



Archaeology
Data Service

High Speed 2 and Unpath'd Waters: Keeping large projects FAIR

By Evelyn Curl, Jamie Geddes and Teagan Zoldoske

Who are we?

The image features a solid red background. A white, wavy, horizontal line runs across the lower portion of the frame. Overlaid on this is a thin, yellow line that follows a similar but more complex, jagged path, creating a layered, abstract effect.



Archaeology
Data Service

Evelyn Curl

Digital Archive Assistant

Jamie Geddes

Digital Archive Assistant

Teagan Zoldoske

Digital Archive Officer



Archaeology Data Service

Department of Archaeology

University of York

The King's Manor

Exhibition Square

York, YO1 7EP



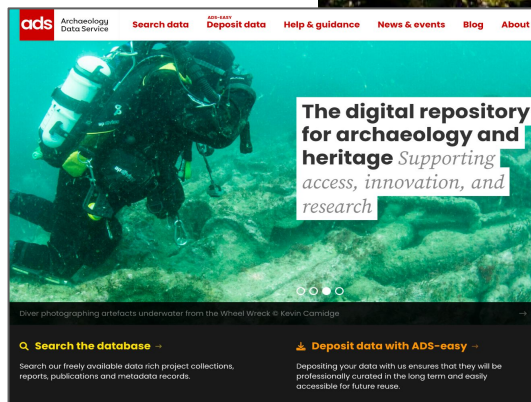
www.archaeologydataservice.ac.uk



help@archaeologydataservice.ac.uk



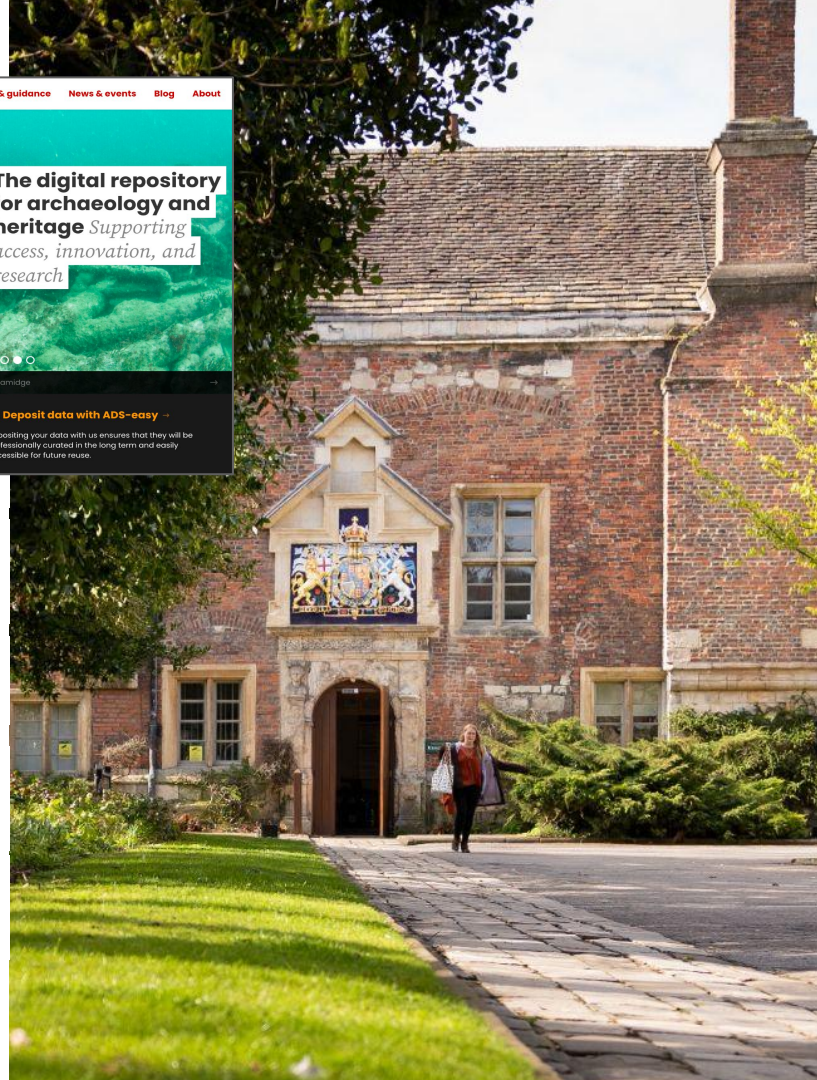
Archaeology Data Service



Website © ADS

- Established in 1996
- University of York, UK
- Core Trust Seal Accredited
- 40+ terabytes of data
- Preservation through migration

Image © University of York





**How does the ADS
promote FAIR
principles?**

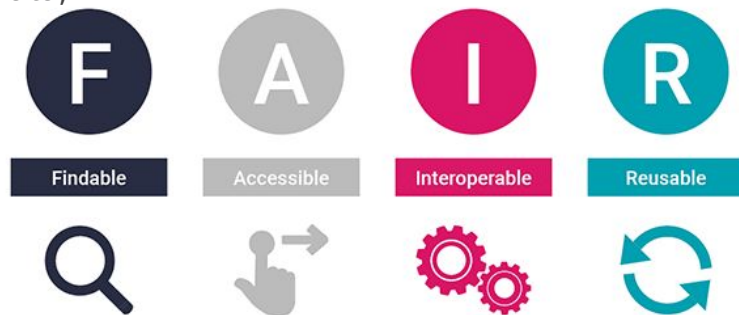
The background of the slide is a solid red color. In the lower half, there are several overlapping, wavy, organic shapes in a lighter shade of red and orange, creating a layered, mountain-like or liquid-like effect. A thin, bright orange line meanders across the lower portion of the slide, weaving between the larger wavy shapes.

