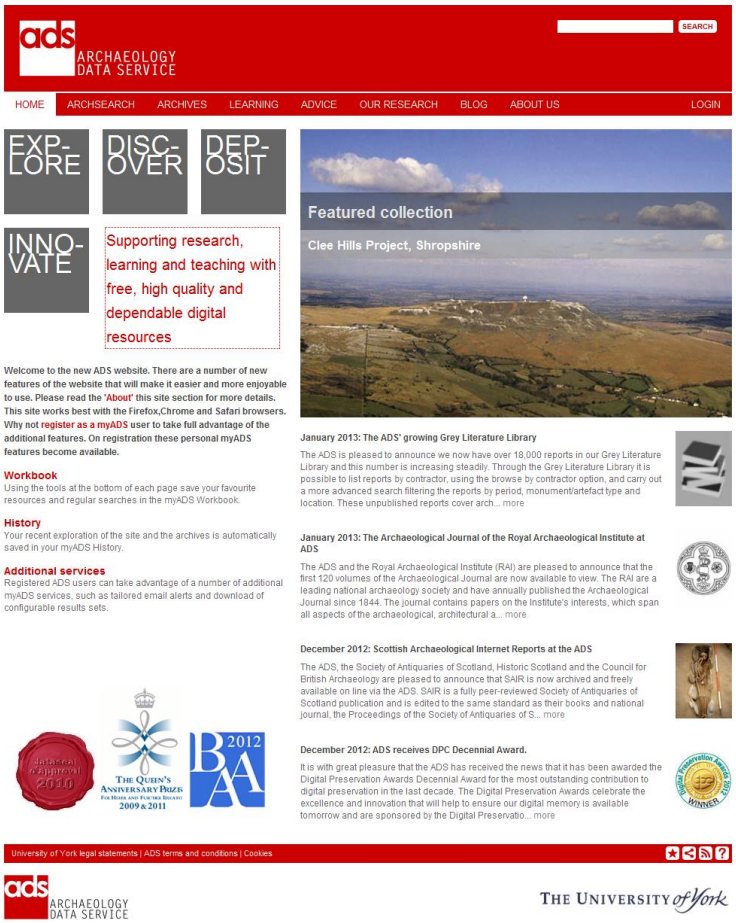
The Archaeology Data Service: Data preservation and persistent identifiers in UK archaeology

ARCHAEOLOGY DATA SERVICE

ODIN codesprint and first year conference

Catherine Hardman
Deputy Director

The ADS: Who we are and what we do



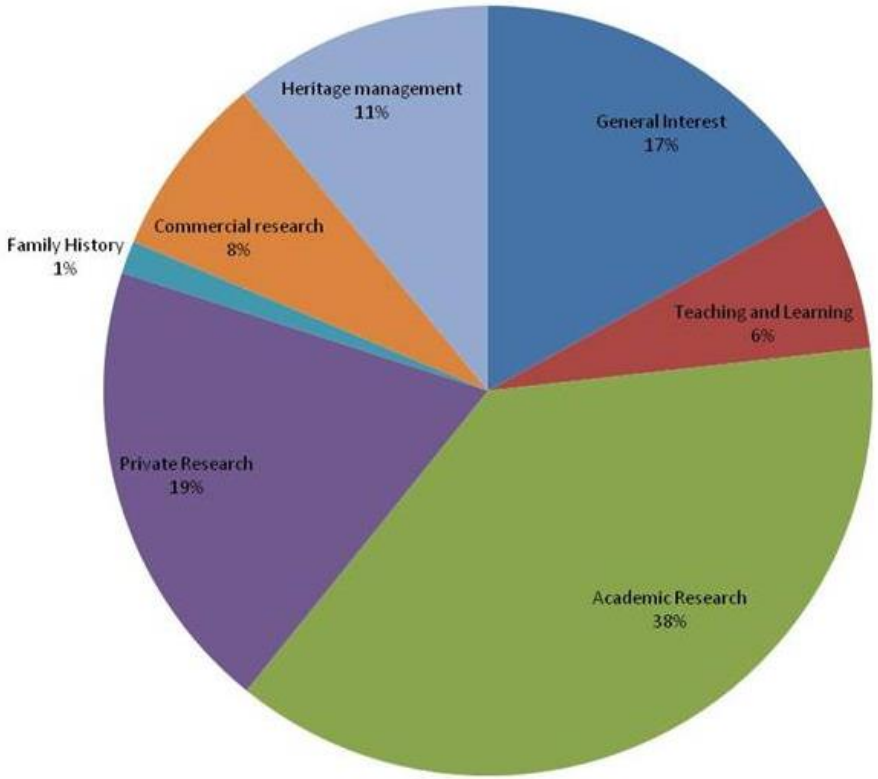
- Founded 1996
- Department of Archaeology
- University of York
- Collections
  - 1,100,000 metadata records
  - 21,000+ unpublished fieldwork reports
  - 700+ rich archives
- Guides to Good Practice
- DPC Decennial Award 2012

Why bother citing datasets and link to publications?

- recognition that data generated in the course of research are just as valuable to academia as papers and monographs.
- the journal paper owes its success in part to the control systems put in place around it:
  - mechanisms allowing authors to be open about their research while still receiving due credit;
  - metrics used to enable rewards for authors and their institutions;
  - and archives ensuring that the work is permanently available.

Primary reuse of Data

Results from a recent survey (2011) show that 44% of reuse of our data sets is for academic research or teaching and learning where good citation practice is expected.



Requirements for data citations

- It must be able to identify uniquely the object cited.
- It must be able to identify subsets of the data as well as the whole dataset.
- It must provide the reader with enough information to access the dataset (and provide a mechanism for accessing the dataset through the Web).
- It must be usable by humans and software tools
- There need to be services that use the citations in metrics to support the academic reward system.

Elements of a data citation

- **Author.**
- **Publication date.**
- **Title.**
- **Edition.**
- **Version.**
- **Feature name and URI.**
- **Resource type.**
- **Publisher.**
- **Unique numeric fingerprint (UNF).**
- **Identifier.**
- **Location.**

Commonly used styles of citation

- **APA** Cool, H. E. M., & Bell, M. (2011). *Excavations at St Peter's Church, Barton-upon-Humber* [Data set]. doi:10.5284/1000389
- **Chicago (notes)** 2. H. E. M. Cool and Mark Bell, Excavations at St Peter's Church, Barton-upon-Humber (accessed May 1, 2011), doi:10.5284/1000389.
- Cool, H. E. M., and Mark Bell. Excavations at St Peter's Church, Barton-upon-Humber (accessed May 1, 2011). doi:10.5284/1000389.
- **MLA** Cool, H. E. M., and Mark Bell. "Excavations at St Peter's Church, Barton-upon-Humber." Archaeology Data Service, 2001. Web. 1 May 2011. <http://dx.doi.org/10.5284/1000389>.
- **Oxford** Cool, H. E. M. & Bell, M. (2011) *Excavations at St Peter's Church, Barton-upon-Humber* [data-set]. York: Archaeology Data Service [distributor] <DOI 10.5284/1000389>.

