



# Aggregating the UK's maritime data in Unpath'd Waters

Julian Richards, Jamie Bradley, Jamie Geddes and Holly Wright, Archaeology Data Service, UK



# AHRC and Towards a National Collection

Towards a National Collection (TaNC) is a major investment using digital technology to create a unified national collection of the UK's museums, libraries, galleries and archives to maintain global leadership in digital humanities and arts research.

Budget: £18.9 million Duration: 2020 to 2025





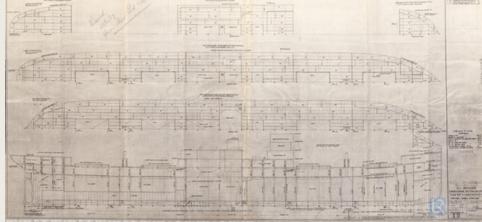
### UNPATH – One of five funded projects Why maritime?

- Of great public interest and central to the UK's 'island/maritime nation' identity.
- Critical management issues no integrated marine inventory of sites despite accelerating exploitation of the seabed
- Clear research applications
- Data access challenges analogue vs digital











### **UNPATH – The Consortium**

Co-Investigators:

- 4 IROs
- 9 Universities

Collaborating Organisations

- 4 Trusts
- 1 Royal Commission

Partners







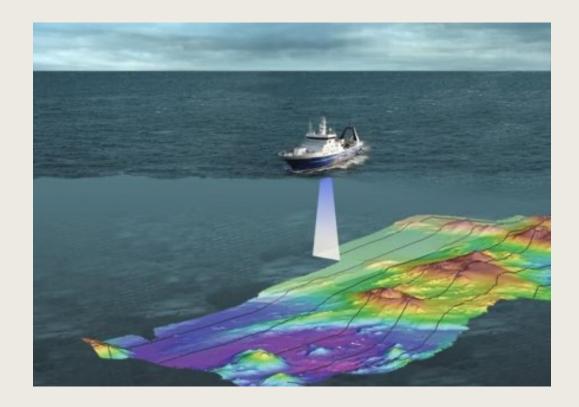
UNPATH'D WATERS

# Unpath'd Waters: Sources



The UK's marine heritage collections, covering 23,000 years of history.

- Collections include archaeological investigations, borehole records, artefacts, sonar surveys, charts, construction records, loss records, images, artworks, and more
- National and local collections
- National inventories
- Grey literature and fieldwork archives
- Citizan Science





# Unpath'd Waters: Aims



- Much better heritage inventories for the four home nations
- New ways of linking very different collection types to enhance research
- Genuine audience-led approaches to accessing collections





# Unpath'd Waters: Challenges

- Lack of agreed data standards
- Variable data quality and granularity
- Metadata suitability for different audiences
- Heterogeneous data sources
- Analogue resources and copyright issues
- Dynamic data sources
- Avoidance of creating more silos



### WPs 1-2: Aggregation, Characterisation & Discovery

Southampton





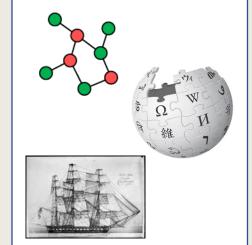
Ontologies,
controlled
vocabularies, &
interoperability

Enhancement and Aggregation

Dissemination

- UO-Cat ontology
  - CIDOC CRM
- What
  - Getty AAT
- When
  - Perio.Do
- Where
  - WGS84

- NLP / NER etc
- Image recognition





- National portals
  - Canmore
  - Coflein
  - Mariner etc
- UK-wide portals
  - ADS
  - MEDIN
- European portals