R1.1. (Meta)data are released with a clear and accessible data usage license – Clearly defined terms of access and reuse within the collection interface and within metadata records. e.g Creative Commons Attribution 4.0 licence (CC-BY 4.0), Open Government License (OGL)



R1.2. (Meta)data are associated with detailed provenance – Provides detailed provenance metadata for all data, both at a collection level and at file level

R1.3. (Meta)data meet domain-relevant community standards – Dublin Core, appropriate linked open data vocabularies e.g UK heritage thesauri (FISH)



Potential reuse risks for large projects

- Risk 1 – Differing metadata standards and lack of documentation for them
- Risk 2 – Data deposited a while after creation by people who may not have created the data
- Risk 3 – The metadata for datasets can be split up and difficult to condense into a way that is easily reused
- Risk 4 – Lack of skills training on open source software and formats and how to export proprietary data
- Risk 5 – Not thinking about archiving and reuse from the beginning

Our Case Study Projects

HS2

High Speed 2 – Data based project

Evelyn



UNPATH'D WATERS

UNPATH'D Waters – metadata aggregation/inventory
collections project

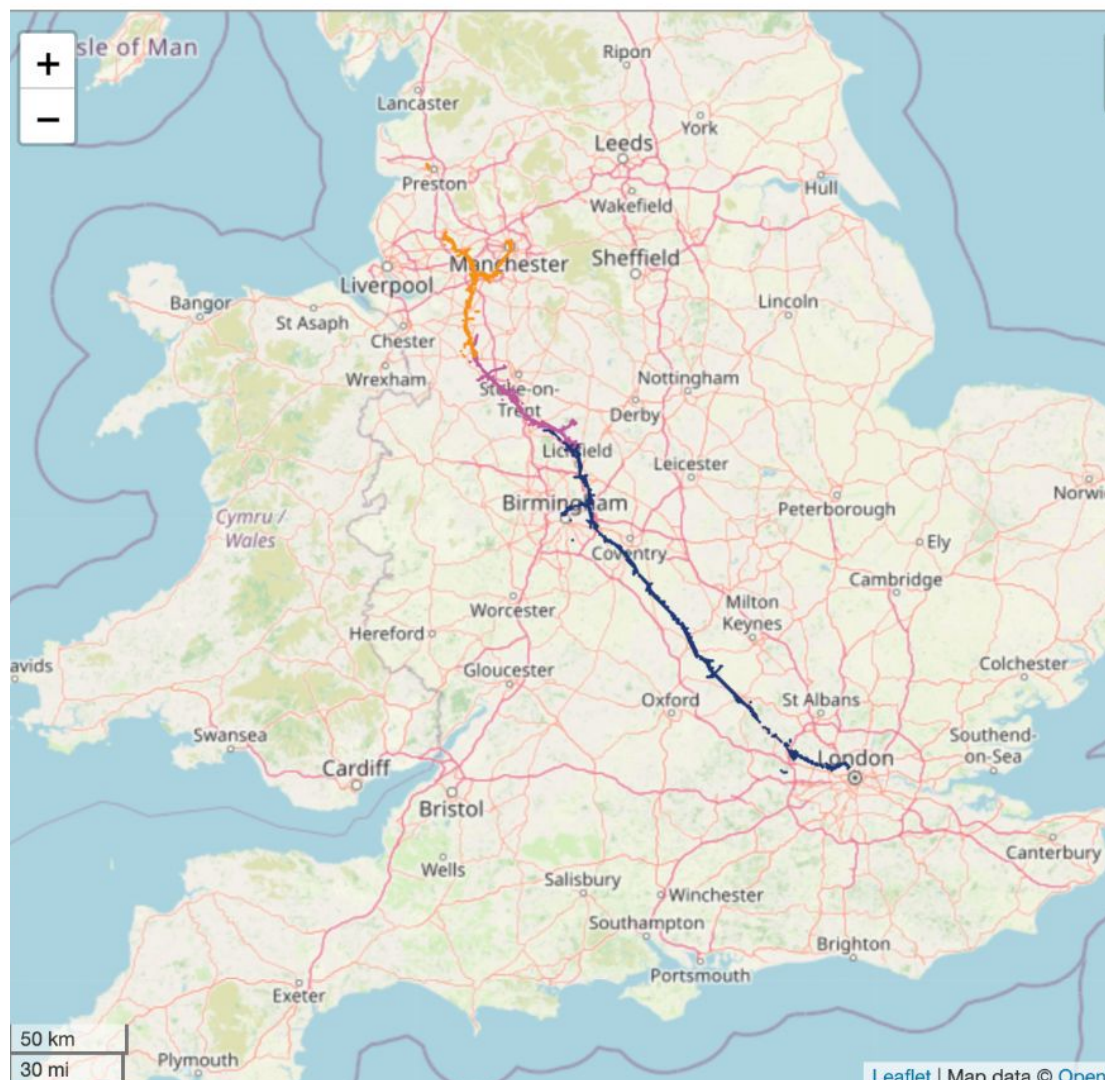
Jamie

High Speed Two

- UK's largest linear infrastructure project
- Unprecedented opportunity

Historic Environment Research and Delivery Strategy Objective

03: To develop and deliver a highly accessible archive and outstanding archival legacy that will be actively promoted.