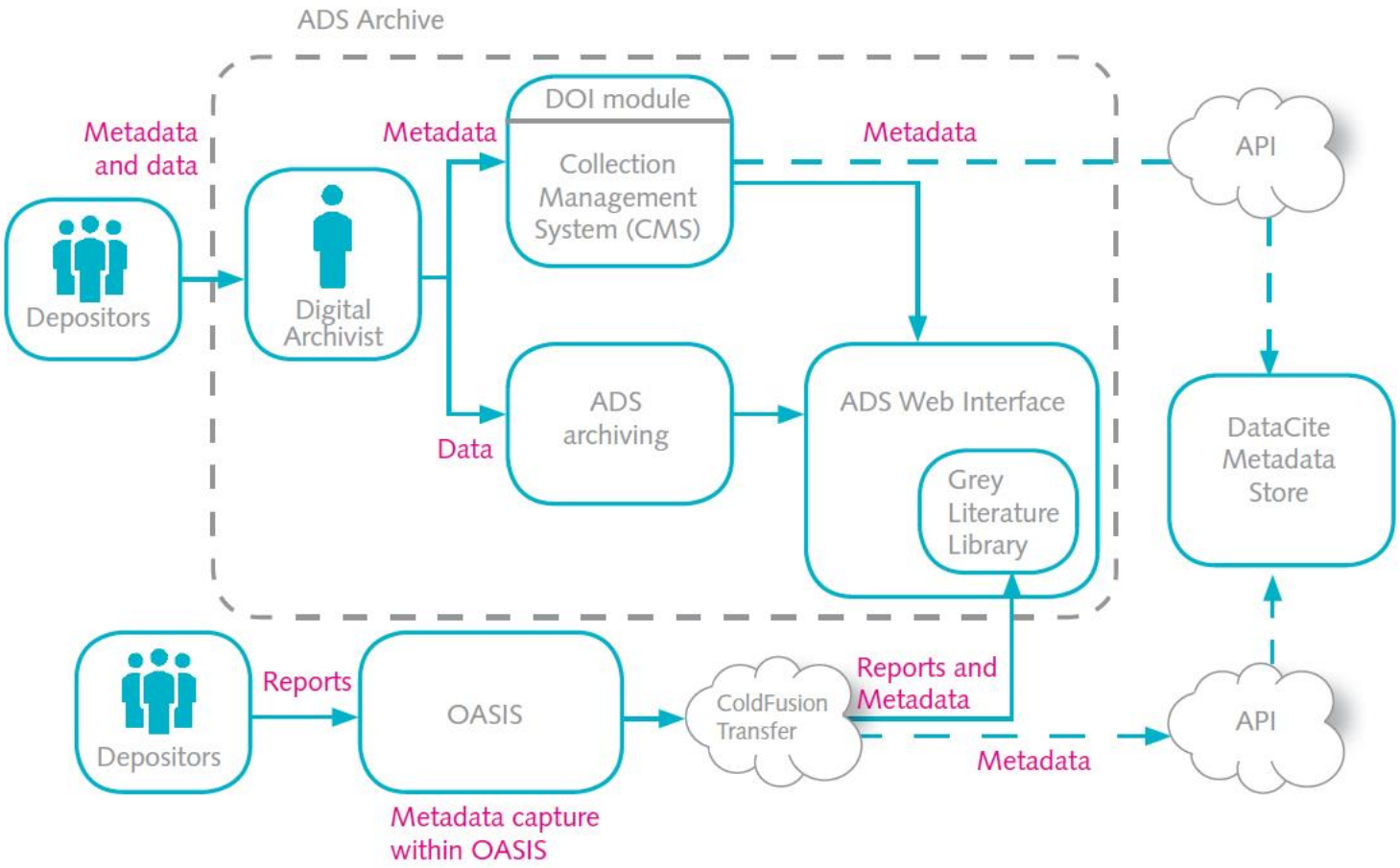
Digital Object Identifiers

Types of persistent identifier e.g Handles, Archival Resource Keys (ARKs) and Persistent URLs (PURLs), all can be resolved to an Internet location. The scheme that is gaining most traction is the Digital Object Identifier (DOI).

http://dx.doi.org/ 10.5284 / 1000389

resolver service | prefix (assigning body) | suffix (resource)

How the infrastructure of the ADS looks



Working with the British Library

- Why did we go with DOIs?
  - Familiarity within domain
  - Centralised resolution
  - Metadata
  - Discovery
  - API

- Why did we need them?
  - Nature of archaeology is particularly destructive

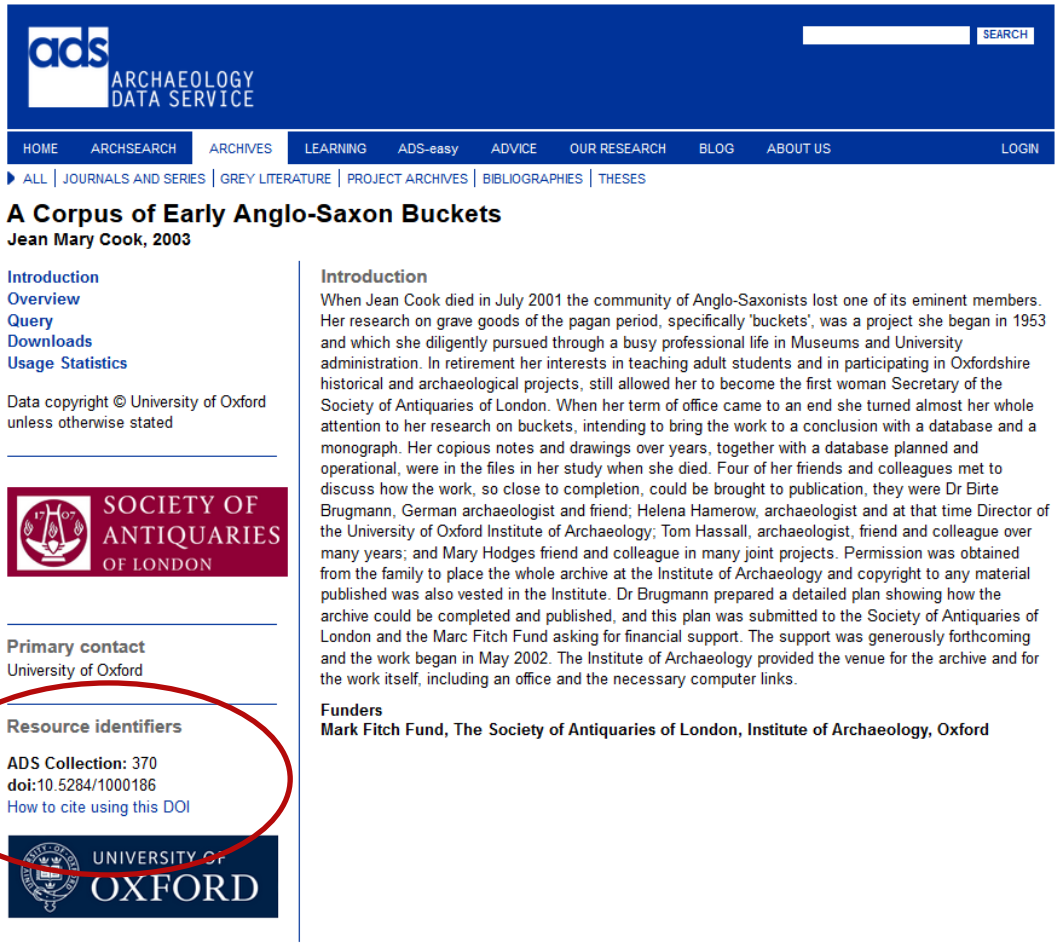
http://archaeologydataservice.ac.uk

Current issues: Granularity

A dataset may form part of a collection and be made up of several files, each containing several tables, each containing many data points. There are also more abstract subsets that can be used, such as features and parameters. At the other end of the scale, it is not always obvious what would constitute an intellectual whole: it can be argued, for example, that investigations should be the primary units of citation rather than individual datasets

http://archaeologydataservice.ac.uk

Collection level



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A Corpus of Early Anglo-Saxon Buckets

