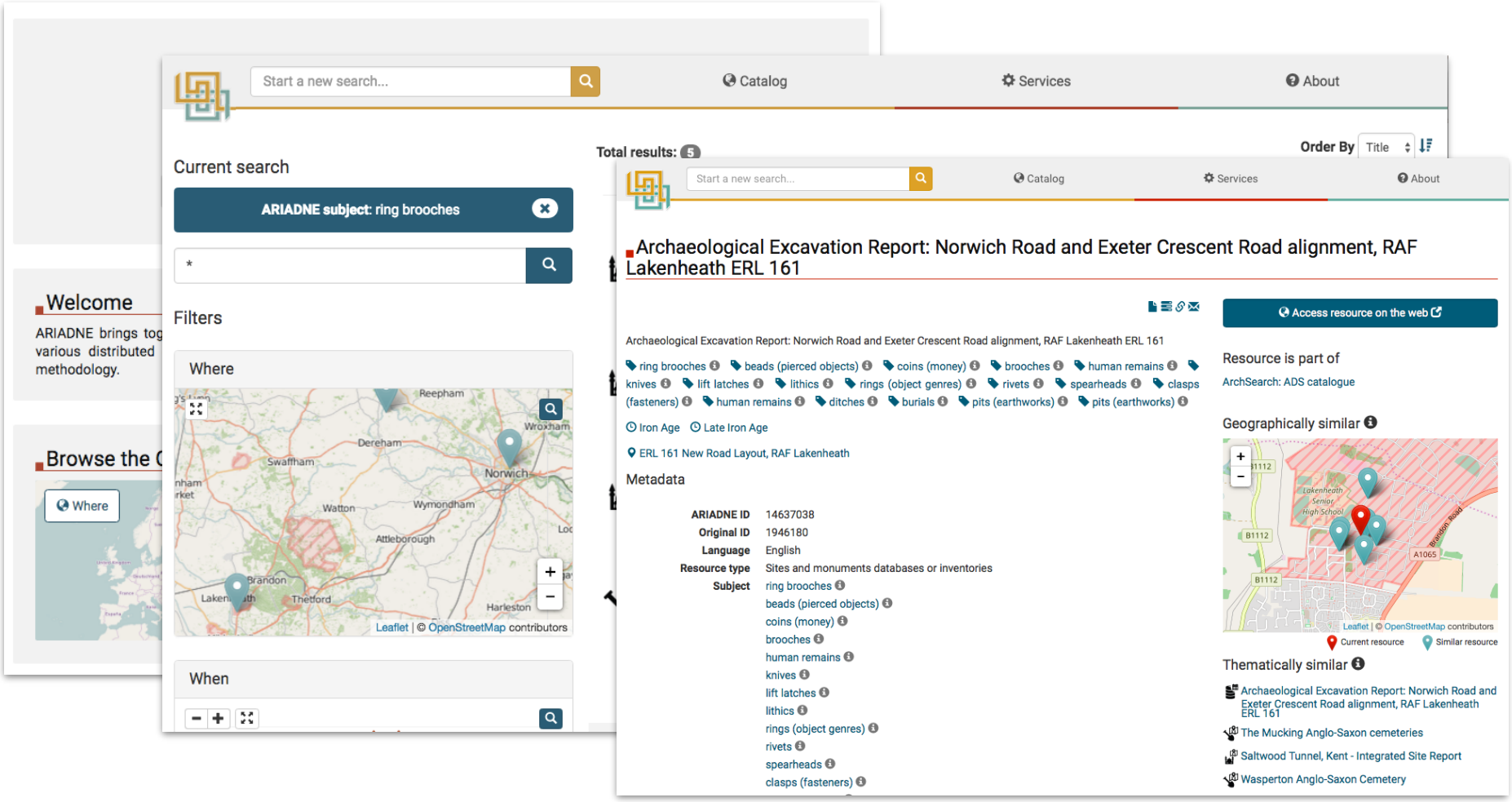
FINDABLE

F4. (Meta)data are registered or indexed in a searchable resource

ADS collections are also available through external catalogues and resources, including:

- **ARIADNEPlus Portal**
- Heritage Gateway
- DataCite
- The Keepers Registry
- Natural Environment Research Council (NERC) data discovery portal
- Marine Environmental Data and Information Network (MEDIN) data portal
- Europeana



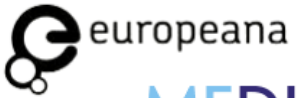

Start a new search...
Catalog
Services
About
Current search
ARIADNE subject: ring brooches
*
Filters
Where
Reepham
Wroxham
Dereham
Swaffham
Norwich
Watton
Wymondham
Attleborough
Brandon
Thetford
Harleston
Leaflet | © OpenStreetMap contributors
When
Total results: 5
Order By
Title
Archaeological Excavation Report: Norwich Road and Exeter Crescent Road alignment, RAF Lakenheath ERL 161
Access resource on the web
Archaeological Excavation Report: Norwich Road and Exeter Crescent Road alignment, RAF Lakenheath ERL 161
ring brooches
beads (pierced objects)
coins (money)
brooches
human remains
knives
lift latches
lithics
rings (object genres)
rivets
spearheads
clasps (fasteners)
human remains
ditches
burials
pits (earthworks)
pits (earthworks)
Iron Age
Late Iron Age
ERL 161 New Road Layout, RAF Lakenheath
Metadata
ARIADNE ID 14637038
Original ID 1946180
Language English
Resource type Sites and monuments databases or inventories
Subject ring brooches
beads (pierced objects)
coins (money)
brooches
human remains
knives
lift latches
lithics
rings (object genres)
rivets
spearheads
clasps (fasteners)
Resource is part of
ArchSearch: ADS catalogue
Geographically similar
Lakenheath Senior High School
B1112
A1065
Brandon Road
Leaflet | © OpenStreetMap contributors
Current resource
Similar resource
Thematically similar
Archaeological Excavation Report: Norwich Road and Exeter Crescent Road alignment, RAF Lakenheath ERL 161
The Mucking Anglo-Saxon cemeteries
Saltwood Tunnel, Kent - Integrated Site Report
Wasperton Anglo-Saxon Cemetery
Welcome
ARIADNE brings tog
various distributed
methodology.
Browse the C
Where

FINDABLE

F4. (Meta)data are registered or indexed in a searchable resource

ADS collections are also available through external catalogues and resources, including:

- ARIADNEPlus Portal
- Heritage Gateway
- DataCite
- The Keepers Registry
- Natural Environment Research Council (NERC) data discovery portal
- Marine Environmental Data and Information Network (MEDIN) data portal
- Europeana

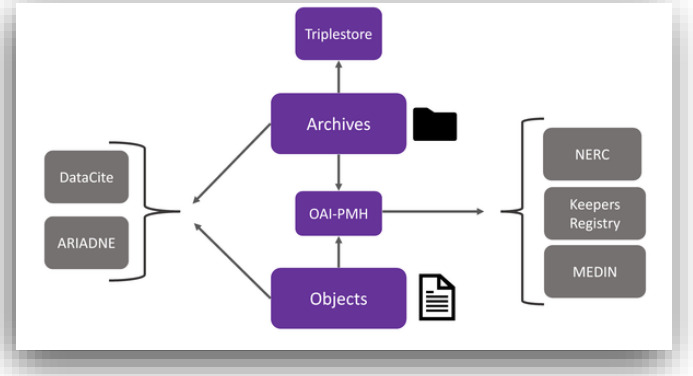


FINDABLE

F4. (Meta)data are registered or indexed in a searchable resource

- ADS catalogues and indexes are searchable and harvestable through a series of **OAI-PMH targets**, and as **linked open data** using a SPARQL query web interface.

https://archaeologydataservice.ac.uk/about/metadataServices.xhtml



Accessable

A1. (Meta)data are retrievable by their identifier using a standardised communications protocol

A1.1 The protocol is open, free, and universally implementable

A1.2 The protocol allows for an authentication and authorisation procedure, where necessary

A2. Metadata are accessible, even when the data are no longer available

ACCESSABLE

A1. (Meta)data are retrievable by their identifier using a standardised communications protocol.