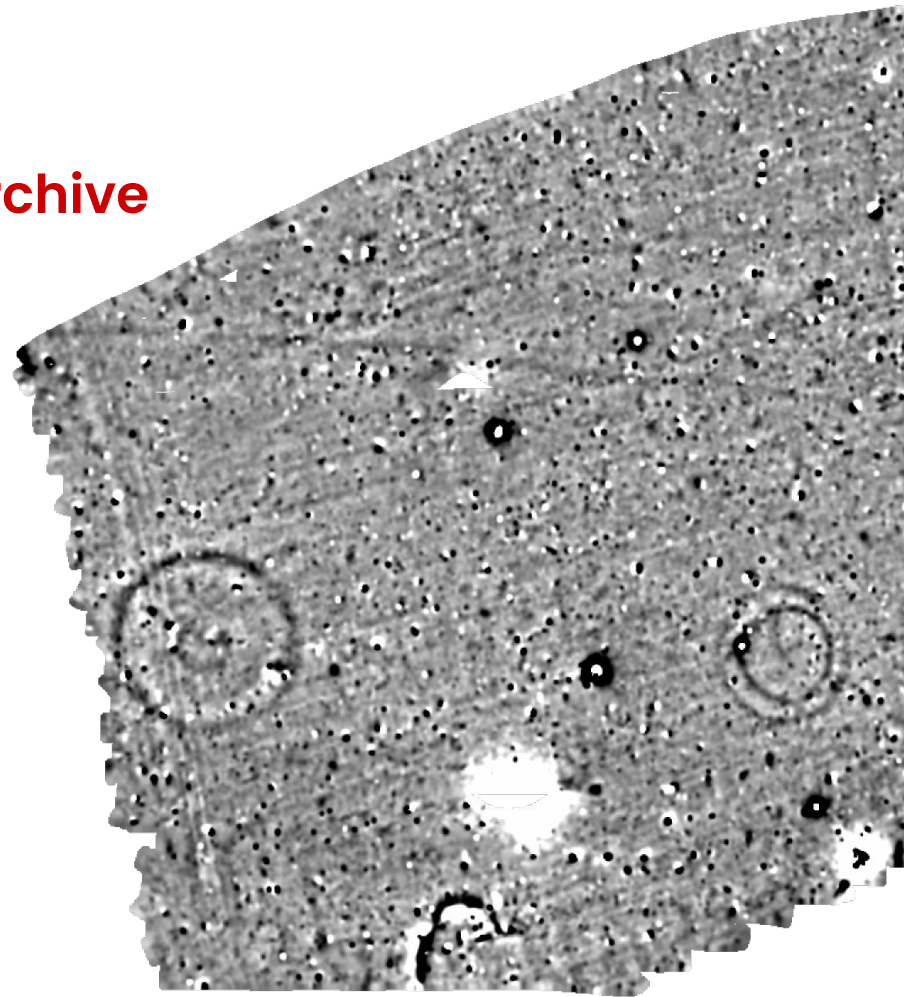
HS2 Historic Environment Digital Archive

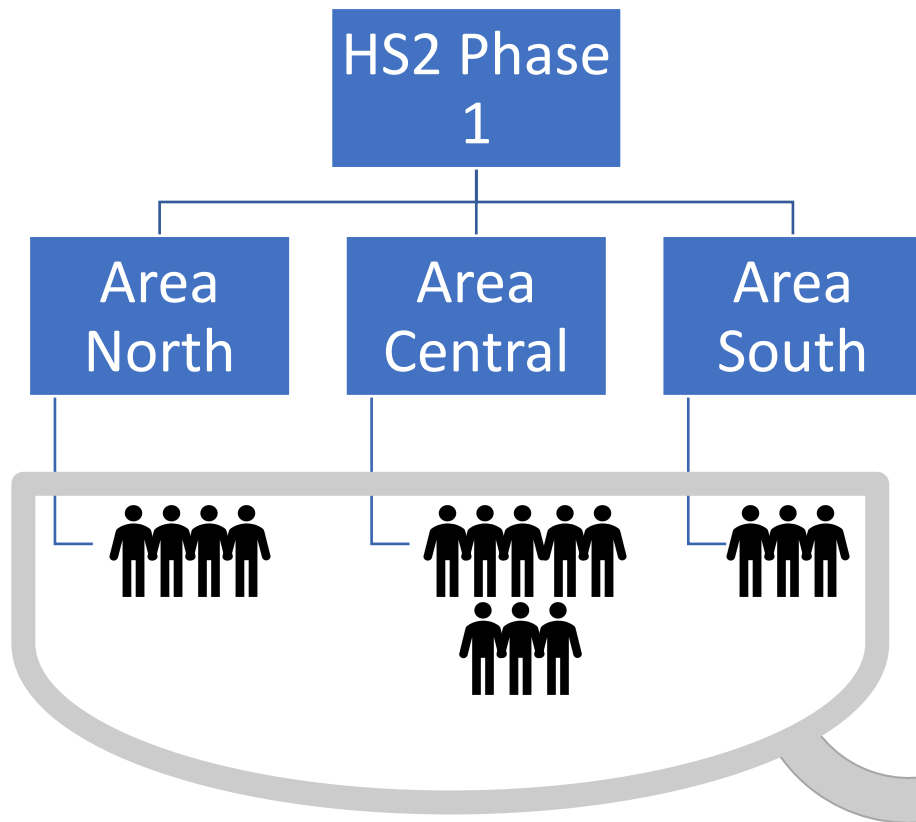
15+ TB of data to be submitted

LIDAR, Laser Scans, Photogrammetry, Video,
RTI, Databases, CT Scans, X Ray, Documents,
Photographs, Geophysics, GPR, Spreadsheets,
CAD, GIS, Scientific data.....