Jean Mary Cook, 2003

Introduction
Overview
Query
Downloads
Usage Statistics

Data copyright © University of Oxford unless otherwise stated

SOCIETY OF ANTIQUARIES OF LONDON

Primary contact
University of Oxford

Resource identifiers

ADS Collection: 370
doi:10.5284/1000186
How to cite using this DOI

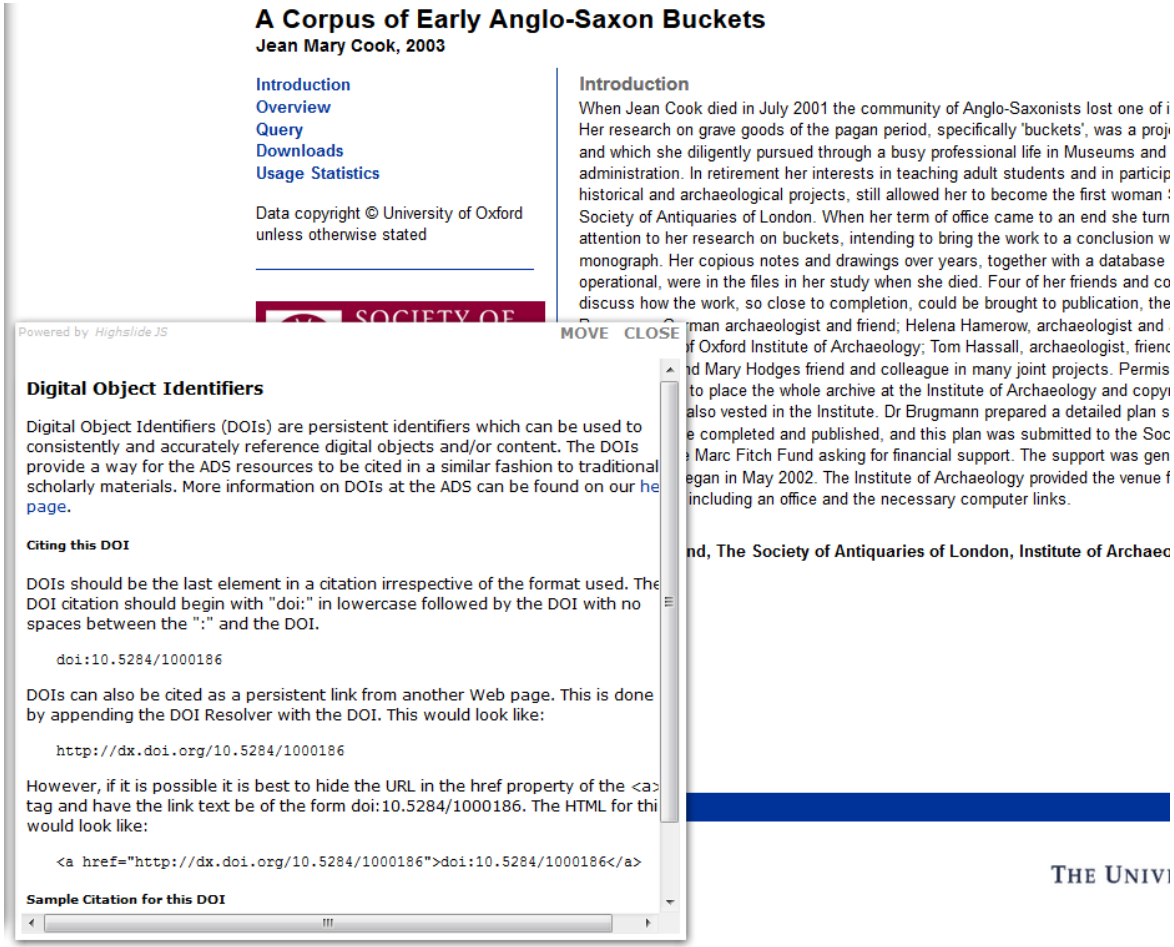
UNIVERSITY OF OXFORD

Introduction

When Jean Cook died in July 2001 the community of Anglo-Saxonists lost one of its eminent members. Her research on grave goods of the pagan period, specifically 'buckets', was a project she began in 1953 and which she diligently pursued through a busy professional life in Museums and University administration. In retirement her interests in teaching adult students and in participating in Oxfordshire historical and archaeological projects, still allowed her to become the first woman Secretary of the Society of Antiquaries of London. When her term of office came to an end she turned almost her whole attention to her research on buckets, intending to bring the work to a conclusion with a database and a monograph. Her copious notes and drawings over years, together with a database planned and operational, were in the files in her study when she died. Four of her friends and colleagues met to discuss how the work, so close to completion, could be brought to publication, they were Dr Birte Brugmann, German archaeologist and friend; Helena Hamerow, archaeologist and at that time Director of the University of Oxford Institute of Archaeology; Tom Hassall, archaeologist, friend and colleague over many years; and Mary Hodges friend and colleague in many joint projects. Permission was obtained from the family to place the whole archive at the Institute of Archaeology and copyright to any material published was also vested in the Institute. Dr Brugmann prepared a detailed plan showing how the archive could be completed and published, and this plan was submitted to the Society of Antiquaries of London and the Marc Fitch Fund asking for financial support. The support was generously forthcoming and the work began in May 2002. The Institute of Archaeology provided the venue for the archive and for the work itself, including an office and the necessary computer links.

Funders
Mark Fitch Fund, The Society of Antiquaries of London, Institute of Archaeology, Oxford

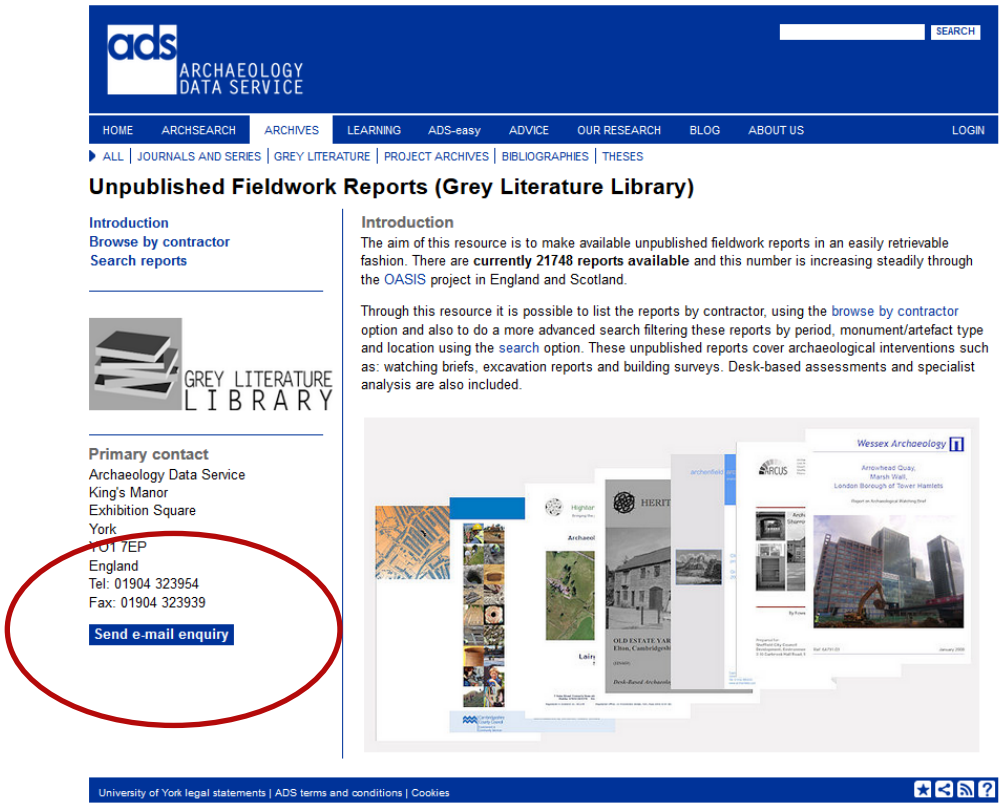
…with help for how to cite the DOI



But there are exceptions where required

- The ADS' Grey Literature Library

No DOI present



Each report has a DOI instead

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Unpublished Fieldwork Reports (Grey Literature Library)

Introduction
Browse by contractor
Search reports

GREY LITERATURE LIBRARY

Primary contact
Archaeology Data Service
King's Manor
Exhibition Square
York
YO1 7EP
England
Tel: 01904 323954
Fax: 01904 323939

Send e-mail enquiry

Resource identifiers
doi:10.5284/1003485
How to cite using this DOI

Details of Document
Bibliographic Reference and files

Timberlake, S. (2008) Huntingdon Racecouse, Brampton An Archaeological Evaluation. Cambridge: Cambridge Archaeological Unit , Report No. 854. doi: 10.5284/1003485

Click on a button to open a file, or right click and use file --> save as from your browser menu to save the file to your computer. Alternatively, if the report is available online, click on the link to open the resource in a new window:

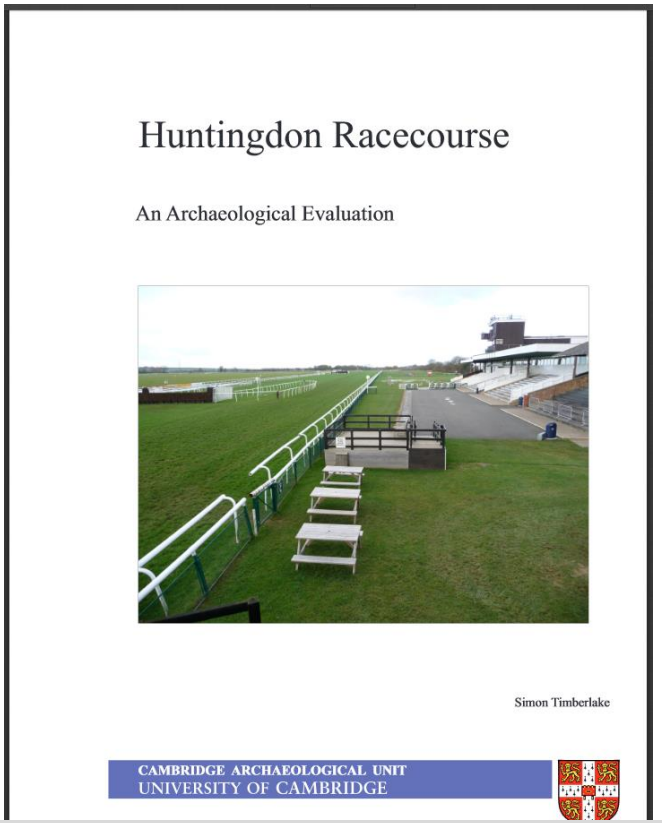
cambridg3-52764_1.pdf	PDF	4 Mb

<< display document details >>

Site details

Location	
Site name	Huntingdon Racecourse
Parish	BRAMPTON
District	HUNTINGDONSHIRE
County	CAMBRIDGESHIRE
Country	ENGLAND
Grid reference	TL 2074 7220 (point)