**Data**Cite

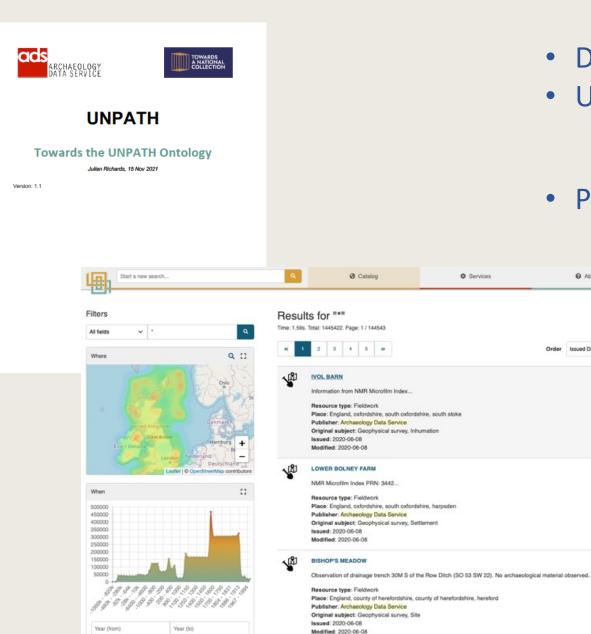
ARIADNE

ORF

SEAL

### Progress so far...



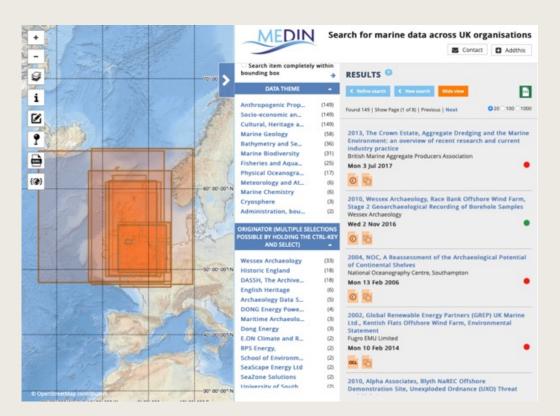


- Data audit completed 89+ sources identified
- UNPATH ontology agreed
  - Harmonised with ARIADNE ontology / CIDOC-CRM •
  - Harmonised with MEDIN metadata schema
- Portal scoping