ADS deposits 2021-2022

- 622 total archives submitted
- 180 HS2 archives





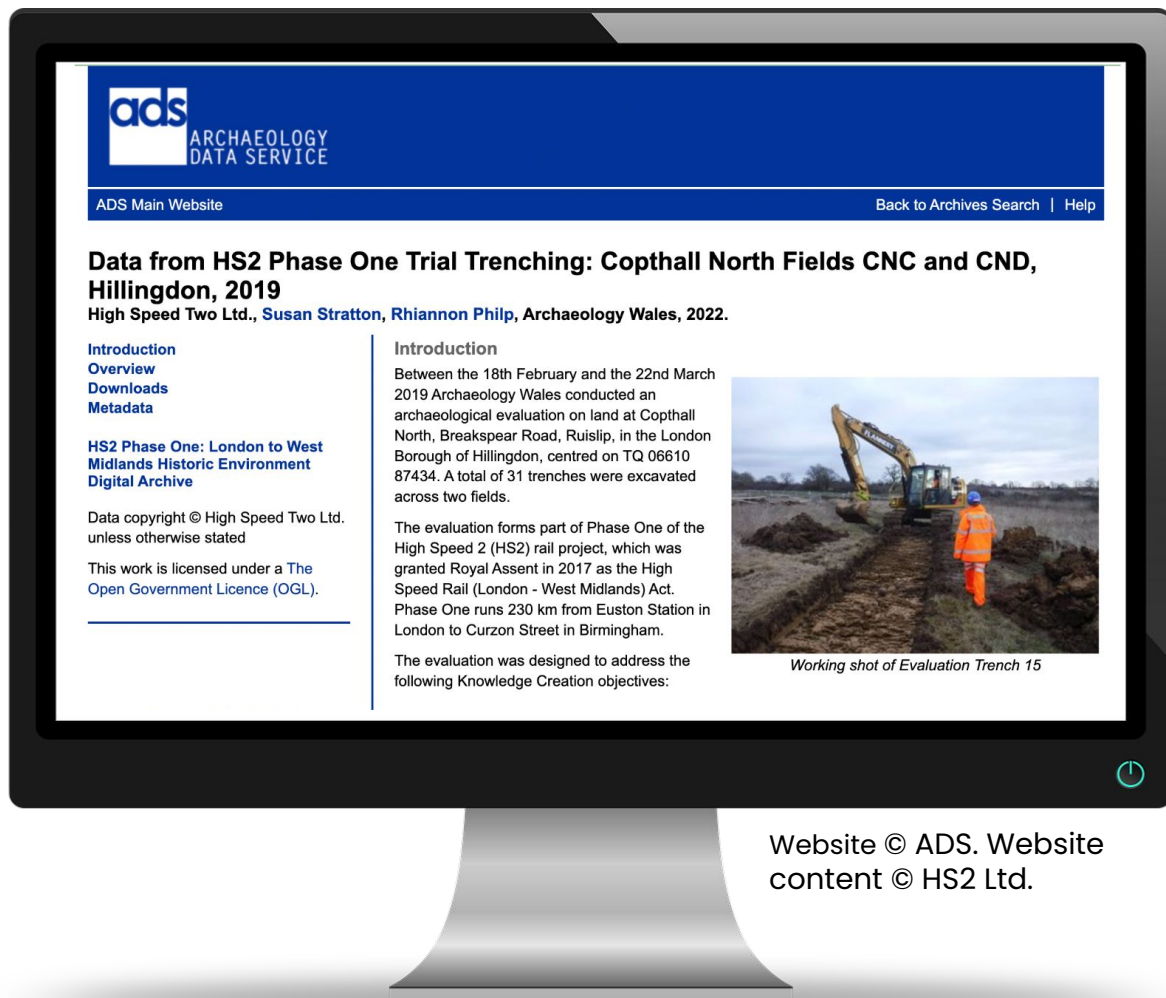
HS2 Hierarchy and Contractors

- The HS2 project is split into phases
- It's then split further into sections
- Contractors work on individual sites
- It all then comes to us

**How we will
disseminate the
data**

The image features a solid red background. In the lower half, there is a light red, semi-transparent shape that resembles a stylized mountain range or a series of connected peaks. A thin yellow line is overlaid on this shape, tracing a path that follows the general contour of the peaks and valleys, starting from the left edge and ending on the right edge.