Monuments and Finds	
NONE	NONE
GLASS BOTTLE	POST MEDIEVAL

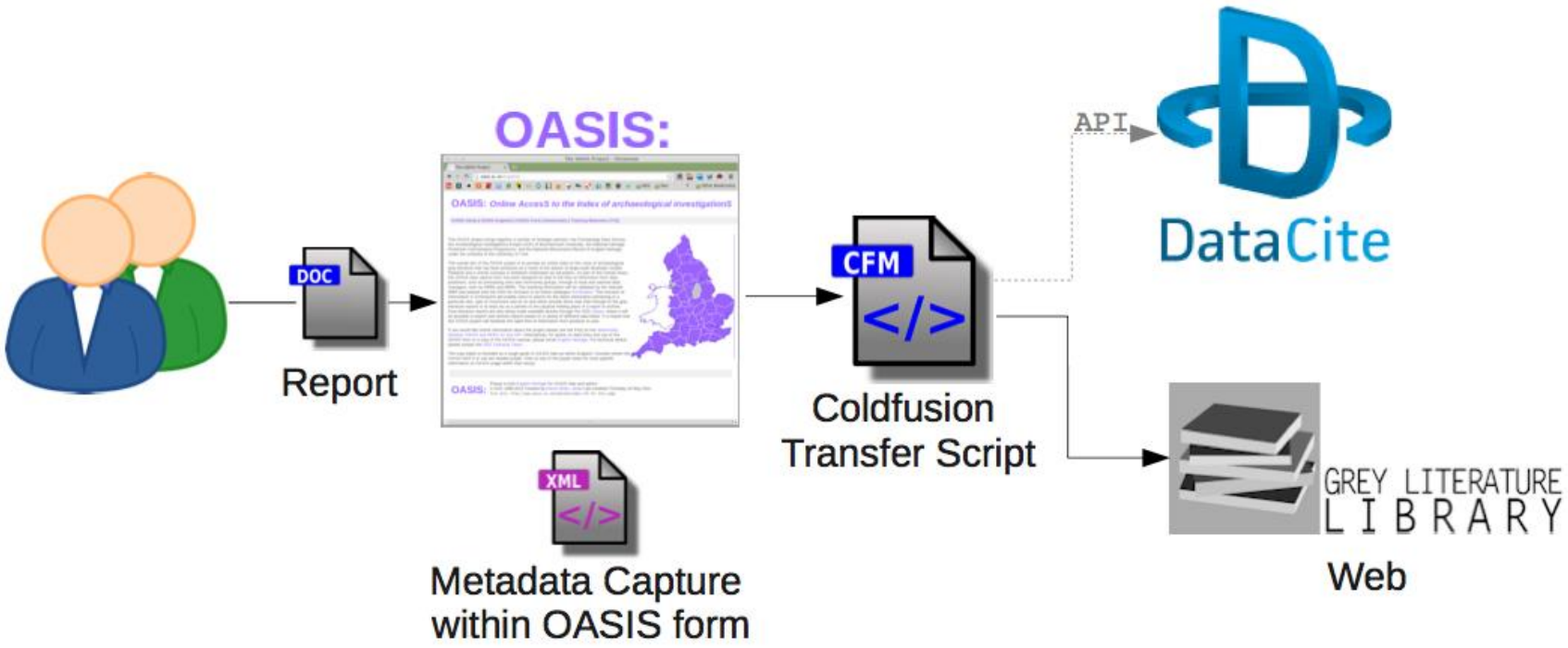

Huntingdon Racecourse

An Archaeological Evaluation

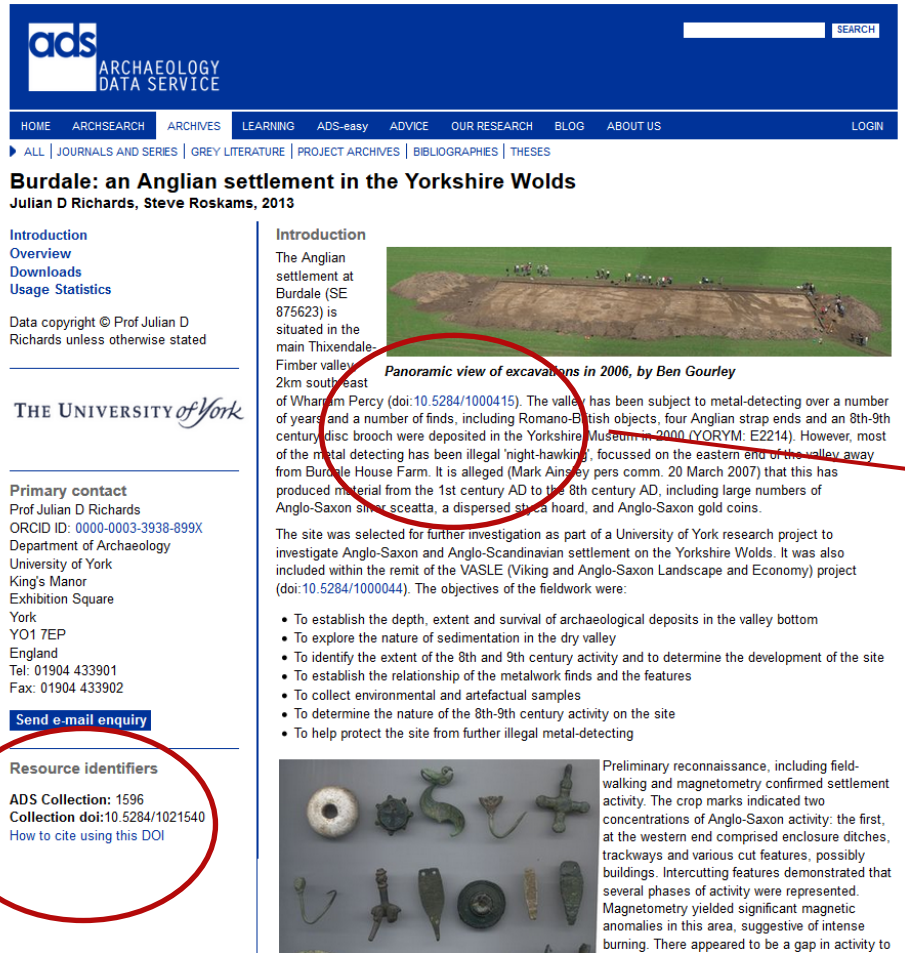
Simon Timberlake

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE

The process for allocating DOIs to grey literature

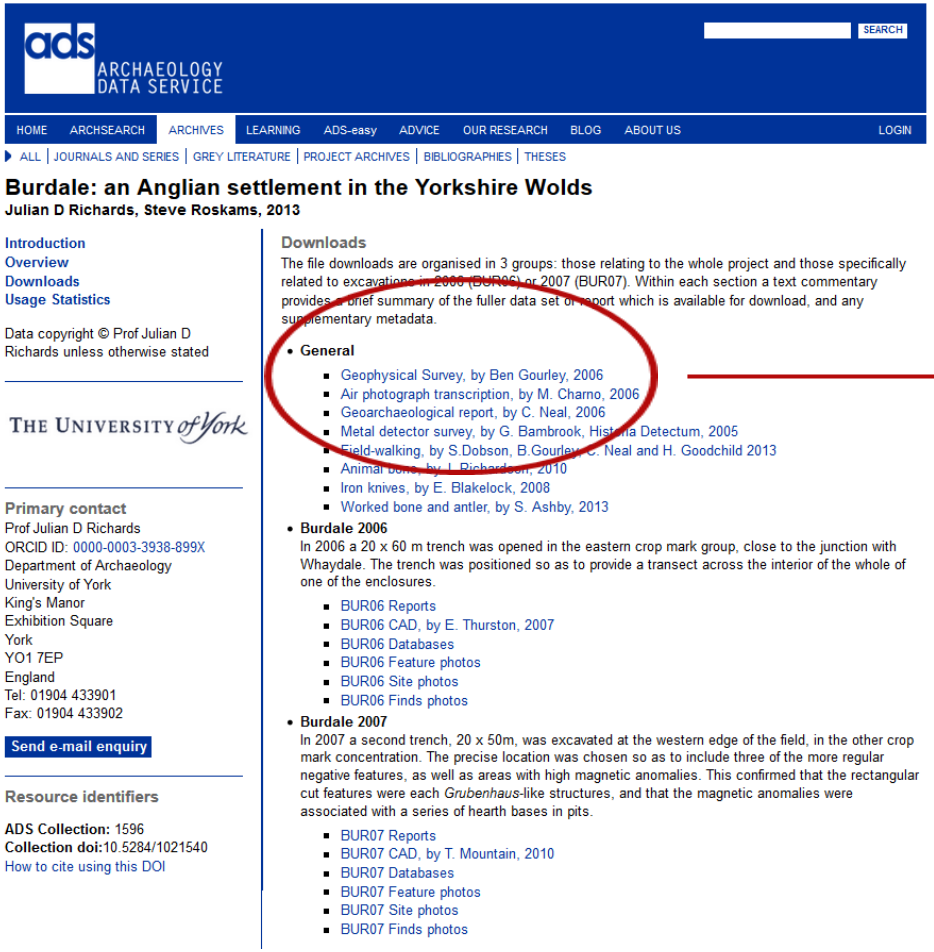


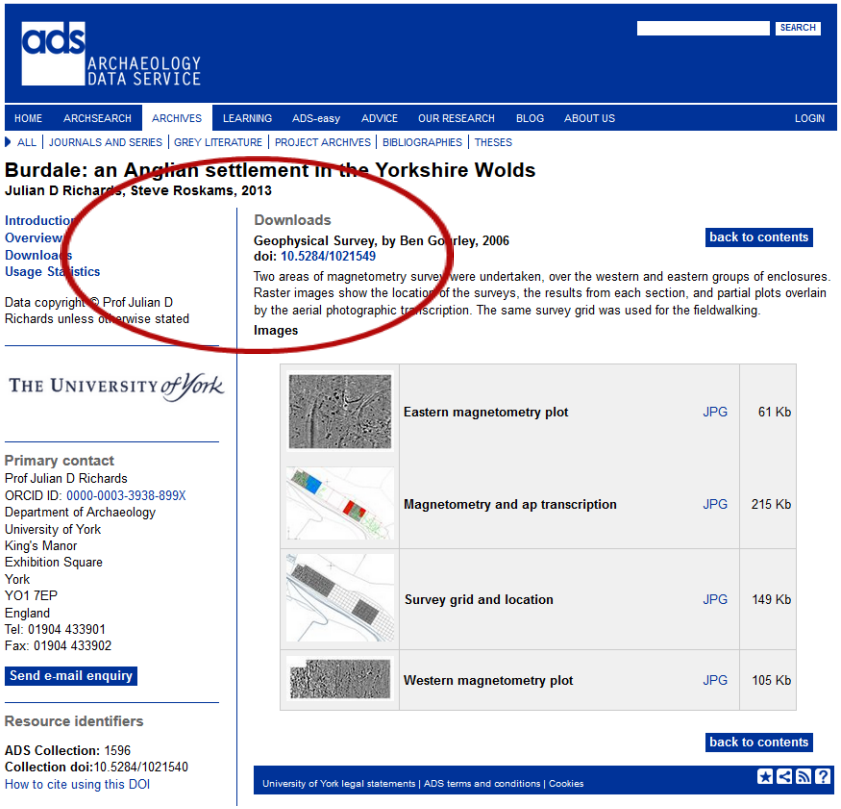
Starting to explore granularity within archives



Internal references to other collections

DOIs within Collections too





Other Issues : Versioning

Other Issues: Embargoes

