



Making your data FAIR

What are the FAIR Principles, and how ADS makes your data FAIR

Data Management and Deposition with the Archaeology Data Service

Dr Holly Wright

Research Projects Manager, ADS holly.wright@york.ac.uk





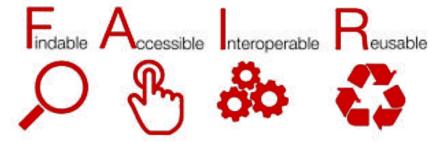


What are the FAIR Principles?

In 2016, the 'FAIR Guiding Principles for scientific data management and stewardship' were published in Scientific Data. The authors intended to provide guidelines to improve the Findability, Accessibility, Interoperability, and Reuse of digital assets. The principles emphasise machine-actionability (i.e., the capacity of computational systems to find, access, interoperate, and reuse data with little or no human intervention) because humans increasingly rely on computational support to deal with data as a result of the increase in volume, complexity, and creation speed of data.

GOFAIR: https://www.go-fair.org/fair-principles/

How does ADS MAKE YOUR DATA FAIR?



- 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



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

 Digital Object Identifier (DOIs) persistent identifiers





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

Data copyright © Wessex

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License.



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 bricktitie, 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 guarter 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.

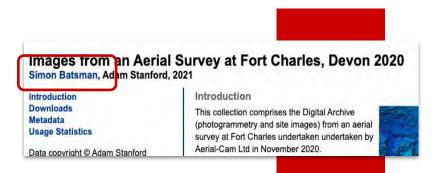
Census data from 1851 to 1911 reveals that the properties were the homes of the skilled working class

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

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







First Name:	Coralie
Surname:	Acheson
ORCID:	https://orcid.org/0000-0002-8346-4075
Alias Id:	

F2. Data are described with rich metadata

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 appear 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 clic	
Introduction text clic	the first page of the interface for your collection.
Introduction test clic 3. Overview (aptional)	the first page of the interface for your collection.

ARCOALO	1361	Collection-leve deposited with		for data
5. Primary contact		vidual with whom update garding the collection.	es and potential u	pdates will be
Name:	Enter pr	imary contact's name:		
Organisation:	Enterpr	imary contact's organisat	don.	
Email:	Enter pr	mary contact's email.		
6. Copyright Holder	individu	nt holders can be either it als working on behalf of a cable for the collection as	organisations (or	both). Please list
Name:	Enterop	pyright horder's name.		
Organisation:	Enter on	pyright holder's organisa	dipn.	
Address:	Enter co	pyright holder's address.		
Email:	Enter co	pyright holder's email.		
7. Licence Holder	will sign usually t	nce holder is the individual the deposition licence or the same as the main cope o required. Email cannot	behalf of an org yright holder. All	anisation. This is the following
Name:	Enterlo	ence holder's name.		
Organisation:	Enterlie	ence holder's organisacio	itr_	
Address:	Enterlic	once holder's address		
Personal Email:	Enterio	once holder's email.		
8. Data Creators	organisa	viduals, organisations or itions that the collection ist all applicable in the on	as a whole should	be attributed to
	Please II			
Name/Orcid ID:		tti creator 1's name,	DC1's	ORGID IO
Name/Orcid ID: Organisation:	Enter da	THE RESERVE TO A PROPERTY OF A PARTY OF A PA	200	ORGID IOC
Name/Orcid ID: Organisation: Email:	Enter da Enter da	its creator 1's name.	200	ORGID IOC

F2. Data are described with rich metadata

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

	World region	British Isles and Ireland
	British Isles country	England
	English region	South West
	County	NORTH SOMERSET
Location	District	NORTH SOMERSET
2000000	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
	Event Type (England)	Evaluation
	Event Type (England)	Geophysical Magnetometer
Subject	Event Type (England)	Geophysical Survey
	Library of Congress Subject Headings	Geophysics in archaeology
	Created From	16-JAN-2021
Project dates	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	Geonhysics	1 objects

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 (+ .md + 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 .sti	Microsoft Excel Open Office Spreadsheet	
Audio	Broadcast Wave Format .bwf Waveform Audio .wav	Advanced Audio Coding aac Audio Interchange File aif Flac flac MPEG3 .mp3	Microsoft Excel Open Office Screadsheet GSX	