Individual Data Collections



Cross Collection Search

Submit query **clear form**

Search options ☒ Include Defended small towns
☐ Exclude Defended small towns

Display options ☒ View as a list
☐ View on a map

Site name

Database ID

County
--- select from list ---
Bath and Northeast Somerset
Bedfordshire
Berkshire
Buckinghamshire
Cambridgeshire
Cheshire

Region
--- select from list ---
Central Belt
Central West
East
North
North-East
Northern England

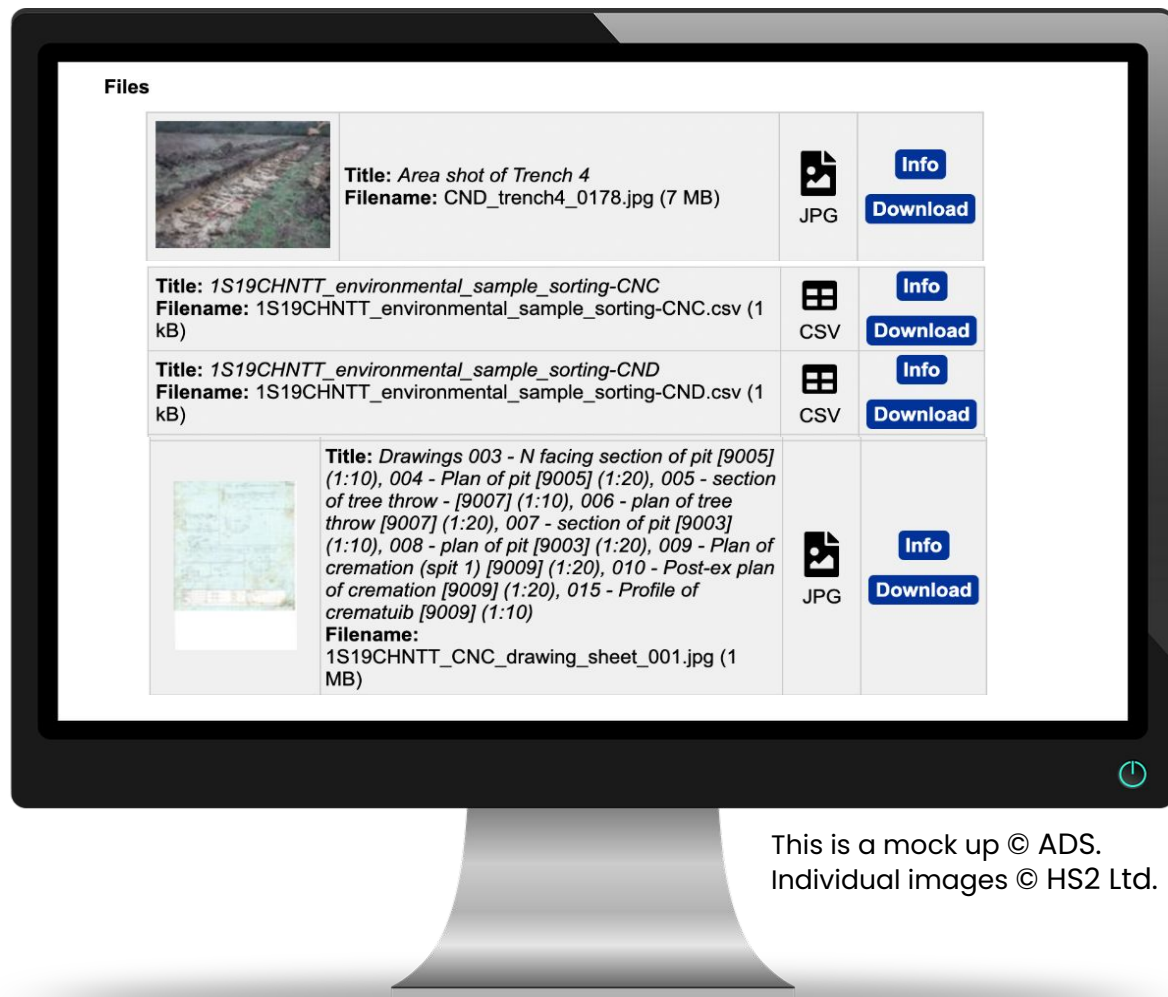
Site Classification

Major Site Type
--- select from list ---
Communications
Industry
Military

Minor Site Type
--- select from list ---
Isolated building
RC temple
agricultural building

This is a mock up © ADS.

Cross Collection Search





This is a mock up © ADS.
Individual images © HS2 Ltd.