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Archaeological Evaluation of the Anglo-Saxon and Viking site at Torksey Lincolnshire

Dawn Hadley, Julian D Richards, 2011

This is a landing page for the digital archive for 'Archaeological Evaluation of the Anglo-Saxon and Viking site at Torksey Lincolnshire'.

The digital archive will be available at this doi (10.5284/1018222) in due course.

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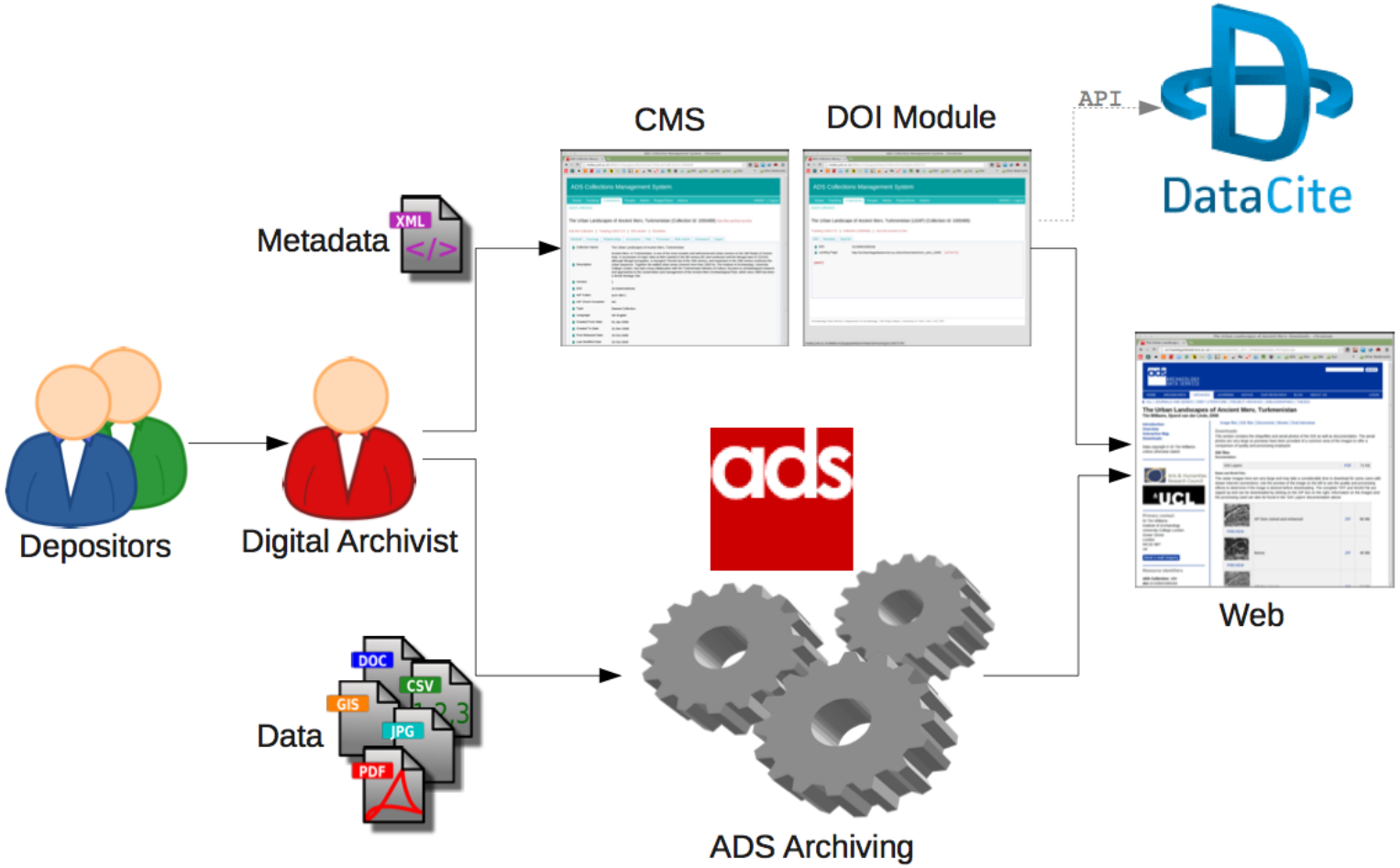
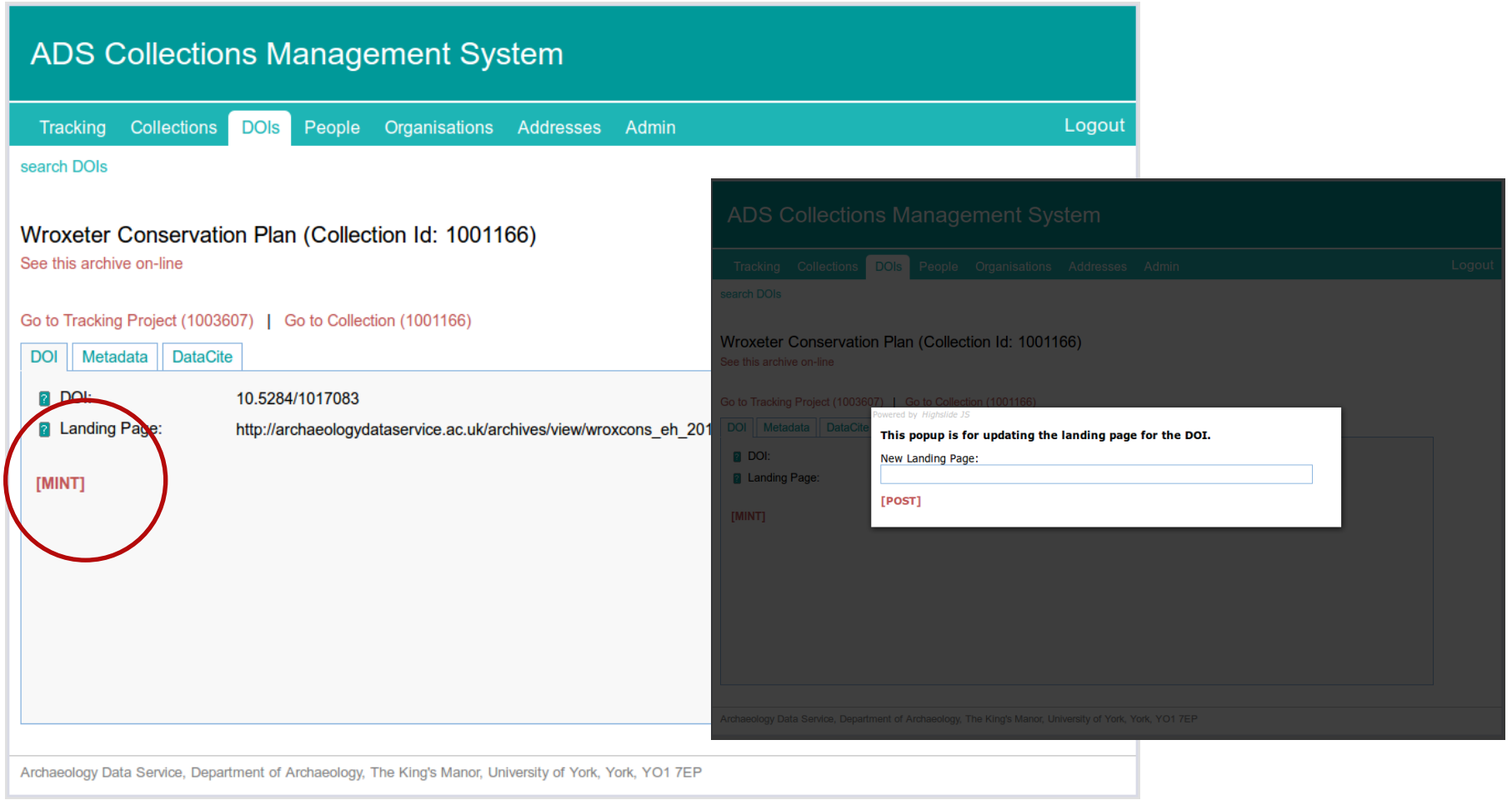
THE UNIVERSITY of York