A1.1 The protocol is open, free, and universally implementable

- HTTPS protocol used to ensure free and open access to resources and to facilitate data retrieval.
- In rare instances, where discrete data objects are too large to support easy exchange using HTTPS, the ADS makes data available 'on request' using free and open exchange services.

A1.2 The protocol allows for an authentication and authorisation procedure, where necessary

- Use of HTTPS provides authentication of the ADS website, and ensures the protection of the privacy and integrity of disseminated data.

ACCESSABLE

A2. Metadata are accessible, even when the data are no longer available

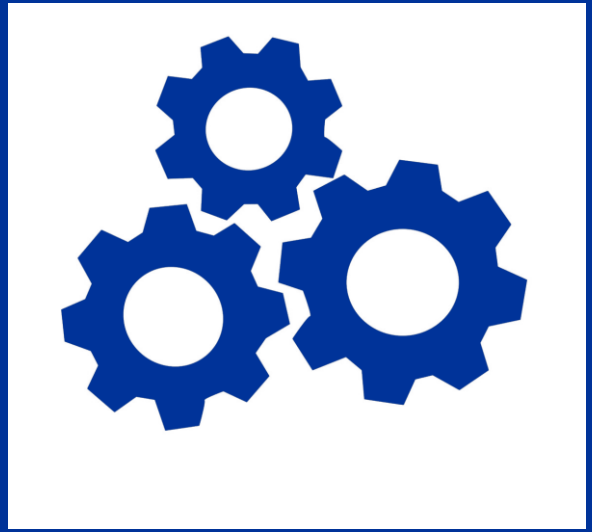
- All datasets and metadata are maintained in perpetuity.
- Maintain a Appraisal and Deaccession Policy which outlines current practice for datasets removed from the archives holdings. In such instances the ADS is committed to supporting identifiers (DOIs), maintaining resource discovery metadata, and updating current information on resources.

INTEROPERABLE

I1. (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.

I2. (Meta)data use vocabularies that follow FAIR principles

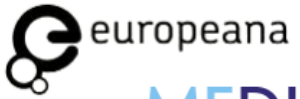
I3. (Meta)data include qualified references to other (meta)data



INTEROPERABILITY

I1. (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation

- Resource discovery metadata is made available using a qualified Dublin Core in RDF/XML through the ADS Linked Data repository.
- External services can consume and disseminate metadata.



INTEROPERABILITY

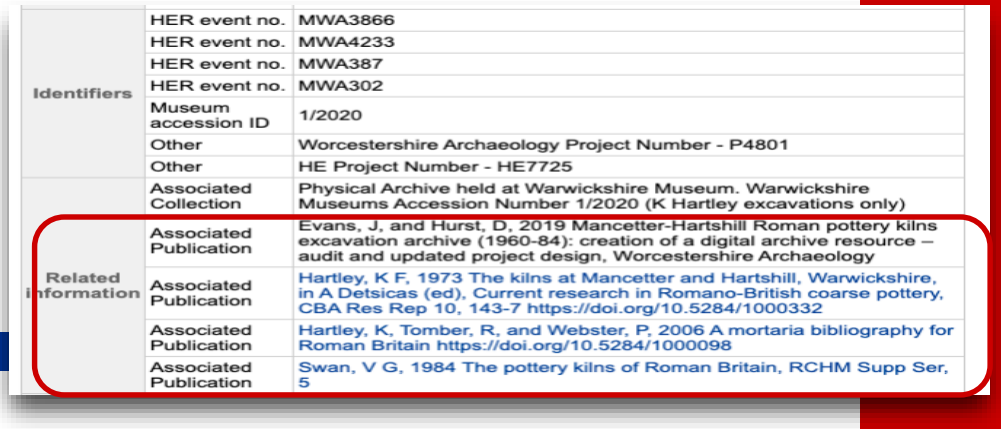
I2. (Meta)data use vocabularies that follow FAIR principles

