

Data Federation and Interoperability in Europe

FAIMS workshop, Sydney , Australia, 16 August 2012



Julian Richards, Director
Archaeology Data Service

Research Infrastructure

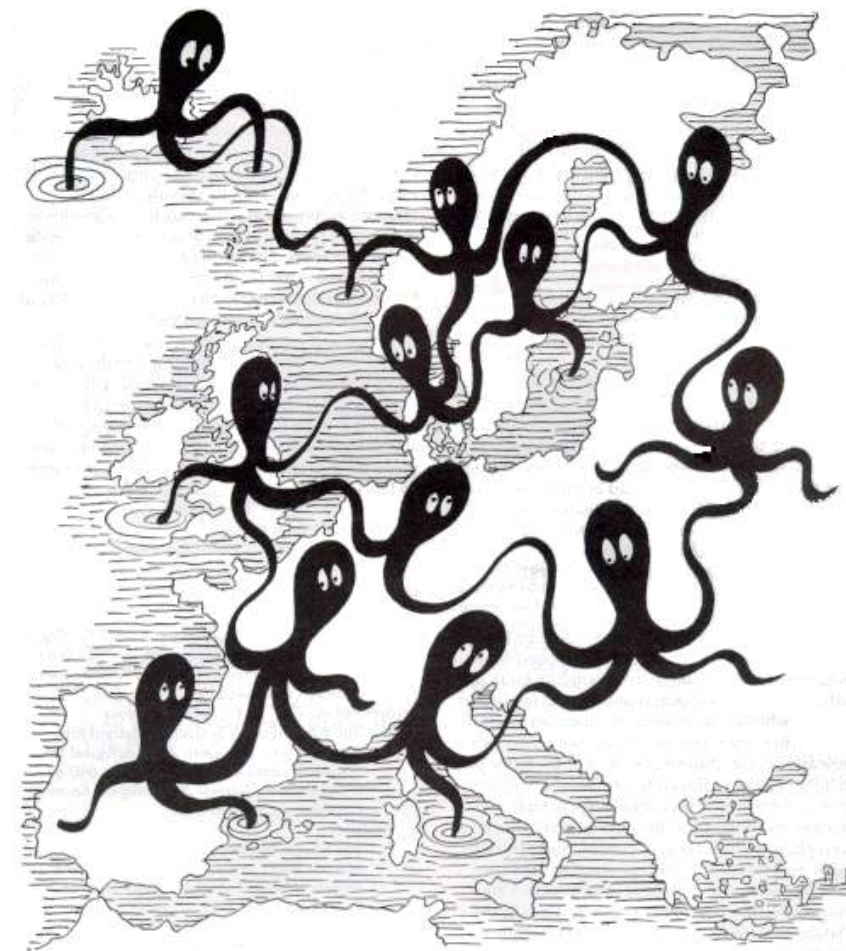
Cross-searching of data & archives

The Vision:

- Interoperable search and analysis

The Challenge:

- How far do individual projects and researchers have to follow agreed ontologies and controlled word lists?



Three answers to interoperability

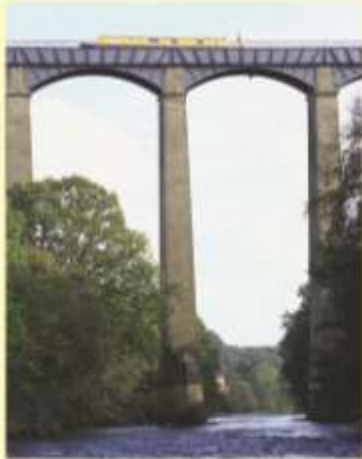
- (1) Tight adherence to core data standards e.g.
 - English Heritage: The Heritage Gateway
- (2) Formal mapping to core data standards e.g.
 - ARENA / ARENA2
 - TAG: UK/US Transatlantic Archaeology Gateway
- (3) Use of Natural Language Processing and Data Mining to index data against core data standards e.g.
 - Archaeotools – ADS ArchSearch
 - Linked Data – STAR/STELLAR

Solution One: Adherence to core data standards

MIDAS Heritage is the UK data standard for information about the historic environment. It states what information should be recorded to support effective sharing of the knowledge of the historic environment.



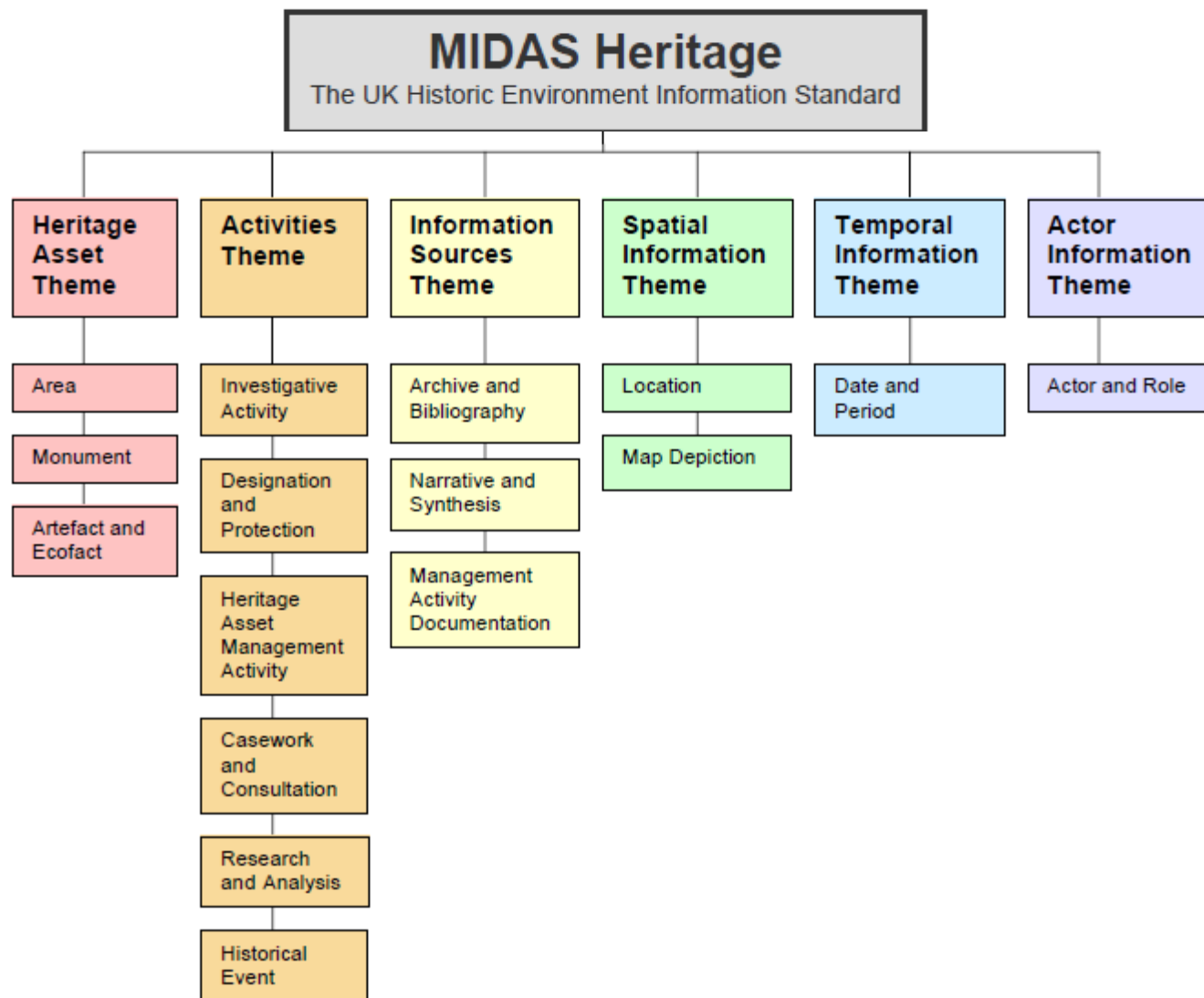
It covers all aspects of the historic environment, including:



- individual assets such as buildings, archaeological sites, shipwrecks, areas of interest and artefacts.
- work that is done to understand, protect and manage change to those assets
- sources of further information

MIDAS Heritage has been developed in the UK building on:

- *CIDOC core data standards for Archaeological Sites + the index to Historic Buildings and Monuments of the Architectural Heritage*
- *MIDAS – A Manual and Data Standard for Monument Inventories (RCHME 1998).*
- International data standards for the cultural heritage sector, in particular ISO 21127 (2005) the CIDOC Conceptual Reference Model
- The work of the Forum on Information Standards in Heritage (FISH) and its earlier interoperability tool-kit
 - MIDAS XML, the tool-kit data validator and the Historic Environment Exchange Protocol
 - INSCRIPTION controlled vocabulary identifiers
- The experience of the organisations which have reviewed and implemented MIDAS



welcome

select...

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[About Heritage Gateway](#)

[Historic Environment Records](#)

[News](#)

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Search for information on England's historic sites and buildings, including images of listed buildings.

The Heritage Gateway allows you to cross-search 49 resources, including:

- Over 50% of local English Historic Environment Records (HERs)
- The National Heritage List for England (including listed buildings)
- 6 other national resources, including Images of England

New!

You can now view the results of your Heritage Gateway search on a map. Carry out a search to see this in action or find out more on the [About the Heritage Gateway](#) page.

Quick Search [\(What's This?\)](#)

Search

☒ any order ☐ exact ☐ any words



[More Detailed Search](#)

news items



[Festival of British Archaeology 2012](#)



[Local Engagement Workshops: Summary](#)



[IHBC: Significance: Who Decides?](#)

[All News Items...](#)



heritage gateway partners

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search

select...

[Homepage Search](#)
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You are here: [Home](#) > [More Detailed Search](#)

More Detailed Search

The detailed search allows you to search using any combination of location (Where), type (What), period (When) and person (Who). You may also select which resources you would like to search. e.g. specific Historic Environment Record only.

Where
[What](#)
[When](#)
[Who](#)
[Resources](#)

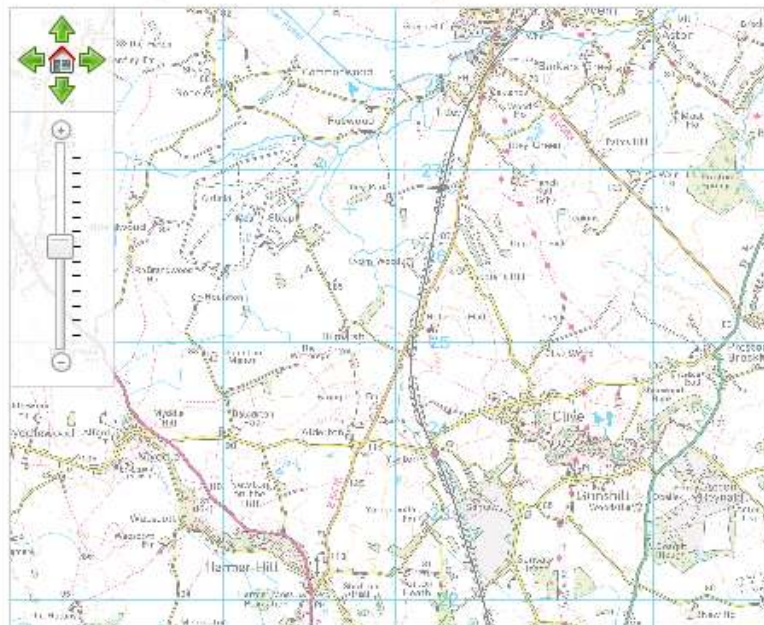
Map

Admin Location

Find on map:

 [Find](#)

Enter place name, street name, postcode or grid reference

Search within:


© Crown Copyright and database right 2012. All rights reserved. Ordnance Survey Licence number: 100024900. | Copyright © English Heritage

☒ [Click to search by Grid Reference](#)
[Search Summary](#)
[Reset](#)
[Search](#)

search

select...

[Homepage Search](#)**[More Detailed Search](#)**[Help and FAQs](#)[Cookies](#)You are here: [Home](#) > [More Detailed Search](#)

More Detailed Search

The detailed search allows you to search using any combination of location (Where), type (What), period (When) and person (Who). You may also select which resources you would like to search. e.g. specific Historic Environment Record only.

Where

Search for a Specific Type:

Type in box and select matching term from the list

What

OR browse the thesaurus of site, monument and object types:

☐ Search Terms

☐ All Building And Site Types

- ☐ Agriculture And Subsistence
- ☐ Civil
- ☐ Commemorative
- ☐ Commercial
- ☐ Communications
- ☐ Defence
- ☐ Domestic
- ☐ Education
- ☐ Gardens Parks And Urban Spaces
- ☐ Health And Welfare
- ☐ ...

Of Specific Grade:

For Listed Building searches only

Search Summary

search

select...

[Homepage Search](#)**[More Detailed Search](#)**[Help and FAQs](#)[Cookies](#)You are here: [Home](#) > [More Detailed Search](#)

More Detailed Search

The detailed search allows you to search using any combination of location (Where), type (What), period (When) and person (Who). You may also select which resources you would like to search. e.g. specific Historic Environment Record only.

Where[What](#)[When](#)[Who](#)[Resources](#)**Search for a Specific Type:**

Type in box and select matching term from the list

OR browse the thesaurus of site, monument and object types:**Search Terms**☒ **All Building And Site Types**☐ **Agriculture And Subsistence**☐ **Agricultural Building**☒ **Apiary**☐ Ash House☐ Back House☐ Bark House☐ Bark Peelers Hut☒ Dovecote☐ Duck House☒ **Farm Building****Of Specific Grade:**

All Grades

For Listed Building searches only

Search Summary

- You must complete at least 1 section of the form.

[Reset](#)[Search](#)

- [What](#) = Thesaurus Term/s (Dovecote);

select...

Your request was sent to
49 resources.

Please wait...

Refine your search

Start new search

Help and FAQs

Cookies

My Gateway

Save this search



You are here: [Home](#) > [More Detailed Search](#) > Gateway Results

Your search returned 0 results from 0 of the 49 resources available on the Heritage Gateway.
Results from 0 of the 0 resources are visible on the map.

- What = Thesaurus Term/s (Burnt Mound)

[\[Refine your search\]](#)

Summary Results

Statutory Data

The National Heritage List for England

Searching:



Non-Statutory National Data

EH PastScape

Searching:



National Trust HBSMR

Searching:



Parks & Gardens UK

Searching:



NMR Excavation Index

Searching:



Local Records

Bedfordshire HER

Searching:



Berkshire Archaeology HER

Searching:



Buckinghamshire HER

Searching:



Cambridgeshire HER

Searching:



Canterbury UAD

Searching:



Cheshire HER

Searching:



City of York HER

Searching:



results

select...