How do we implement it in the ADS



The ADS' Collections Management System



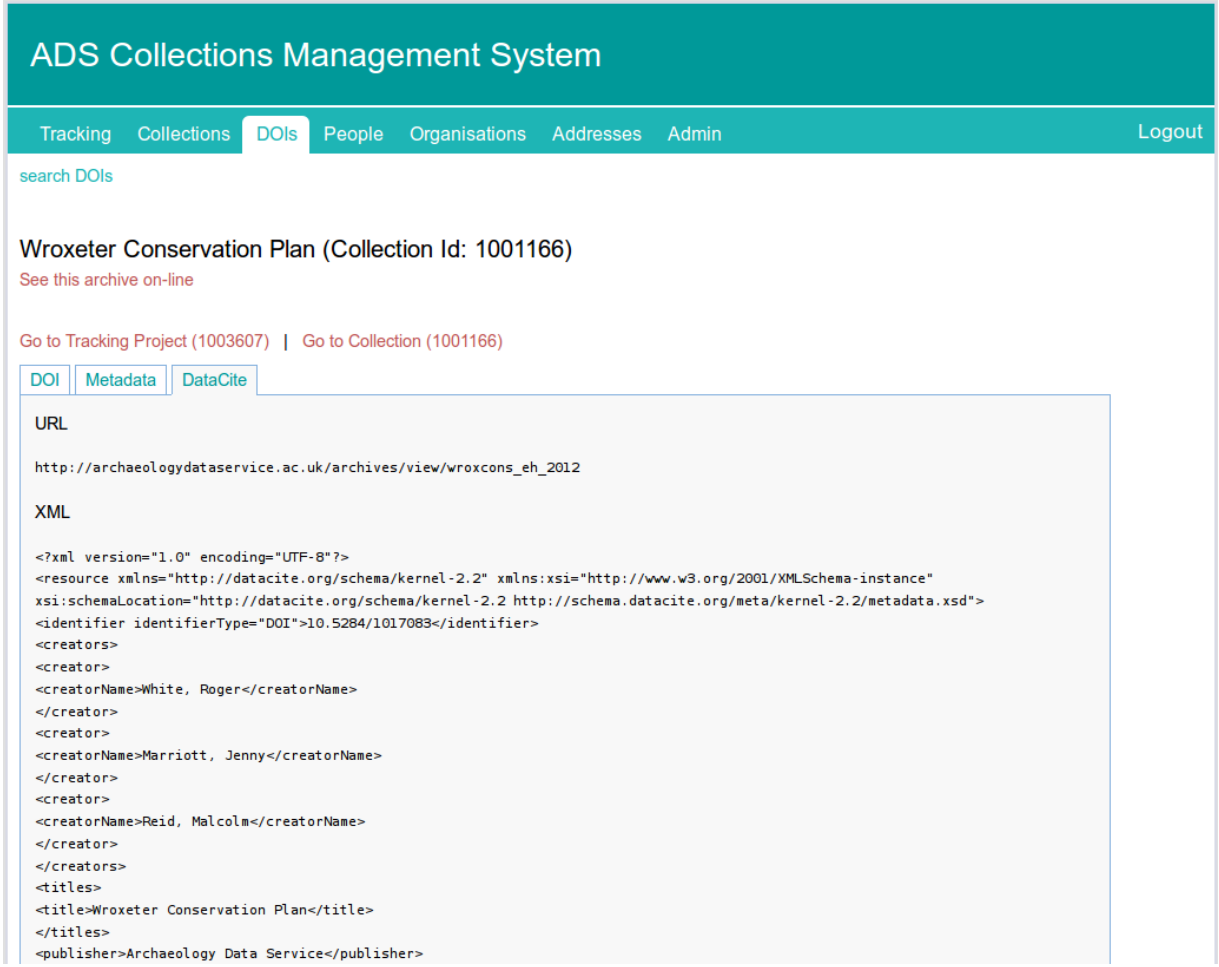
DOI | Metadata | DataCite

This is the current metadata for the active DOI (**10.5284/1017083**) related to this archive. For previous versions of the metadata for this DOI, go to the DataCite MDS.

	CMS	DATACITE
Creator(s):	Roger White Jenny Marriott Malcolm Reid	Roger White Jenny Marriott Malcolm Reid
Title:	Wroxeter Conservation Plan	Wroxeter Conservation Plan
Publication Year:	2012	2012
Subject(s):	Wroxeter (England)--Antiquities, Roman [LCSH] BATHS [NMR Monument Types] LEGIONARY FORTRESS [NMR Monument Types] TOWN [NMR Monument Types] SETTLEMENT [NMR Monument Types] FORUM [NMR Monument Types] MACELLUM [NMR Monument Types] ROAD [NMR Monument Types] [NMR Monument Types (class)] [NMR Monument Types (class)] [NMR Monument Types (class)]	Wroxeter (England)--Antiquities, Roman [LCSH] BATHS [NMR Monument Types] LEGIONARY FORTRESS [NMR Monument Types] TOWN [NMR Monument Types] SETTLEMENT [NMR Monument Types] FORUM [NMR Monument Types] MACELLUM [NMR Monument Types] ROAD [NMR Monument Types] null [NMR Monument Types (class)] null [NMR Monument Types (class)] null [NMR Monument Types (class)]
Contributor(s):	English Heritage [Funder] University of Birmingham [Copyright holder] English Heritage [Copyright holder]	English Heritage [Funder] University of Birmingham [RightsHolder] English Heritage [RightsHolder]
Date Created:	01-Jan-2009	01-Jan-2009
Date Created:	31-Dec-2010	31-Dec-2010
Alternate Identifier:	1166	1166
Related Identifier(s):		
Version:	1	1
Description:	In 2009, English Heritage commissioned a Conservation Plan for Wroxeter Roman City from Dr Roger White, Ironbridge Institute, University of Birmingham. This was one of two sites to act as a pilot project (EH Project Number AA090778/CP) to test the application of the then	In 2009, English Heritage commissioned a Conservation Plan for Wroxeter Roman City from Dr Roger White, Ironbridge Institute, University of Birmingham. This was one of two sites to act as a pilot project (EH Project Number AA090778/CP) to test the application of the then