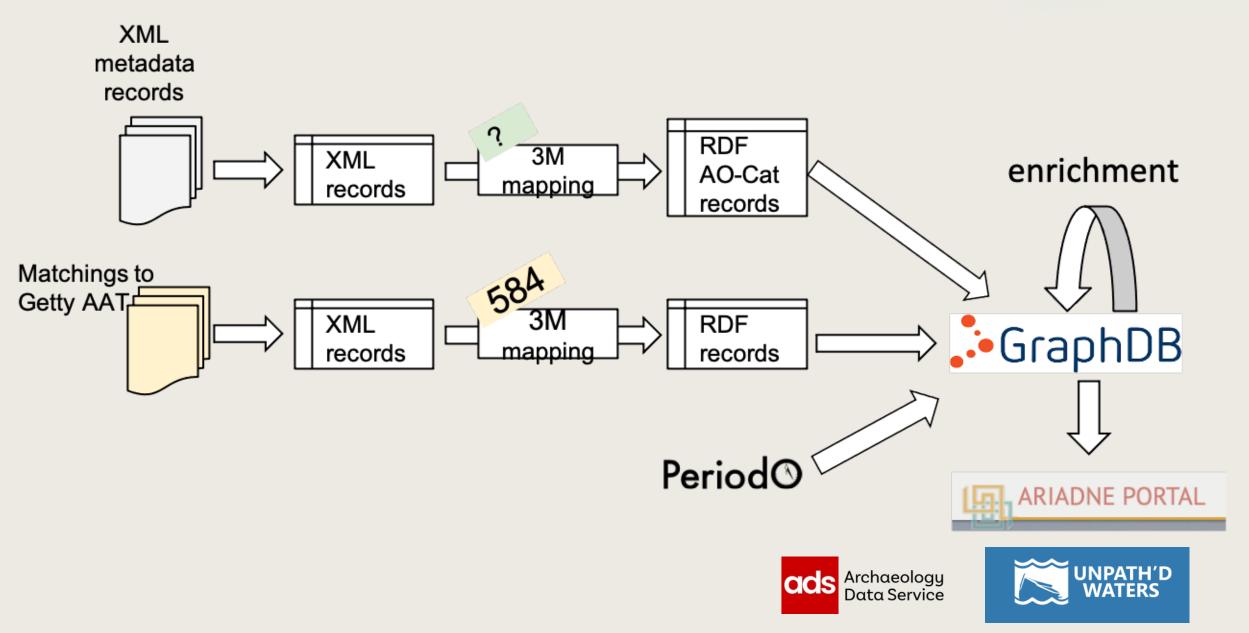
About

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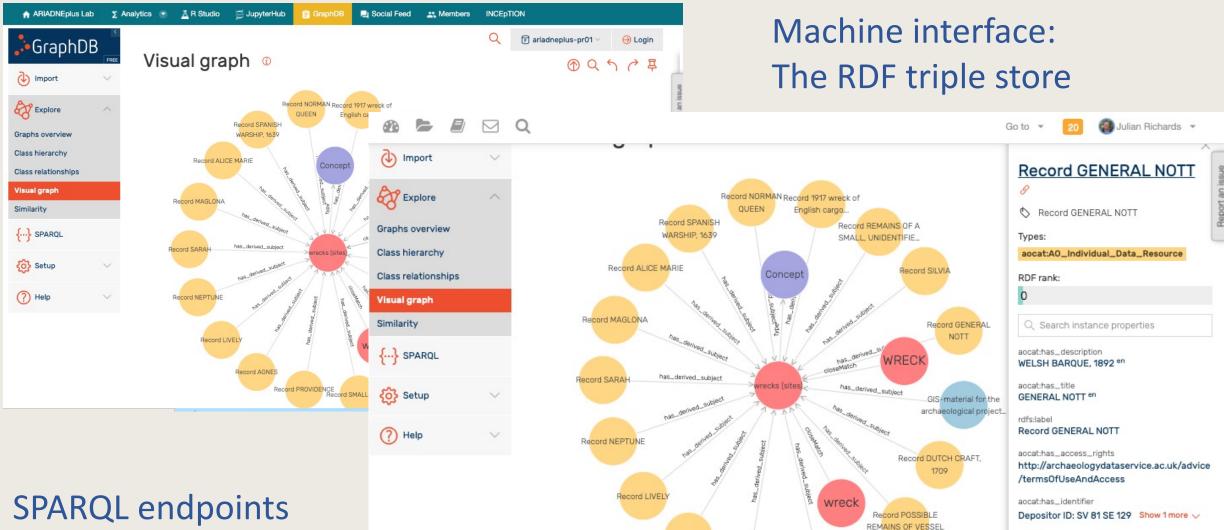
\$ Services



# The workflow



### UNPATH'D WATERS



Record AGNES

Record PROVIDENCE Record SMALL WRECK

Getty AAT & Perio.Do **URIs** 

aocat:was\_modified 15 Sep 2004 j.0:dateTime

15 Sep 2004 j.0:dateTime

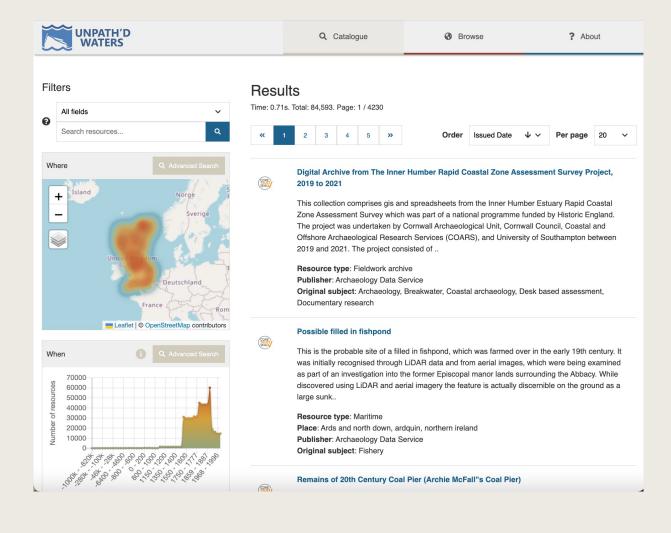
aocat:was\_issued

aocat:has\_original\_id

1176424



- Triple store operational
- Installed a proof of concept instance of the ARIADNE portal badged and hard-wired for UK maritime data for UNPATH – 86k records
- Ingest of national data sets for Scotland, England, NI & IoM; Wales in progress
- Testing interoperability of data
- Perio.Do definitions for Scottish and Irish data sets published
  - NB "Island of Ireland"!!
- Getty AAT thesaurus mapping for maritime craft agreed







Browse

? About



#### All fields O Time period O Place O Title O Getty AAT Subject ?

Search resources...

Isles of Scilly Designated Wrecks

#### < 2/11 > ▶

Side view of sheave wheels showing rims with diver in background from the Isles of Scilly Designated Wrecks project. The project investigated five designated wreck sites situated in the Isles of Scilly: Tearing Ledge, HMS Association, Bartholomew Ledges, HMS Colossus and the Wheel Wreck. https://doi.org/10.5284/1051619 Data copyright © Kevin Camidge

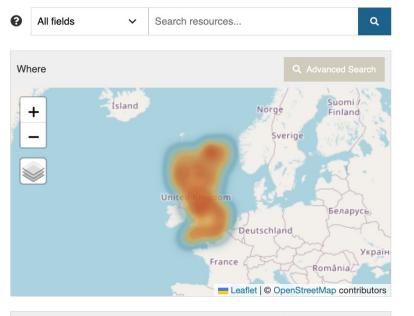


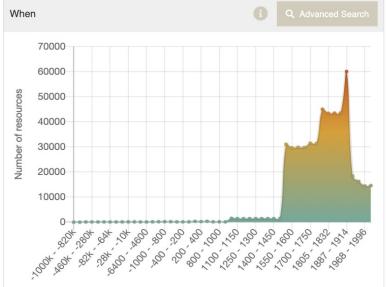


Unpath'd Waters is funded by the <u>Arts and Humanities Research Council</u> under the <u>Towards a National Collection</u> programme. The Unpath'd Waters portal reuses e-infrastructure constructed within the EU-funded ARIADNE and <u>ARIADNEplus</u> project. ✓ Contact | ① Unpath'd Waters portal guide | University of York Legal Statements

Browse

#### Filters





#### Results

CORE

CORE

CORE

Time: 0.64s. Total: 84,593. Page: 1 / 4230



#### Digital Archive from The Inner Humber Rapid Coastal Zone Assessment Survey Project, 2019 to 2021

This collection comprises gis and spreadsheets from the Inner Humber Estuary Rapid Coastal Zone Assessment Survey which was part of a national programme funded by Historic England. The project was undertaken by Cornwall Archaeological Unit, Cornwall Council, Coastal and Offshore Archaeological Research Services (COARS), and University of Southampton between 2019 and 2021. The project consisted of ...