Your request was sent to
49 resources.

Total Results: 3569

Refine your search

Start new search

Help and FAQs

Cookies

My Gateway

Save this search



You are here: [Home](#) > [More Detailed Search](#) > Gateway Results

Your search returned 3569 results from 37 of the 49 resources available on the Heritage Gateway.
Results from 8 of the 37 resources are visible on the map.

- What= Thesaurus Term/s (Dovecote)

[\[Refine your search\]](#)

Summary Results

[View Results on a Map \(Beta\)](#)

Statutory Data

[The National Heritage List for England](#)

Returned first 1000 of 2411 results



Non-Statutory National Data

[EH PastScape](#)

561 results



[National Trust HBSMR](#)

No records matched your search



[Parks & Gardens UK](#)

83 results



[NMR Excavation Index](#)

No records matched your search



Local Records

[Bedfordshire HER](#)

188 results



[Berkshire Archaeology HER](#)

2 results



[Buckinghamshire HER](#)

72 results



[Cambridgeshire HER](#)

131 results



[Canterbury UAD](#)

No records matched your search



[Cheshire HER](#)

20 results



[City of York HER](#)

No records matched your search



[Colchester UAD](#)

1 results



[Cornwall & Scilly HER](#)

121 results



results

select...

Your request was sent to
49 resources.

Total Results: 5552

Refine your search

Start new search

Help and FAQs

Cookies

My Gateway

Save this search



You are here: [Home](#) > [More Detailed Search](#) > Gateway Results

Your search returned 5552 results from 38 of the 49 resources available on the Heritage Gateway. Results from 8 of the 38 resources are visible on the map.

- What= Thesaurus Term/s (Dovecote)

[\[Refine your search\]](#)[Summary Results](#)[View Results on a Map \(Beta\)](#)

Statutory Data

[The National Heritage List for England](#)

Returned first 1000 of 2411 results



Non-Statutory National Data

[EH PastScape](#)

561 results

[National Trust HBSMR](#)

No records matched your search

[Parks & Gardens UK](#)

83 results

[NMR Excavation Index](#)

No records matched your search



Local Records

[Bedfordshire HER](#)

188 results

[Berkshire Archaeology HER](#)

2 results



Berkshire Archaeology HER

BERKSHIRE
ARCHAEOLOGY

The Berkshire Archaeology Historic Environment Record (HER) is a record of the known archaeology and historic environment within the 5 Unitary Authorities areas in the east of Berkshire - Reading Borough Council, Wokingham Borough Council, Bracknell Forest Borough Council, Slough Borough Council and the Royal Borough of Windsor and Maidenhead. The western half of what was the post 1974 county of Berkshire is covered by West Berkshire HER.

Berkshire Archaeology HER returned 2 records matching your search.

Name**Location**[Reading Abbey - Dovecote](#)

Reading

[Dovecote at Berkyn Manor, Horton, Berkshire](#)

Horton

[View all Berkshire Archaeology HER results...](#)[Buckinghamshire HER](#)

72 results



select...

< Back to Berkshire
Archaeology HER Results

<< Back to Gateway results

Refine your search

Start new search

Help and FAQs

Cookies

You are here: [Home](#) > [More Detailed Search](#) > [Gateway Results](#) > [Berkshire Archaeology HER Results](#) > Berkshire Archaeology H

Berkshire Archaeology HER

[Any Questions? Please try here first](#)If you have any comments or new information about this record, please [email us](#).

Name: Reading Abbey - Dovecote
HER Number: RD15571
Record Type: Monument

Grid Reference: SU 718 734
Administrative Area/Parish: Reading, Reading, Berkshire
Map: [Show location on GoogleMaps](#) (to an accuracy of 100m only)

Summary

The dovecote stood immediately to the west of the Abbey mill, it's exact location, however, is unknown.

Monument Types

[DOVECOTE](#) (Medieval - 1066 AD to 1539 AD)

Description

The dovecote stood immediately to the west of the Abbey mill, it's exact location, however, is unknown.

Sources

- Cram, Leslie. 1988. Reading Abbey. [Bibliographic reference / SRD12631]
- Kemp B R. 1968. Reading Abbey: An Introduction to the History of the Abbey. [Bibliographic reference / SRD6872]
- Hurry, J B. 1901. Reading Abbey. [Bibliographic reference / SRD6886]

Associated Events:

ERM232 Abbey Mill House and Forbury Vaults
ERM930 Abbey Mill House and Forbury Vaults (Ref: BR-ABB02)

Associated Monuments

[MRD1374](#) Reading Abbey, Reading, Berkshire (Monument)
[MRD1374](#) Reading Abbey, Reading, Berkshire (Monument)
[MRD1374](#) Reading Abbey, Reading, Berkshire (Monument)

Solution Two: Mapping to core data standards




ARENA

Archaeological Records of Europe - Networked Access

Welcome to the ARENA search portal.

Please select a flag from the right to start searching in your language

The ARENA search portal allows you to search for archaeological sites and monuments from six European countries: Denmark, Great Britain, Norway, Iceland, Romania and Poland.



The content of this project does not necessarily reflect the position of the European Community, nor does it involve any responsibility on the part of the European Community.

  Education and Culture **Culture 2000**

ads © ADS 1996- Edited by Jo Clarke, email
Cite only: <http://ads.ahds.ac.uk> for this page



ARENA: Archaeological Records of Europe: Networked Access.





Archaeological Records of Europe - Networked Access The ARENA Portal



This is the search interface of the ARENA project. It allows you to search archaeological resources from six European countries by period, theme and place.

You can build your search by selecting below. Choose a Period (When) and a Theme (What), remembering to store your selection. You may wish to use the where option to select a place and refine your search.

Warning! Searches are limited to 5,000 hits. If your search exceeds this limit use the where option to narrow your search.

When

You can choose to search for site within a certain period range.

What

Choose a type of monument/site from a list of archaeological themes

Where

Using a map of Europe choose the area you would like to search

Search

Choose what and when

[Clear all values](#)
[Help on searching](#)
[Advanced search](#)