ARCHAEOLOGY DATA SERVICE

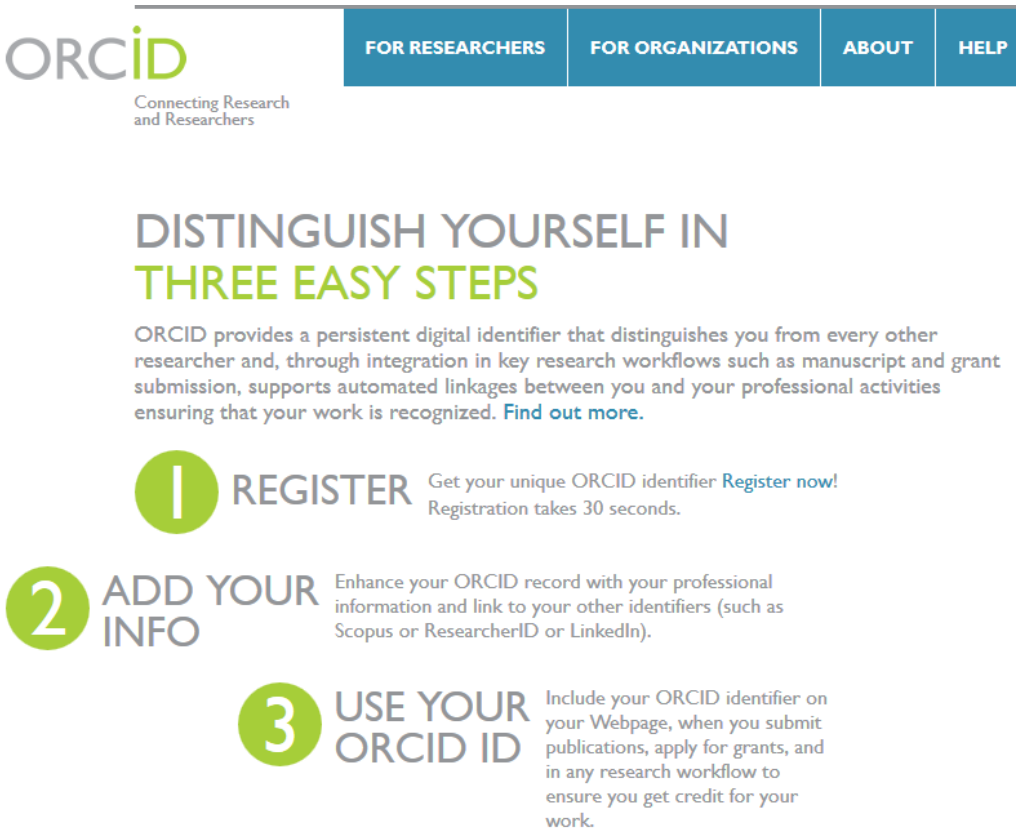
Collection Management System



Contributor identifiers

- The Open Researcher and Contributor Identifier (ORCID) is a scheme specifically aimed at academic authors.[26] It has gained support from over 200 organisations, including major academic publishers. The underlying infrastructure is still being developed as of mid-2011, but the intention is to maintain a registry of IDs, each associated with a researcher profile and a list of publications to which that researcher has contributed. The registry will also allow the profile to be linked to identifiers and profiles from other schemes such as Thomson Reuters' ResearcherID, Scopus, Scholar Universe, and RePEc

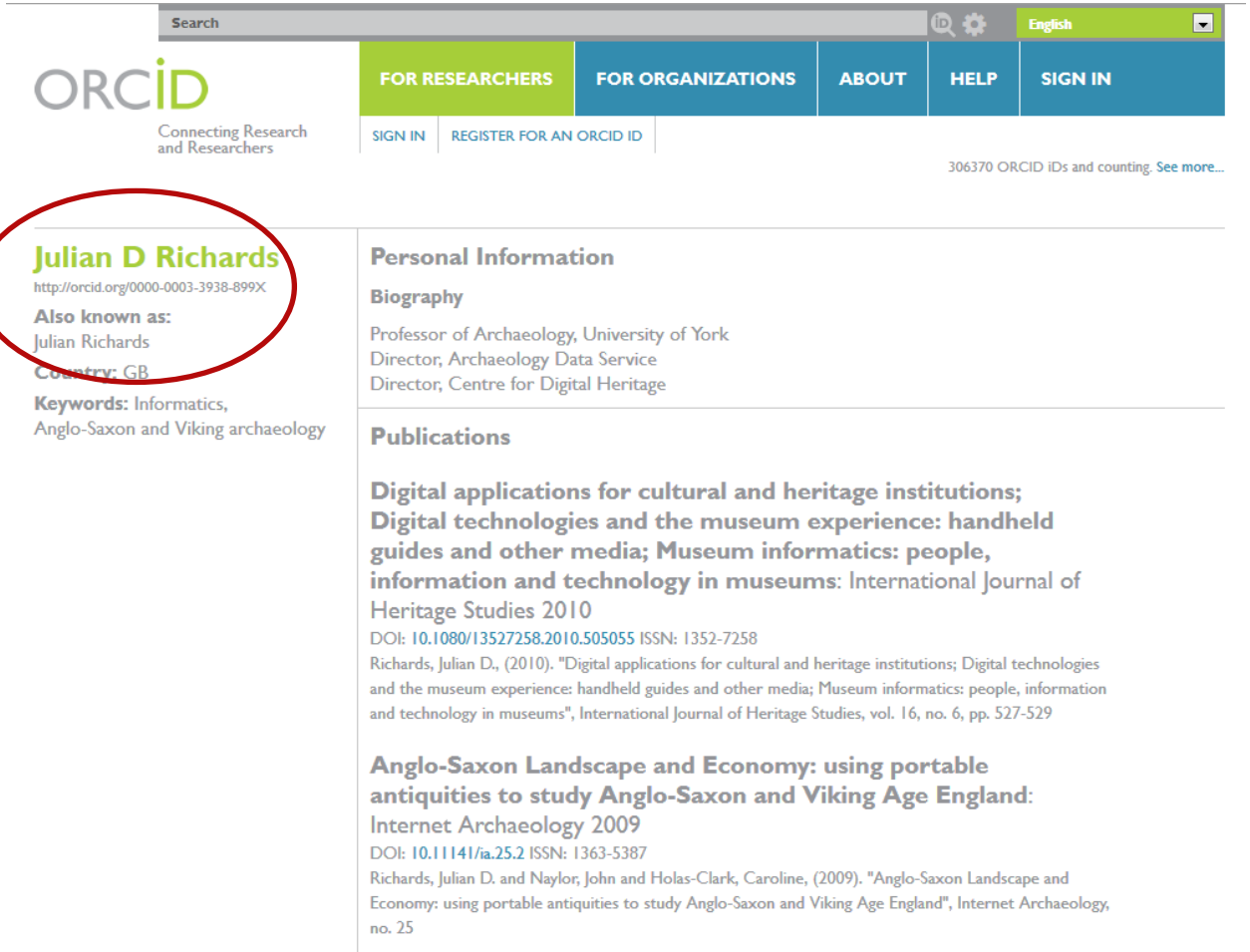
ORCiD


ORCID
Connecting Research and Researchers
FOR RESEARCHERS
FOR ORGANIZATIONS
ABOUT
HELP
DISTINGUISH YOURSELF IN THREE EASY STEPS
ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized. Find out more.
1 REGISTER
Get your unique ORCID identifier Register now! Registration takes 30 seconds.
2 ADD YOUR INFO
Enhance your ORCID record with your professional information and link to your other identifiers (such as Scopus or ResearcherID or LinkedIn).
3 USE YOUR ORCID ID
Include your ORCID identifier on your Webpage, when you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.

Would the real Julian Richards step forward?

?