Interactive Maps

Data Visualisation

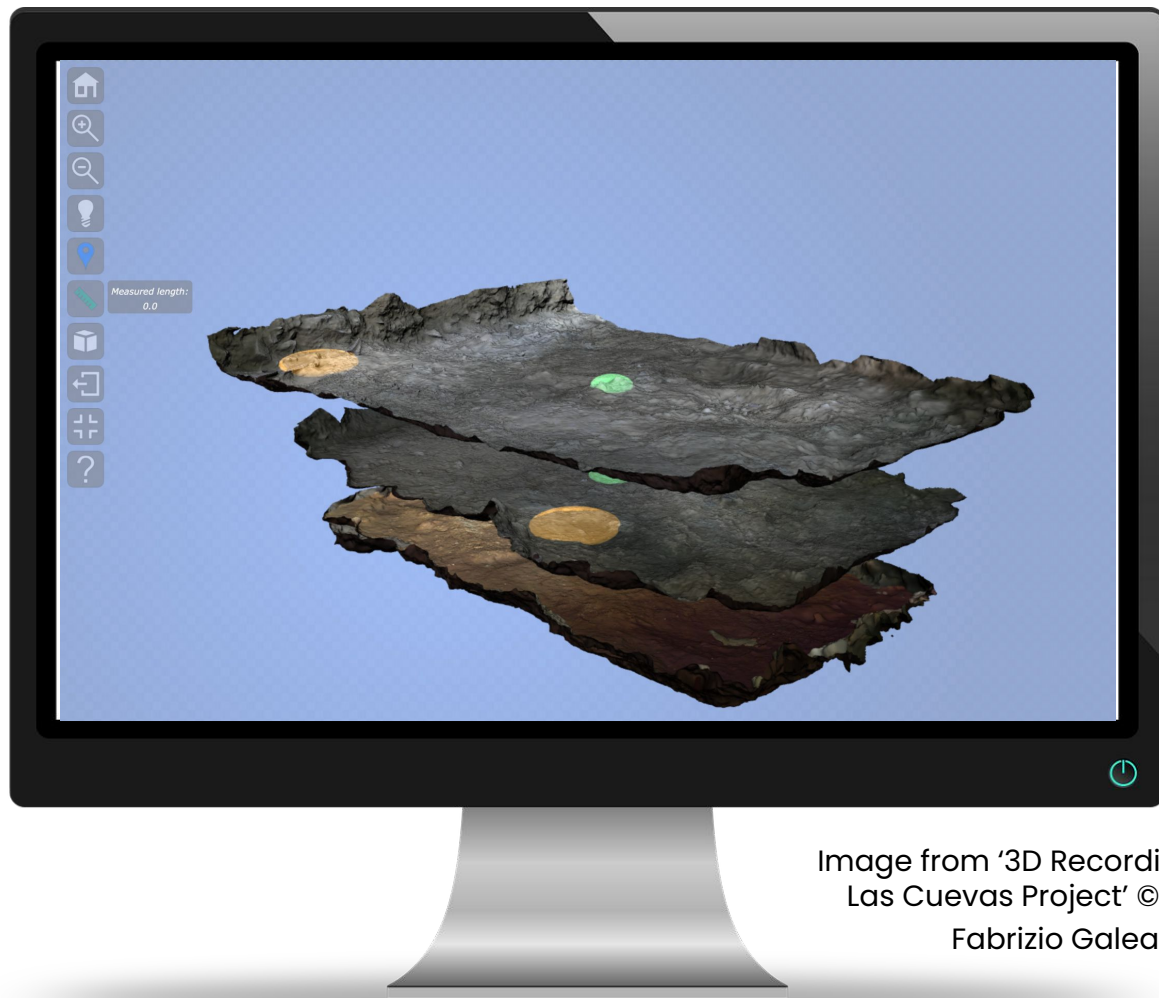


Image from '3D Recording
Las Cuevas Project' © Dr
Fabrizio Galeazzi.

Mitigating risks / How does disseminating in this way facilitate reuse?

Archive decision sheets make contractors think about selection/retention leading to higher quality data – educates depositors about what we're actually asking for

Data visualization – allows users without specialist software to access, interrogate and use the data

Cross collection search – richer user experience than individual collection interfaces

Hand accessioning – ensures it's all to the same standard

HS2 standards require rich metadata, leading to an enhanced spatial search

UNPATH'D Waters

- ground-breaking 3-year research project that aims to unite the UK's maritime collections
- unleash the potential of maritime heritage.



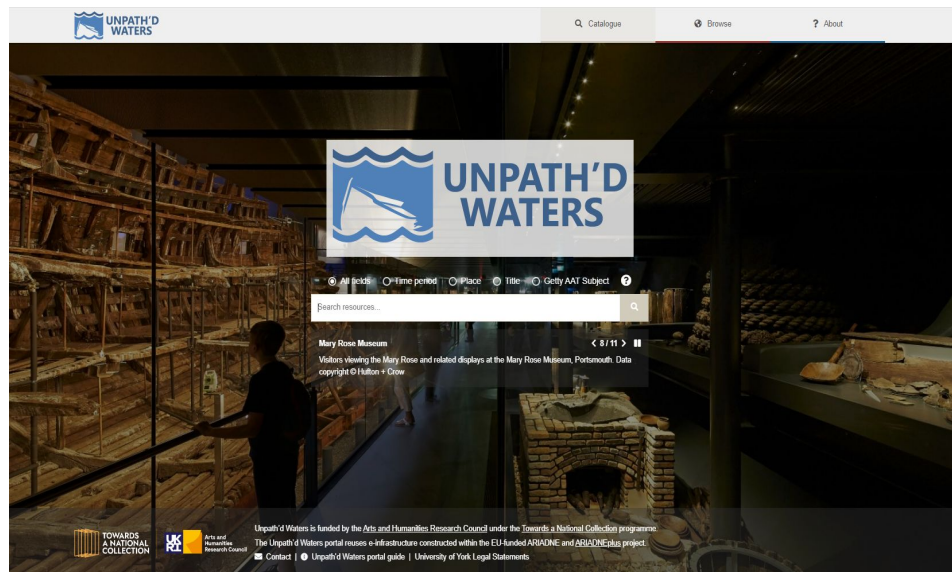
Picture from ADS Isles of Scilly Designated Wrecks Interpretation Data copyright © Kevin Camidge

Support

This work was supported by the Arts and Humanities Research Council [grant number AH/W003384/1]

UNPATH'D Portal

- > 86,509 records in the portal as of the moment
- Metadata is the UO-CAT Ontology (CIDOC-CRM) – Subject terms use GETTY AAT term vocabulary
- Key information and Links to resources from provider containing data for reuse such as: Spatial Coordinates, Documents, and Photographs



Images of all Principal Investigator & Co-Investigators, Collaborator and Partners on the project



What sort of data is deposited?