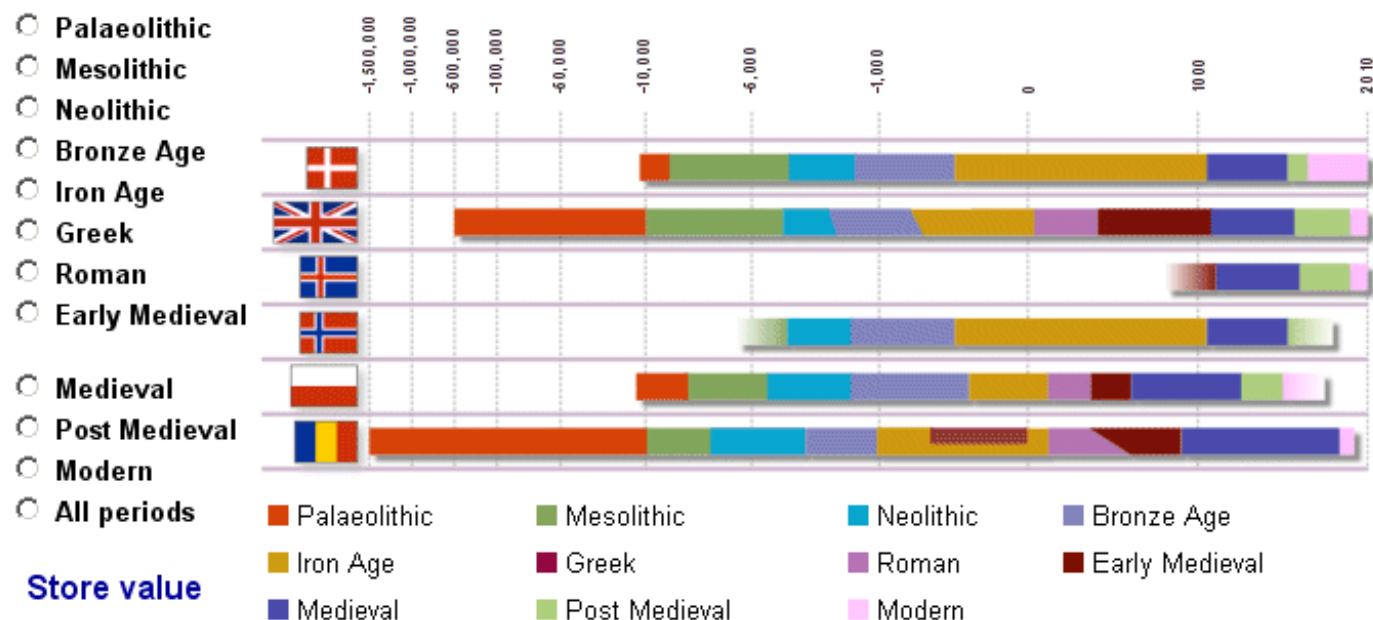


Archaeological Records of Europe - Networked Access

The ARENA Portal

When

Select a period from the list below. Your choice will be highlighted on the diagram. For more information on the time span for each period hover your mouse over the period diagram



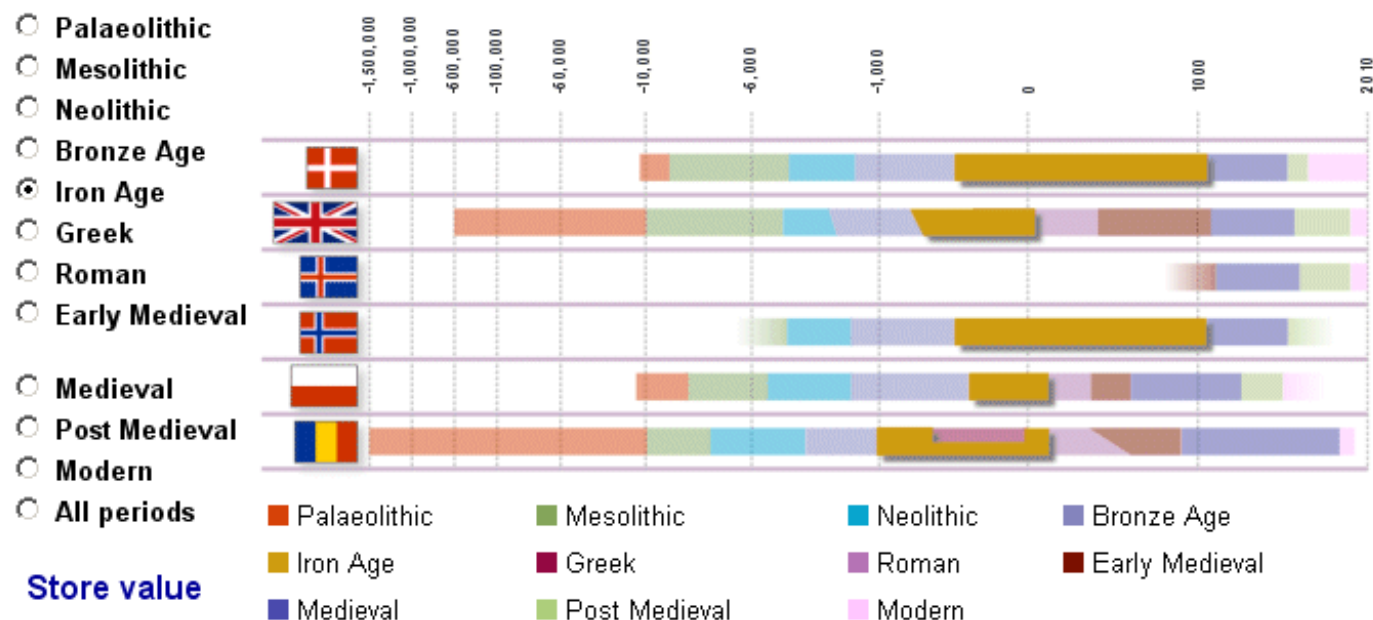


Archaeological Records of Europe - Networked Access

The ARENA Portal

When

Select a period from the list below. Your choice will be highlighted on the diagram. For more information on the time span for each period hover your mouse over the period diagram





Archaeological Records of Europe - Networked Access The ARENA Portal



This is the search interface of the ARENA project. It allows you to search archaeological resources from six European countries by period, theme and place.

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Warning! Searches are limited to 5,000 hits. If your search exceeds this limit use the where option to narrow your search.

When

Your chosen period:

Iron Age

What

Choose a type of monument/site from a list of archaeological themes

Where

Using a map of Europe choose the area you would like to search

Search

Choose what

[Clear all values](#)
[Help on searching](#)
[Advanced search](#)

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Archaeological Records of Europe - Networked Access The ARENA Portal



This is the search interface of the ARENA project. It allows you to search archaeological resources from six European countries by period, theme and place.

You can build your search by selecting below. Choose a Period (When) and a Theme (What), remembering to store your selection. You may wish to use the where option to select a place and refine your search.

Warning! Searches are limited to 5,000 hits. If your search exceeds this limit use the where option to narrow your search.

When

Your chosen period:

Iron Age

What

Your chosen theme:

**Agriculture and
Subsistence**

Where

Using a map of Europe
choose the area you would
like to search

Denmark - ? records
Britain - too many records
Iceland - ? records
Norway - 999 records
Poland - ? records
Romania - ? records

Search

[Clear all values](#)
[Help on searching](#)
[Advanced search](#)

If you press search now you will search all countries with less than 5000



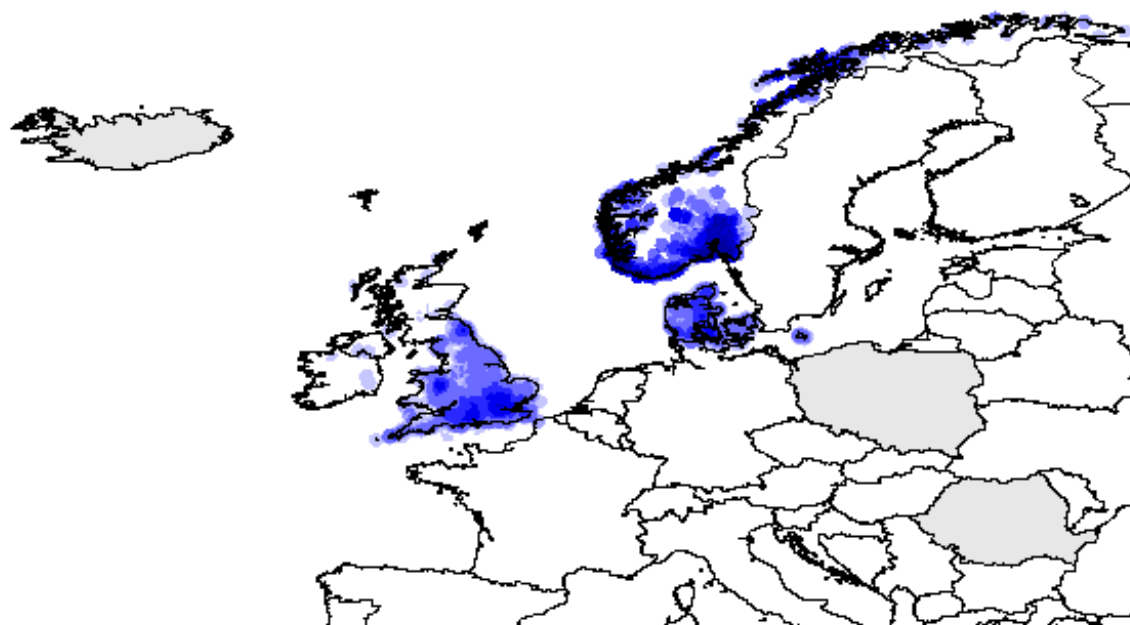
Archaeological Records of Europe - Networked Access