Example of completed metadata sheet for database files deposited with the ADS

File Name	Title	Description	Creator (if more to new row)	han one individual/org	anisation, add on a		er (if more than one tion, add on a new row):	Period of Cre	ation
			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

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

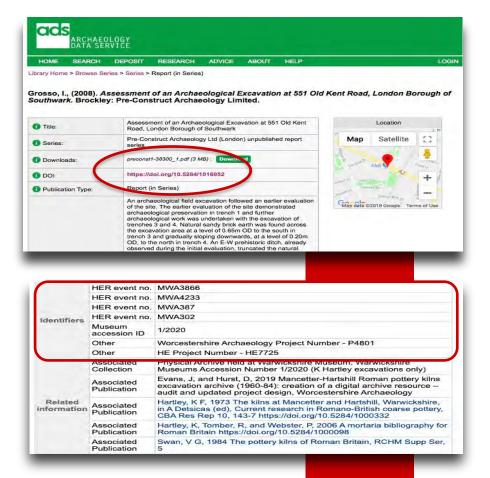
Spreadsheet metadata	CSV	9 Kb
Spreadsheet conventions	PDF	111 Kb

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
Timber Drawing register	CSV	1 Kb
Building Recording Drawing register	CSV	1 Kb

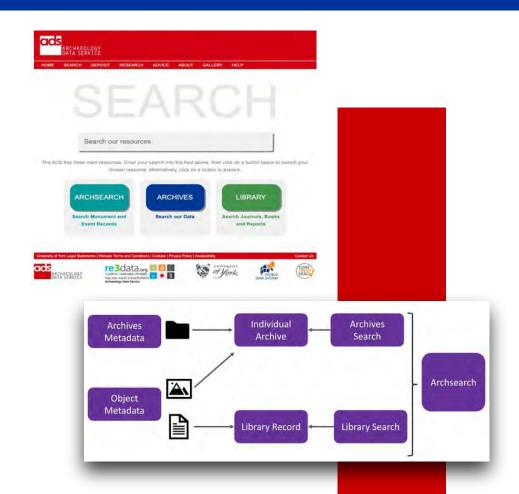
F3. Metadata clearly and explicitly include the identifier of the data they describe

- 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).



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.



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

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

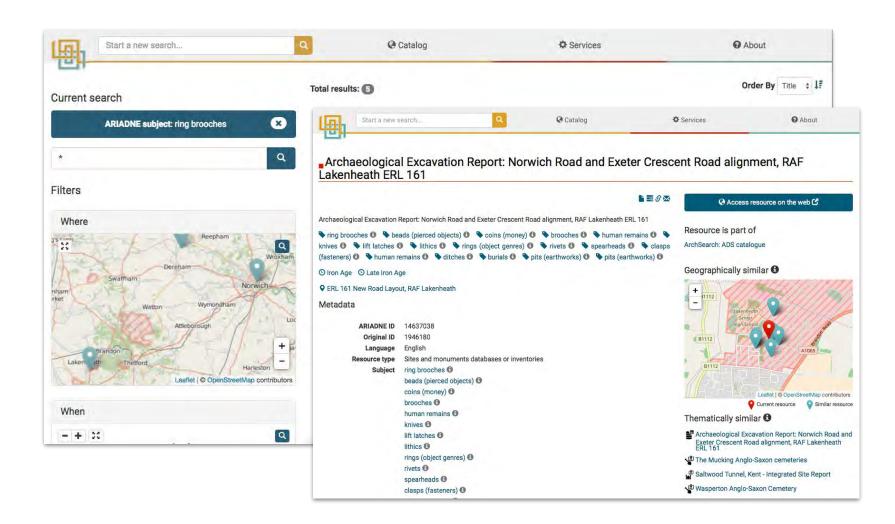
- **ARIADNEPlus Portal**
- Heritage Gateway
- **DataCite**
- The Keepers Registry
- Natural Environment Research Council (NERC) data discovery portal
- Marine Environmental Data and Information Network (MEDIN) data portal
- Europeana











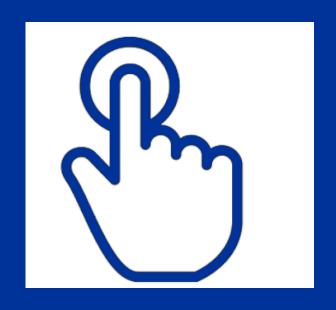
Accessable

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



NTEROPERABILITY

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.