- Use a variety of sustainable, open vocabularies to qualitatively classify and identify resources and datasets, including:
  - Heritage Data vocabularies,
  - Library of Congress Subject Headings (LCSH)
  - Marine Environmental Data and Information Network (MEDIN)
  - Getty Thesaurus of Geographic Names (TGN)
- Utilises recognised technical vocabularies to denote and categorise preservation activities
  - PREservation Metadata: Implementation Strategies (PREMIS)
  - Getty metadata types (Baca 2016)

INTEROPERABILITY

I3. (Meta)data include qualified references to other (meta)data

- The ADS supports the qualified referencing with and between publications, datasets and resources. Where available the repository uses sustainable referencing, e.g. DOIs.



Identifiers	HER event no.	MWA3866
	HER event no.	MWA4233
	HER event no.	MWA387
	HER event no.	MWA302
	Museum accession ID	1/2020
	Other	Worcestershire Archaeology Project Number - P4801
	Other	HE Project Number - HE7725
Related information	Associated Collection	Physical Archive held at Warwickshire Museum. Warwickshire Museums Accession Number 1/2020 (K Hartley excavations only)
	Associated Publication	Evans, J, and Hurst, D, 2019 Mancetter-Hartshill Roman pottery kilns excavation archive (1960-84): creation of a digital archive resource – audit and updated project design, Worcestershire Archaeology
	Associated Publication	Hartley, K F, 1973 The kilns at Mancetter and Hartshill, Warwickshire, in A Detsicas (ed), Current research in Romano-British coarse pottery, CBA Res Rep 10, 143-7 https://doi.org/10.5284/1000332
	Associated Publication	Hartley, K, Tomber, R, and Webster, P, 2006 A mortaria bibliography for Roman Britain https://doi.org/10.5284/1000098
	Associated Publication	Swan, V G, 1984 The pottery kilns of Roman Britain, RCHM Supp Ser, 5

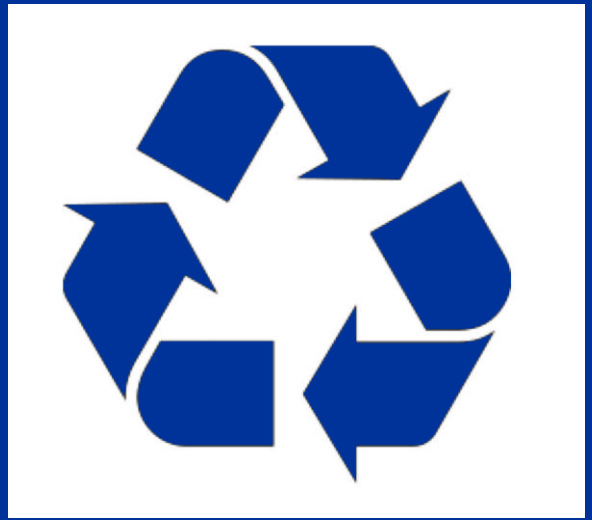
Reusable

R1. (Meta)data are richly described with a plurality of accurate and relevant attributes

R1.1. (Meta)data are released with a clear and accessible data usage license

R1.2. (Meta)data are associated with detailed provenance

R1.3. (Meta)data meet domain-relevant community standards



REUSABLE

R1. Meta(data) are richly described with a plurality of accurate and relevant attributes