The ARENA Portal

Where

You can define an area to search. Click on the map below to zoom into a more detailed map of the area.

Map of density of records available: Iron Age





Archaeological Records of Europe - Networked Access

The ARENA Portal

Where

Please use the arrows around the map to navigate to your area of interest, then click on the map at the centre of the area you want to search. The search will cover half a degree of latitude/longitude around your point

9.75E
60.25N

10.25E
60.25N



QUERY

RESET QUERY

SEARCH

QUERY BUILDER

KEYWORD

Add keyword

▼ WHAT

- ☐ Agriculture and Subsistence
- ☐ Civil
- ☐ Commemorative
- ☐ Commercial
- ☐ Communications
- ☐ Defence
- ☐ Domestic
- ☐ Education
- ☐ Health and Welfare
- ☐ Industrial
- ☐ Maritime
- ☐ Recreational
- ☐ Religious, Ritual and Funerary
- ☐ Transport
- ☐ Water Supply and Drainage

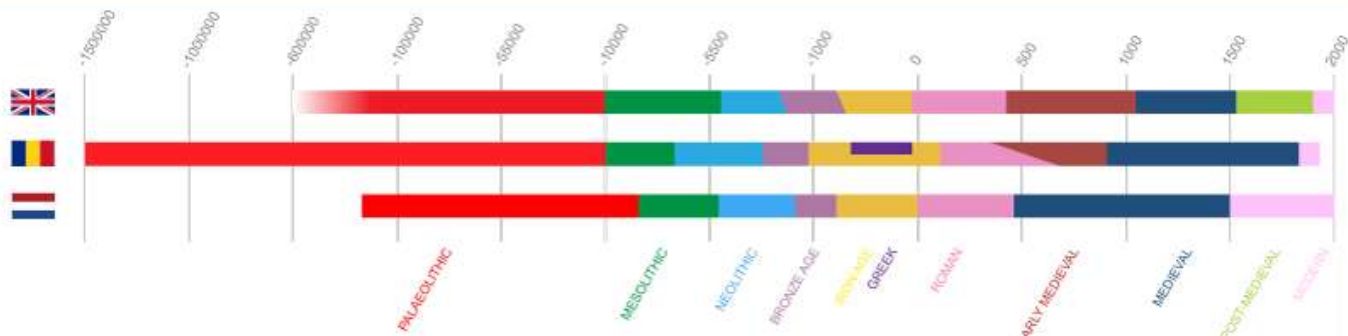
WHERE

Navigate map ☒ Click and drag select box ☐



▼ WHEN

- ☐ Palaeolithic
- ☐ Mesolithic
- ☐ Neolithic
- ☐ Bronze Age
- ☐ Iron Age
- ☐ Greek
- ☐ Roman
- ☐ Early Medieval
- ☐ Medieval
- ☐ Post-Medieval



QUERY

WHAT Defence

WHEN Iron Age

WHERE Lat: 51.124213 to 53.592505
Lon: -1.230469 to 6.943359

RESET QUERY

SEARCH

QUERY BUILDER

KEYWORD

Add keyword

WHAT

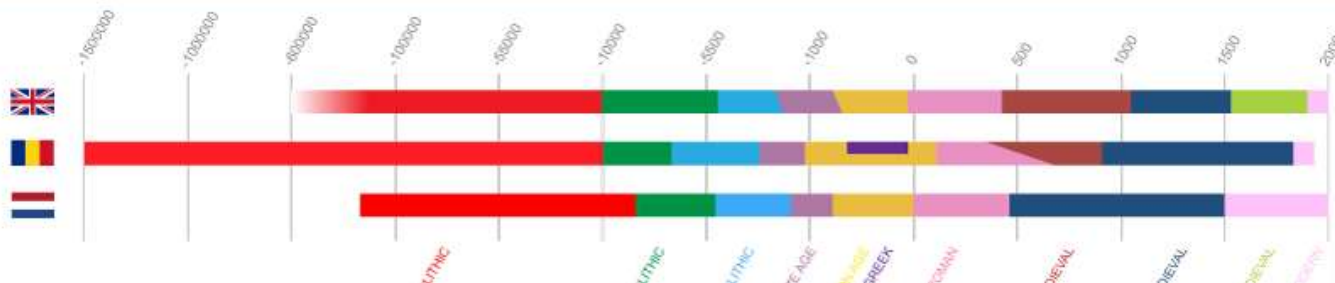
- ☐ Agriculture and Subsistence
- ☐ Civil
- ☐ Commemorative
- ☐ Commercial
- ☐ Communications
- ☒ Defence
- ☐ Domestic
- ☐ Education
- ☐ Health and Welfare
- ☐ Industrial
- ☐ Maritime
- ☐ Recreational
- ☐ Religious, Ritual and Funerary
- ☐ Transport
- ☐ Water Supply and Drainage

WHERE



WHEN

- ☐ Palaeolithic
- ☐ Mesolithic
- ☐ Neolithic
- ☐ Bronze Age
- ☒ Iron Age
- ☐ Greek
- ☐ Roman
- ☐ Early Medieval



WHAT Defence

WHAT Iron Age

WHERE Lat: 51.124213 to 53.592505
Lon: -1.230469 to 6.943359

AMEND QUERY

RESULTS

Arena 2 Archive Service [UK]

Title

See More Results

Arena 2 Archsearch Service [UK]

Title

See More Results

CIMEC Web Service [Romania]

Title

See More Results

DANS Web Service [Netherlands].

Results: Listing top 5 of 89 records hold in our database relevant to this query.

Title

Archeologische waarneming op bastion IX, Dalemwal te Gorinc ...

Het diftarproject in Zutphen. 25 verhalen uit de middeleeuw ...

Grachten, wallen en Berkelwater in de fietsenkelder. Versla ...

Het Hoorwerk (2). Proefsleuvenonderzoek op het Hoorwerk t ...

Het Hoorwerk (1). Archeologisch onderzoek aan het contresc ...