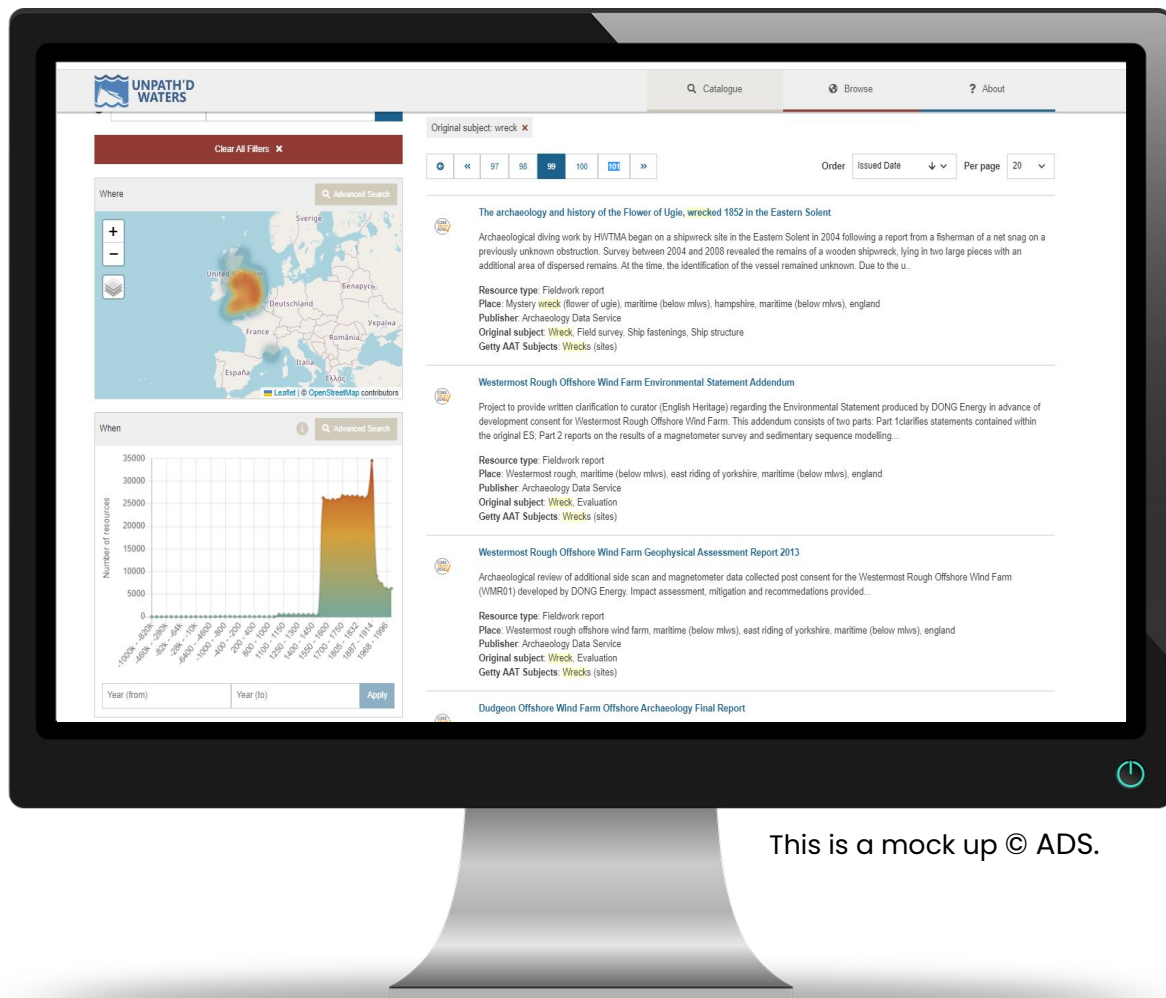
- Datasets with thousands of rows of metadata information on objects/collections have been sent to us from different bodies. This data has then been 'wrangled' to adhere to UO-CAT
- Had to deal with many forms of datasets sent in form of excel, json and xhtml. The data was then converted into XML and uploaded into the UNPATH portal