NTEROPERABILITY

12. (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

NTEROPERABILITY

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.

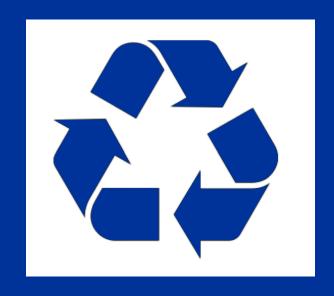
	HER event no.	MWA3866	
	HER event no.	MWA4233	
Identifiers	HER event no.	MWA387	
	HER event no.	MWA302	
i dominio d	Museum accession ID	1/2020	
	Other	Worcestershire Archaeology Project Number - P4801	
	Other	HE Project Number - HE7725	
	Associated Collection	Physical Archive held at Warwickshire Museum. 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	
Related nformation	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	
- 6	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	

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

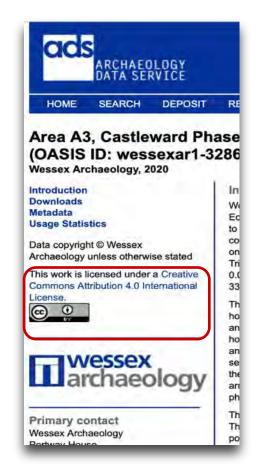
R1.3. (Meta)data meet domain-relevant community standards



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.



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.

preadsheets		
Spreadsheet metadata	CSV	9 Kb
Spreadsheet conventions	PDF	111 Kb

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

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

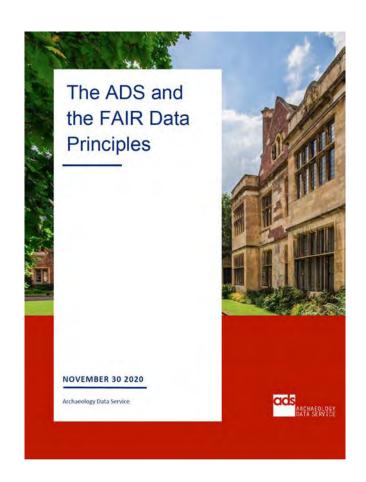
- Dublin Core metadata for collection level metadata.
- Data must be accompanied by appropriate, file specific 'technical' metadata derived from recognised community standards and standardised templates provided to ensure consistency.
- All (meta)data is accepted, preserved and disseminated in sustainable,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

Summary

- How to make data Findable, Accessible and Interoperable are well understood, with examples of well-implemented methodologies and technologies
- Still lots of work to do on **Reusable**: Can measure quantitative reuse with web stats, but how to measure qualitative reuse is the next frontier
- FAIR makes each element of equal importance
- FAIR principles are just a useful lens for understanding your own situation with regard to current best practice

ADS FAIR Audit

- Determined we should do an audit that would result in internally and externally-facing reports
- Internal report for ADS staff to inform our strategic planning process using the RDA FAIR Data Maturity Model tool, so that our progress can be measured over time
- External report for users/depositors to show how data deposited with ADS is FAIR data





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

- 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

WHAT CAN YOU DO?

What are the CARE Principles?

- **Collective Benefit:** Data ecosystems shall be designed and function in ways that enable Indigenous Peoples to derive benefit from the data.
- Authority to Control: Indigenous Peoples' rights and interests in Indigenous data must be recognised and their authority to control such data be empowered. Indigenous data governance enables Indigenous Peoples and governing bodies to determine how Indigenous Peoples, as well as Indigenous lands, territories, resources, knowledges and geographical indicators, are represented and identified within data.
- **Responsibility:** Those working with Indigenous data have a responsibility to share how those data are used to support Indigenous Peoples' self-determination and collective benefit. Accountability requires meaningful and openly available evidence of these efforts and the benefits accruing to Indigenous Peoples.
- **Ethics:** Indigenous Peoples' rights and wellbeing should be the primary concern at all stages of the data life cycle and across the data ecosystem.

What are the CARE Principles?



https://www.gida-global.org/care



Archaeology Data Service

http://archaeologydataservice.ac.uk

Department of Archaeology
The King's Manor

University of York

York, YO1 7EP

Thank you!

Dr Holly Wright

Research Projects Manager, ADS holly.wright@york.ac.uk