Publisher

DANS

DANS

DANS

DANS

DANS

See More Results

ARENA2 is hosted by the Archaeology Data Service | Project introduction

Data Archiving and Networked Services

DANS

Home Browse Advanced search

Search

Register or Log in

New deposit

Archeologische waarneming op bastion IX, Dalemwal te Gorinchem

Overview Description Data files (1)

Vaars, J.P.; Floore, P.M.; Vaars, J.P.L. (2002-11), *Archeologische waarneming op bastion IX, Dalemwal te Gorinchem*
Persistent Identifier: [um:inbr.nl:ui:13-yn7-h8h](#)
onderzoeksrapport

DANS Data Archive | Legal information | Property rights statement

Version: 2.0-GA.9454
Build: 2011-08-09 10:09



QUERY

RESET QUERY

SEARCH

QUERY BUILDER

KEYWORD

Add keyword

WHAT

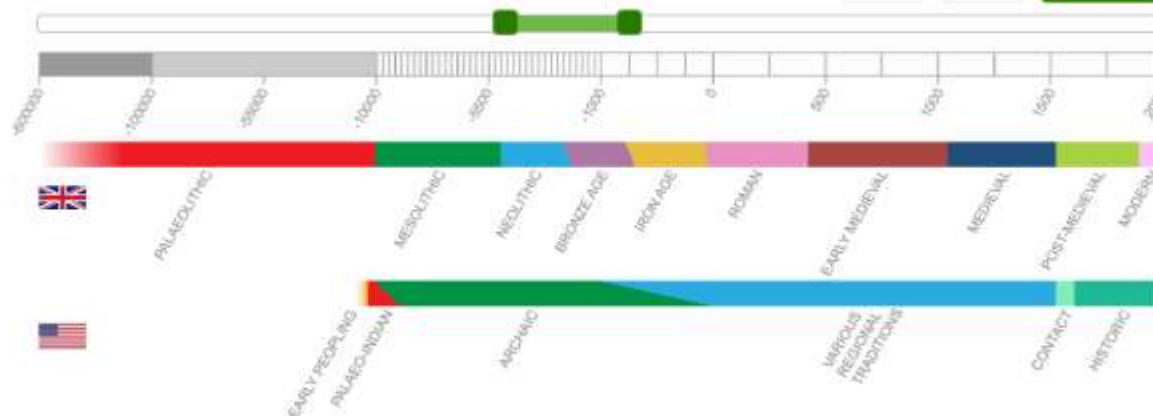
- ☐ Agriculture and Subsistence
- ☐ Civil
- ☐ Commemorative
- ☐ Commercial
- ☐ Communications
- ☐ Defence
- ☐ Domestic
- ☐ Education
- ☐ Health and Welfare
- ☐ Industrial
- ☐ Maritime
- ☐ Recreational
- ☐ Religious, Ritual and Funerary
- ☐ Transport
- ☐ Water Supply and Drainage

WHERE



WHEN

From to Set date range



TAG is hosted by the Archaeology Data Service | Legal statements and disclaimers

Help



QUERY

WHAT Domestic

WHEN from -365 to 824

AMEND QUERY

RESULTS

ADS Archive Web Service [UK]:

Results: Listing top **5** of **15** records hold in our database relevant to this query.

Title	Depositor
Bremetenacum: Excavations at Roman Ribchester 1980, 1989-19 ...	Oxford Archaeology North
Pig Measurements from Durrington Walls (Wiltshire, England)	Umberto Albarella
Coln Gravel, Thornhill Farm, Fairford, Gloucestershire	Oxford Archaeology
Radiocarbon Dating Bone Samples Recovered from Gravel Sites	Christopher Bronk Ramsey
The Welsh Roundhouse	Eleanor Ghey

[See More Results](#)

tDAR TAG Gateway Service [USA]:

Results: Listing top **5** of **32** records hold in our database relevant to this query.

Compare datasets within these results:

Title	Depositor
Ojo Bonito Archaeological Project (OBAP)	Statistical Research, Inc.
The Lower Verde Archaeological Project	
The Archaeology of Rota, Northern Mariana Islands	
The Archaeology of Petrified Forest National Park	
The Archaeology of Yosemite National Park	

[See More Results](#)

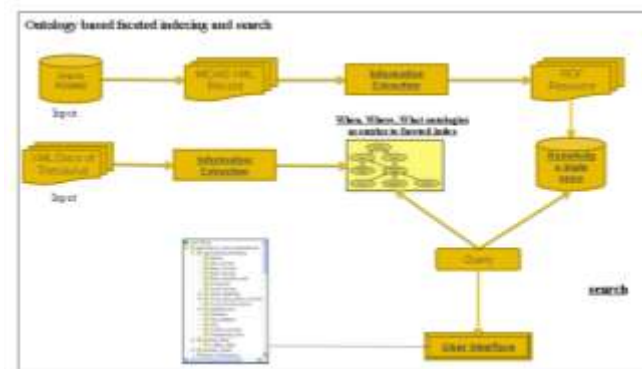
Solution Three:

NLP indexing according to core data standards

A very quick overview of Archaeotools..

Work package 1

- Advanced Faceted Classification /Geo-spatial browser
- 1m+ records
- 3 primary facets (What, Where, When).

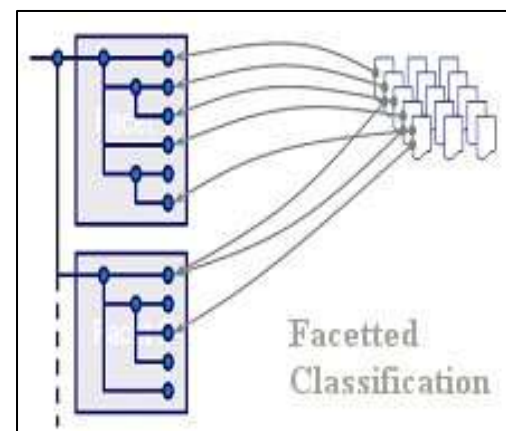


Work package 2

- Natural language processing /Data-mining of Grey Literature

Work package 3

- Data-mining of Historic Literature
- plus geoXwalk



RESET QUERY

KEYWORD

SEARCH

▼ WHAT

- ▶ ○ Event 32922
- ▶ ○ Evidence 272225
- ▶ ○ Maritime 48839
- ▶ ○ Monument Types 914553
- ▶ ○ Object Types 159278

▼ WHERE

- ▶ ○ England 638609
- ▶ ○ Scotland 272348
- ▶ ○ Wales 44660

▼ WHEN

- ▶ ○ Early Prehistoric 14777
- ▶ ○ Later Prehistoric 87258
 - Roman 71366
 - Early Medieval 17078
- ▶ ○ Medieval 122421
- ▶ ○ Post Medieval 297870
- ▶ ○ Modern 68950

▼ RESOURCE

- ▶ ○ Resources 354804

1045218 Total results

◀ 1 2 3 ... ▶▶

ABBNEY FIELDS ABBEYMEAD**English Heritage NMR Excavation Index for England**

Followed by excavation 14/86 (UID 652905). Observation of sewer trench.

GLOUCESTERSHIRE

APPLEGARTH WEST OF ST ANDREWS CHURCHYARD**English Heritage NMR Excavation Index for England**

Two small trial trenches in the garden of a 1960s bungalow adjacent to the churchyard boundary wall on the west side of St Andrew's Church revealed traces of the Roman road from the Mendips to the River Avon, possibly RR540. There were also indications of a possible Roman roadside settlement, as well as earlier medieval activity pre-dating the laying out of the market place.