(The real) Julian's ORCiD record



Search

English

ORCID
Connecting Research and Researchers

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SIGN IN | REGISTER FOR AN ORCID ID

306370 ORCID iDs and counting. See more...

Julian D Richards
http://orcid.org/0000-0003-3938-899X

Also known as:
Julian Richards

Country: GB

Keywords: Informatics, Anglo-Saxon and Viking archaeology

Personal Information

Biography

Professor of Archaeology, University of York
Director, Archaeology Data Service
Director, Centre for Digital Heritage

Publications

Digital applications for cultural and heritage institutions; Digital technologies and the museum experience: handheld guides and other media; Museum informatics: people, information and technology in museums: International Journal of Heritage Studies 2010
DOI: 10.1080/13527258.2010.505055 ISSN: 1352-7258
Richards, Julian D., (2010). "Digital applications for cultural and heritage institutions; Digital technologies and the museum experience: handheld guides and other media; Museum informatics: people, information and technology in museums", International Journal of Heritage Studies, vol. 16, no. 6, pp. 527-529

Anglo-Saxon Landscape and Economy: using portable antiquities to study Anglo-Saxon and Viking Age England: Internet Archaeology 2009
DOI: 10.11141/ia.25.2 ISSN: 1363-5387
Richards, Julian D. and Naylor, John and Holas-Clark, Caroline, (2009). "Anglo-Saxon Landscape and Economy: using portable antiquities to study Anglo-Saxon and Viking Age England", Internet Archaeology, no. 25

But how do creators get the maximum benefit?

internet archaeology

Internet Archaeology: Data Papers

Sometimes the level of recognition gained from depositing your archaeological research data with an accredited repository is limited, so in an attempt to redress this, Internet Archaeology is working with its sister service ADS (Archaeology Data Service) to establish a series of published, peer-reviewed 'data papers'. You have put a lot of effort into creating your data and an IA data paper allows you to get credit for it, to publicise and share it with the community.

What is a Data Paper?

A data paper is a short, peer-reviewed publication that is designed to raise awareness of your dataset and its re-use potential. A data paper describes the contents of your dataset (already or soon to be deposited with an accredited repository*), the methods used to create that dataset and, most importantly, what further avenues of research are possible.

See our first published data paper by Stephanie Wynne-Jones and Jeffrey Fleisher.

A data paper is an extension of the 'integrated publication' model we have been developing with ADS since our very earliest issues, integrating data within the article narrative. It differs in that the article is much shorter (and so able to be published more quickly), but it also explicitly credits the referee and makes their comments available to all. A data paper may be used to complement and enhance a related IA publication or help add context to a standalone archive.

The main points that define a data paper are:

- It describes the content and the re-use potential of a particular dataset hosted in a repository (usually by the same authors)
- The data paper is accompanied by an unanonymised referee (peer) statement on the data's re-use potential and significance
- It is an edited, Open Access publication, disseminated under a CC-BY licence
- It is assigned a CrossRef DOI
- It links back to the original deposited dataset

* *We are working in the first instance with the ADS, but other trusted repositories will be added in due course.*

Credit due….

Burdale: An Anglian Settlement in the Yorkshire Wolds (Data Paper)

Julian D Richards* and Steve Roskams*

*Department of Archaeology, University of York, UK. julian.richards@york.ac.uk (0000-0003-3938-899X) / steve.roskams@york.ac.uk

Cite this as: Richards, J., and Roskams, S. (2013). Burdale: An Anglian Settlement in the Yorkshire Wolds (Data Paper). Internet Archaeology, (35). doi:10.11141/ia.35.8

Dataset Location

This dataset has been deposited with the Archaeology Data Service. doi: 10.5284/1021540

Referee

Referee statement

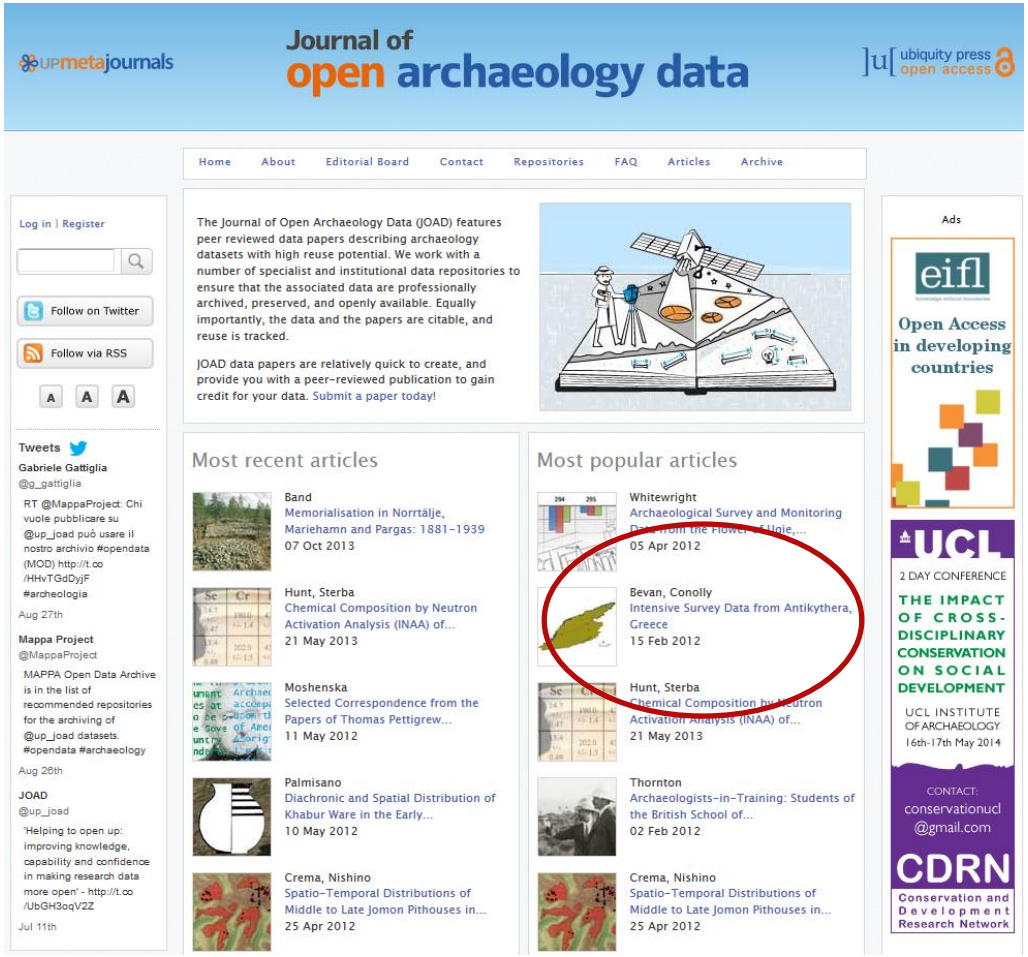
Dataset Content

The Burdale digital archive (Richards and Roskams 2013) comprises a broad range of primary and secondary data derived from fieldwork and post-excavation analysis. It complements the summary report published as Richards and Roskams (2012).

Full stratigraphic reports are downloadable for each season of excavation and can be related to the sequence of CAD plans also available. These can, in turn, be set within the wider site map derived from aerial photography and geophysical survey. Final reports are available for the pottery, spindlewhorls, and worked bone and antler (Ashby 2013). Other finds are simply listed in the finds databases, split by excavation year, with some preliminary notes on the ironwork included in the investigative conservation reports. The non-ferrous finds assemblage was largely missing, apart from a small number of topsoil finds recovered during metal detector surveys. Given the alleged wealth of the site, and the interest in it from 'nighthawks' we have to assume that unfortunately, most of the coinage and copper alloy metalwork has been collected from the ploughsoil over many years and is in private hands or has been sold for profit. In common with other Yorkshire sites Burdale produced very little early medieval pottery but this is likely to be a real absence rather than a product of recovery bias. The animal bone assemblage (Richardson 2010) is one of the most important elements of the archive. Over 300 images are also presented, split by year of excavation.

The file downloads are organised in 3 groups: those relating to the whole project and those specifically related to excavations in 2006 (BUR06) or 2007 (BUR07).

Other data paper initiatives



Acknowledgements and references

Ball, A. & Duke, M. (2012). 'How to Cite Datasets and Link to Publications'. DCC How-to Guides. Edinburgh: Digital Curation Centre.

Available online: http://www.dcc.ac.uk/resources/how-guides

Out of Cite, Out of Mind: the current state of practice, policy and technology for the citation of data. Data Science Journal Volume 12 (September 2013)

Working with the British Library and DataCite: Institutional Case studies (2013)

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catherine.hardman@york.ac.uk

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