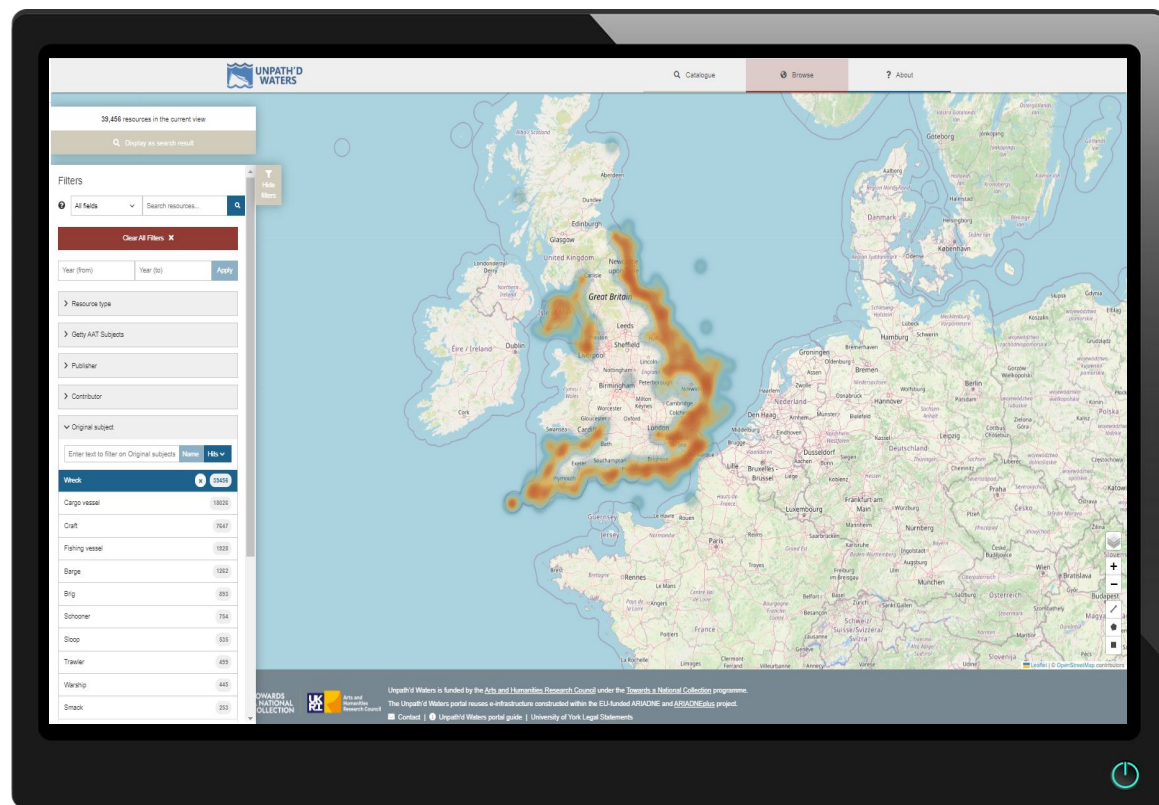
{JSON}



Cross Collections Search



This is a mock up © ADS.



This is a mock up © ADS.

Interactive Maps

▼ Resource type

Enter text to filter on Resource types.

Name

Hits ▼

Site/monument

×

21

▼ Getty AAT Subjects

Enter text to filter on Getty AAT Subjects.

Name

Hits ▼

Wrecks (sites)

×

21

Ferries

×

21

| Original subject | |
|---|-----------------------------------|
| <input type="text" value="Enter text to filter on Original subjects."/> | <div>Name</div> <div>Hits ▾</div> |
| Wreck | 39457 |
| Cargo vessel | 18150 |
| Craft | 16414 |
| Fishermens fastener | 6994 |
| Schooner | 3708 |
| Sloop | 2526 |
| Fishing vessel | 2358 |
| Aircraft | 2365 |
| Obstruction | 2316 |
| Steamship | 2305 |
| Brig | 2079 |
| Barge | 1406 |
| Smack | 1328 |
| Lugger | 1247 |
| Dam | 901 |
| Barque | 854 |
| Steam trawler | 813 |
| Trawler | 790 |
| Motor fishing vessel | 767 |
| Brigantine | 716 |

Advanced Filters

Resource links

 [View resource at provider](#)

 [Json](#)  [Xml](#)  [Rdf](#)  [Cite](#)  [Report an issue](#)

 Resource is part of

Resource type:

[Maritime](#)

[Site/monument](#)

Subject - AAT:   [wrecks \(sites\) \(en\)](#)

Subject - Original: [Wreck](#)

Metadata Info



Sir Edward (Possibly): Pentland Skerries, Pentland Firth



Details

Collections (1)

Images

Overview

Collections

Administrative Areas

Archaeology Notes

References

MyCanmore Images

MyCanmore Text

Brig (19th Century)(Possible), Schooner (19th Century)(Possible)

Site Name Sir Edward (Possibly): Pentland Skerries, Pentland Firth

Classification Brig (19th Century)(Possible),
Schooner (19th Century)(Possible)

Alternative Name(s) 'On The Pentland Skerry'; North Sea; Muckle Skerry

Canmore ID 282226

Site Number ND47NE 8051

NGR ND 47 77

NGR Description ND c. 47 77

Datum Datum not recorded

Permalink <http://canmore.org.uk/site/282226>



Ordnance Survey licence number 100057073. All rights reserved.
Canmore Disclaimer. © Copyright and database right 2023.

[Toggle Aerial](#) | [View on large map](#)

Correction

Favourite

How has UNPATH'D Waters managed to work around the common risks that prevent reuse?

- Clear community standards – enables large scale cross search
- This is a specialised resource with a clear designated maritime community making it easier to create a bespoke portal
- Human skills and expertise along with tools and interfaces developed by partners such as CNR and University of South Wales ensures consistency of mapping across various metadata standards

Closing thoughts

- Interfaces are being built to answer specialised queries
- We are always thinking about who our designated community is – anyone with a research or professional interest in archaeology and heritage
- We want to meet bespoke needs
- FAIR has roots in Science, but our background is Arts and Humanities – so there are potential gaps
- We always need specialist community involvement to help fill these gaps



QUESTIONS?

The image features a solid red background. In the lower half, there is a white wavy line that forms a series of peaks and valleys. Overlaid on this is a thin yellow line that also follows a wavy path, sometimes intersecting the white line. The overall effect is a modern, abstract design.



Archaeology
Data Service

Thank you



Archaeology Data Service

Department of Archaeology

University of York

The King's Manor

Exhibition Square

York, YO1 7EP



www.archaeologydataservice.ac.uk



help@archaeologydataservice.ac.uk