AVON

Abington deserted medieval village**Milton Keynes HER**

1) C13th St.Neots ware sherds; 2) 2 Lyveden-type sherds, found by Mr B (b1-2). 3) Medieval sherds from Abington DMV, found by Mr P (b3-5). 4) Area of NGR (b7).

Method of Discovery: Chance find

History: 1967 artefacts found & 1973

Buckinghamshire

Abington deserted medieval village**Milton Keynes HER**

Disturbed ground surrounded by ridge and furrow suggests a deserted hamlet

WHEN Roman ✕

RESET QUERY

KEYWORD

SEARCH

71366 Total results

◀◀ 1 2 3 ... ▶▶

▼ WHAT

- ▶ ☐ Event 30457
- ▶ ☐ Evidence 31252
- ▶ ☐ Maritime 31
- ▶ ☐ Monument Types 65292
- ▶ ☐ Object Types 31803

▼ WHERE

- ▶ ☐ England 65441
- ▶ ☐ Scotland 1693
- ▶ ☐ Wales 1295

▼ WHEN

- ▶ ☐ Early Prehistoric 876
- ▶ ☐ Later Prehistoric 12484
- ▶ ☒ Roman 71366
- ▶ ☐ Early Medieval 3854
- ▶ ☐ Medieval 8826
- ▶ ☐ Post Medieval 5275
- ▶ ☐ Modern 577

▼ RESOURCE

- ▶ ☐ Resources 34325

APPLEGARTH WEST OF ST ANDREWS CHURCHYARD

English Heritage NMR Excavation Index for England

Two small trial trenches in the garden of a 1960s bungalow adjacent to the churchyard boundary wall on the west side of St Andrew's Church revealed traces of the Roman road from the Mendips to the River Avon, possibly RR540. There were also indications of a possible Roman roadside settlement, as well as earlier medieval activity pre-dating the laying out of the market place.

AVON

BEHIND SINCLAIRS COACH FACTORY

English Heritage NMR Excavation Index for England
CHESHIRE

BERMONDSEY MEWS 614 LEROY STREET

English Heritage NMR Excavation Index for England

Site code: LER91. Project funded by Durkan Southern Ltd. Excavation located a sequence of drainage or boundary ditches, several of which were sealed by a compact gravel surface; and two rubbish pits, one a brick lined soakaway. SMR number(Greater London): 091419-29. Information from Greater London SMR.

GREATER LONDON

BURDENS SWAN STREET

English Heritage NMR Excavation Index for England
WARWICKSHIRE



WHERE Dumfries And Galloway ✕

WHEN Roman ✕

RESET QUERY

KEYWORD

SEARCH

259 Total results

◀◀ 1 2 3 ... ▶▶

▼ WHAT

- ▶ ☐ Event 30209
- ▶ ☐ Evidence 5
- ▶ ☐ Monument Types 194
- ▶ ☐ Object Types 62

▼ WHERE

- ▶ ☐ England 1
- ▼ ☐ Scotland 258
 - ▶ ☒ Dumfries And Galloway 259

▼ WHEN

- ▶ ☒ Roman 259

▼ RESOURCE

- ▶ ☐ Resources 1

DRUMBUOY WIGTOWNSHIRE



National Monuments Record of Scotland

No description
DUMFRIES AND GALLOWAY

WAUCHOPE BRIDGE LANGHOLM



National Monuments Record of Scotland

Alternative name(s): LANGHOLM, BOATFORD BRIDGE; LANGHOLM, TOWNHEAD BRIDGE
DUMFRIES AND GALLOWAY

AIRD



National Monuments Record of Scotland

No description
DUMFRIES AND GALLOWAY

AMISFIELD TOWER



National Monuments Record of Scotland

Alternative name(s): AMISFIELD
DUMFRIES AND GALLOWAY

ANNAN BUTTS STREET



National Monuments Record of Scotland

No description

WHAT Signalling Structure ✕

WHERE Dumfries And Galloway ✕

WHEN Roman ✕

RESET QUERY

KEYWORD

SEARCH

4 Total results

K < 1 2 > H

▼ WHAT

- ▶ ☐ Event 30209
- ▼ ☐ Monument Types 4
 - ▶ ☐ Agriculture And Subsistence 1
 - ▼ ☐ Communications 4
 - ▶ ☒ Signalling Structure 4
 - ▶ ☐ Defence 4
 - ▶ ☐ Domestic 1
 - ▶ ☐ Religious Ritual And Funerary 1
- ▶ ☐ Object Types 1

▼ WHERE

- ▼ ☐ Scotland 4
 - ▶ ☒ Dumfries And Galloway 4

▼ WHEN

- ▶ ☒ Roman 4

▼ RESOURCE

BUTTERHOLE BRAE DALSWINTON**National Monuments Record of Scotland**

No description

DUMFRIES AND GALLOWAY

CARNSALLOCH**National Monuments Record of Scotland**

No description

DUMFRIES AND GALLOWAY

THORNHILL**National Monuments Record of Scotland**

Alternative name(s): TEMPLAND MAINS

DUMFRIES AND GALLOWAY

WARD LAW**National Monuments Record of Scotland**

Alternative name(s): WARDLAW

DUMFRIES AND GALLOWAY

PAGE 1 OF 2

K < 1 2 > H

EXTERNAL
ADVANCED
MAP



Royal Commission on the
Ancient and Historical
Monuments of Scotland -
National Monuments Record of
Scotland

NX98SW 49

[View Canmore record](#)



[View larger map](#)
[View historic maps](#)

[BACK](#)

BUTTERHOLE BRAE, DALSWINTON

Description: No description

Parish: KIRKMAHOE

County: DUMFRIES AND GALLOWAY

Grid reference: NX938843

Map reference: [EPSG:27700] 293800, 584340

Period: ROMAN;

Subject: ROMAN SIGNAL STATION (POSSIBLE); HENGES (POSSIBLE);

Identifiers:

[ADS] Depositor ID - NX98SW 49

[ADS] Import RCN - RCAHMS06-65935

People Involved:

[Publisher] Royal Commission on the Ancient and Historical Monuments of Scotland -
National Monuments Record of Scotland

Cite record using this URL: <http://archaeologydataservice.ac.uk/archsearch/record.jsf?titleId=1410307>

WHAT Signalling Structure ✕

WHERE Dumfries And Galloway ✕

WHEN Roman ✕

RESET QUERY

◀◀ 12 ▶▶ 4 Total results

BUTTERHOLE BRAE DALSWINTON

CARNSALLOCH

THORNHILL

WARD LAW

select box ☐ navigate ☒ (Points indicate sites listed on left)

The Semantic Web: STAR & STELLAR projects

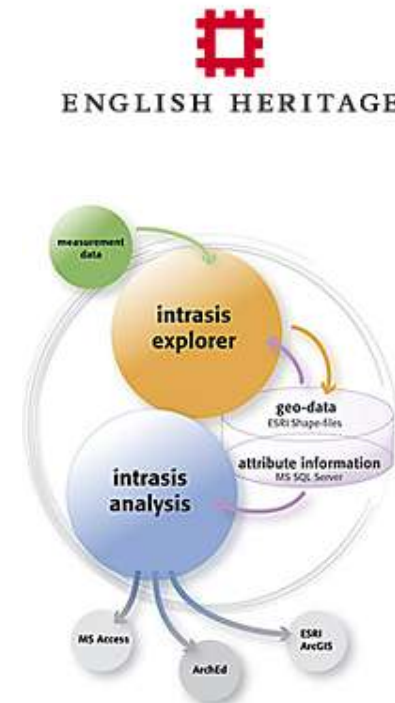
STAR: Develop new methods for enhancing linkages between databases and grey literature, exploiting the potential of a high level, core ontology, and apply multi-concept queries to archaeological research.