R1.1. (Meta)data are released with a clear and accessible data usage license

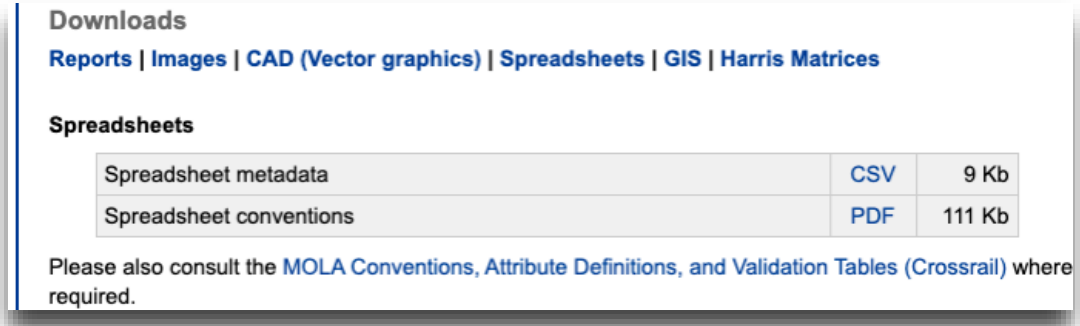
- Clearly define the terms of access and reuse within the collection interface and within metadata records
- Creative Commons Attribution 4.0 licence (CC-BY 4.0) but data may also be disseminated under other licences on request.

REUSABLE

R1. Meta(data) are richly described with a plurality of accurate and relevant attributes

R1.2. (Meta)data are associated with detailed provenance

- Provides detailed provenance metadata for all data. At a collection level this is expressed in the archive interface and discovery metadata, at file level within the technical metadata disseminated alongside the data.



Downloads

Reports | Images | CAD (Vector graphics) | Spreadsheets | GIS | Harris Matrices

Spreadsheets

Spreadsheet metadata	CSV	9 Kb
Spreadsheet conventions	PDF	111 Kb

Please also consult the MOLA Conventions, Attribute Definitions, and Validation Tables (Crossrail) where required.

REUSABLE

R1. Meta(data) are richly described with a plurality of accurate and relevant attributes

R1.3. (Meta)data meet domain-relevant community standards

- Dublin Core metadata for collection level metadata.
- Data must be accompanied by appropriate, file specific 'technical' metadata derived from recognised community standards and standardised templates provided to ensure consistency.
- All (meta)data is accepted, preserved and disseminated in sustainable, open formats.
- Use appropriate vocabularies to qualitatively describe datasets and document preservation actions.

archaeologydataservice.ac.uk/about/adsFAIR.xhtml

ARCHAEOLOGY DATA SERVICE

HOME SEARCH DEPOSIT RESEARCH ADVICE ABOUT GALLERY HELP

The ADS and the FAIR Data Principles

Findable Accessible Interoperable Reusable

The ADS is an advocate for FAIR and the FAIR principles for data stewardship. As such the ADS recognise that while preservation and dissemination of data remain of core importance, stewardship should also include demonstratable quantitative and qualitative evidence for data reuse. The ADS is actively investigating how the datasets it curates can be fully compliant with the FAIR principles and is working within SSHOC, ARIADNEplus and E-RIHS to promote this.

As a result when you deposit your datasets with the ADS, you can be confident that your data becomes FAIR data.

What is FAIR Data?

(*after* Bezjak *et al.* 2018.)

ACCREDITATION

STRATEGY + STANDARDS

METADATA SERVICES

How is ADS data FAIR data?

Each of the FAIR Principles and sub-principles is described below, along with the specific ways in which the ADS ensures compliance with all aspects of FAIR.

OASIS V AND FAIR

- DOIs for all reports
- Supports ORCIDs for report authors
- Metadata follows the FAIR principles - all core fields use LOD vocabularies
- Use of web services (including WMS) allows the creation of rich and interoperable metadata created by authorities including OS and BGS
- Metadata is designed to be interoperable with wider systems: “record once re-use multiple times”
- API (in development) will allow machine access to metadata
- Supports open licences to facilitate re-use

WHAT CAN YOU DO?

- Deposit with a trusted repository
- Provide accurate and proportionate metadata
- Provide associated identifiers with metadata
- Use DOIs when referencing and sharing datasets
- Use standardised vocabularies with data and metadata
- Deposit data under suitable licences
- Think about and plan for data reuse from the beginning of your project.
- Create DMPs

Thank you!

Archaeology Data Service

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