STELLAR: Develop an enhanced mapping tool for non-specialist users to map and extract archaeological datasets into RDF/XML representation conforming to CIDOC CRM-EH, and publish corresponding Linked Data.



- Project management & recording system
- Excavation projects from EH

intrasis





Archaeology Data Service Linked Data

These Linked Data are made available as a direct result of the STELLAR project, a joint project between the [University of Glamorgan](#), the [ADS](#) and [English Heritage](#). Linked Data is a growing part of the Web where data is published on the Web and then linked to other published data in much the same way that web pages are interlinked using hypertext. The term Linked Data is used to describe a method of exposing, sharing, and connecting data via URIs on the Web. For more information go to <http://linkeddata.org/>. The ADS cannot give advice or support on using RDF, SPARQL or SPARQL Endpoints. For a full description of the ADS datasets used in this initial evaluation version of an ADS Linked Data store please see the ADS [STELLAR](#) Research Page. The STELLAR tools and templates are available from the [University of Glamorgan](#).

Property	Value
?:coverage	■ <http://data.ordnancesurvey.co.uk/id/country/england>
?:description	■ The Archaeology Data Service (ADS) supports research, learning and teaching with high quality and dependable digital resources. It does this by preserving ... »more»
?:exampleResource	■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/cobham/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/cuxton/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/eyhorne/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/saltwood/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/sittingbourne/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/thornham/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000230/tut/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000365/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000389/> ■ <http://data.archaeologydataservice.ac.uk/10.5284/1000392/>
?:issued	■ 2011-06-30
?:label	■ Archaeology Data Service Linked Data
?:license	■ Subject to ADS Terms of Use and Access
?:publisher	■ Archaeology Data Service
?:rights	■ All rights reserved, copyright retained by original depositors
?:title	■ Archaeology Data Service Linked Data
?:uriRegexPattern	■ http://data.archaeologydataservice.ac.uk/ +

Metadata [\[show\]](#)

This page shows information obtained from the SPARQL endpoint at <http://data.archaeologydataservice.ac.uk/sparql/repositories/archives>. This data is also available as [RDF/XML](#) and [Turtle](#).

View the data in the following other browsers:

- [Disco](#)
- [Tabulator](#)

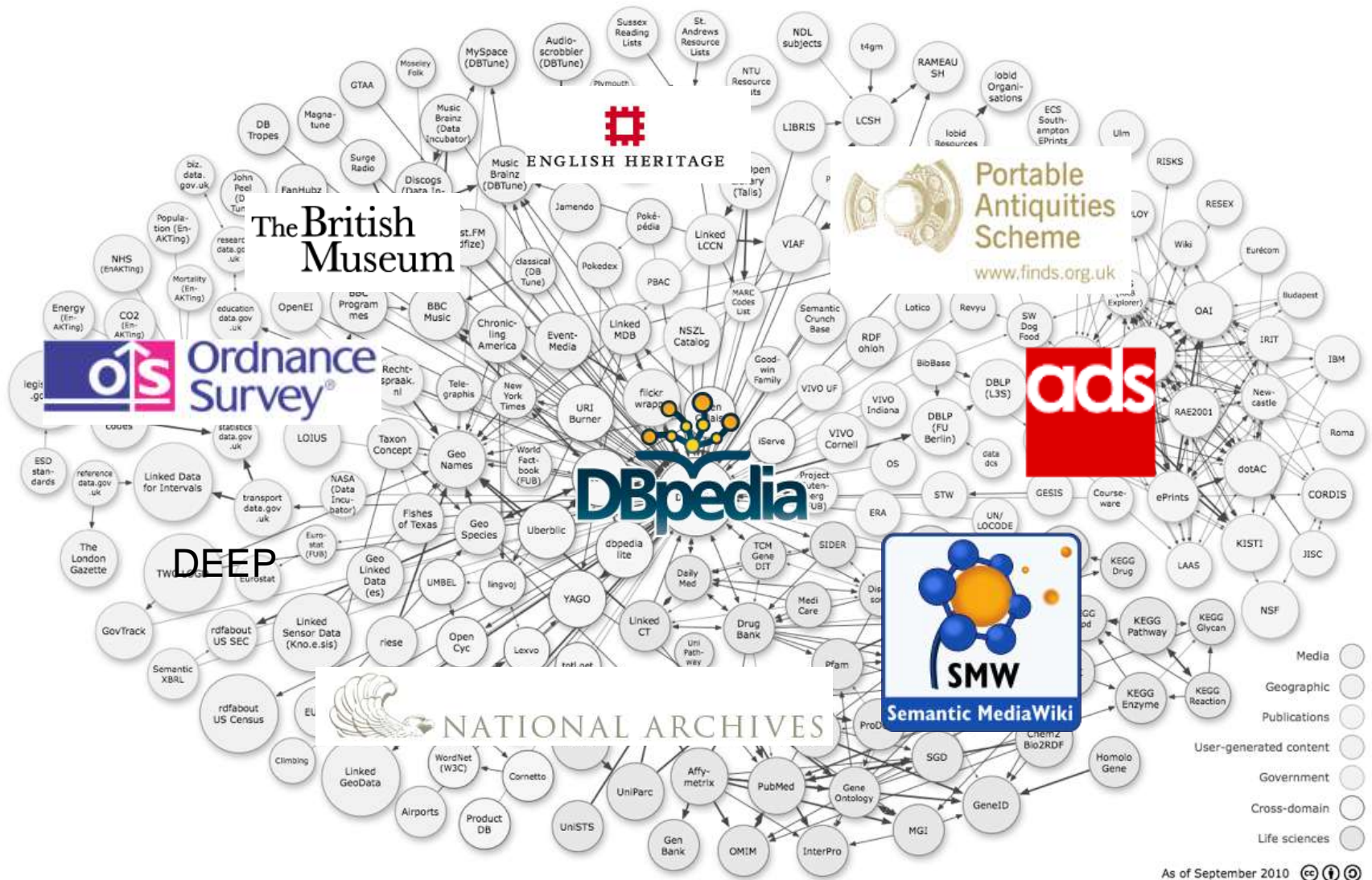
`http://[namespace]/[context]/[entity_type]_[value]`

[http://data.archaeologydataservice.ac.uk/\[context\]/\[entity_type\]_\[value\]](http://data.archaeologydataservice.ac.uk/[context]/[entity_type]_[value])

[http://data.archaeologydataservice.ac.uk/10.5284/1000365/\[entity_type\]_\[value\]](http://data.archaeologydataservice.ac.uk/10.5284/1000365/[entity_type]_[value])

[http://data.archaeologydataservice.ac.uk/10.5284/1000365/EHE007_\[value\]](http://data.archaeologydataservice.ac.uk/10.5284/1000365/EHE007_[value])

http://data.archaeologydataservice.ac.uk/10.5284/1000365/EHE007_1003



(A) 3 approaches:

- Tight adherence to core data standards
- Formal mapping to core data standards
- Use of Natural Language Processing and Data Mining to index data against core data standards

(B) Each has implications re the degree of conformity required of individual researchers – and the depth of analysis possible, but all require existence of core standards

(C) See what thesauri can be borrowed

<http://archaeologydataservice.ac.uk/>



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