Resource type: Fieldwork archive

Publisher: Archaeology Data Service

Original subject: Archaeology, Breakwater, Coastal archaeology, Desk based assessment, Documentary research

#### Possible filled in fishpond

This is the probable site of a filled in fishpond, which was farmed over in the early 19th century. It was initially recognised through LiDAR data and from aerial images, which were being examined as part of an investigation into the former Episcopal manor lands surrounding the Abbacy. While discovered using LiDAR and aerial imagery the feature is actually discernible on the ground as a large sunk.

#### Resource type: Maritime

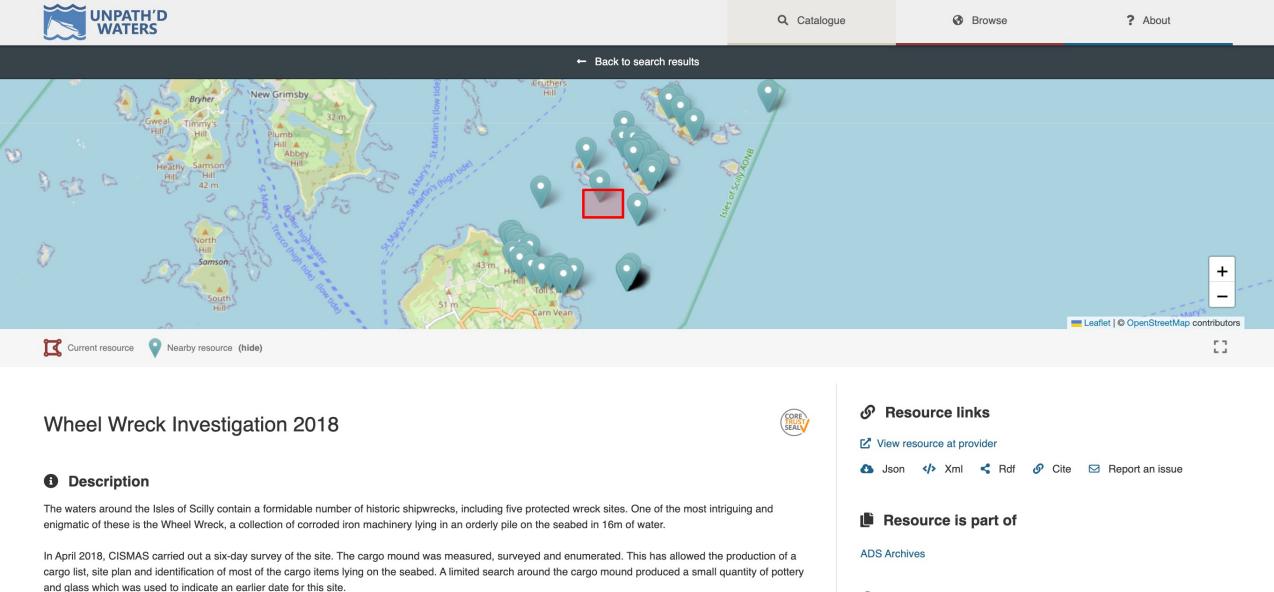
Place: Ards and north down, ardquin, northern ireland Publisher: Archaeology Data Service Original subject: Fishery

#### Remains of 20th Century Coal Pier (Archie McFall''s Coal Pier)

This site inspection was undertaken at low tide following requests by the Abbeyville Resident's Association. The surviving remains of this coal pier are an impressive and stark feature on the north coast of Belfast Lough at Whiteabbey. The substantial concrete parts of the far seaward structure, are partially situated in the tide at LWMMT and are located some 150m south east, east from the shore ..

Resource type: Maritime Place: Mid and east antrim, whiteabbey, northern ireland Publisher: Archaeology Data Service Original subject: Pier

#### TRAVELLING CRANE AND DOCK - GOLIATH



It has not been possible to identify the vessel which carried this cargo. However, we have estimated the hold size, beam and tonnage of the vessel from the

Metadata

Original ID: https://doi.org/10.5294/1055001

disposition and quantity of the cargo. This, along with the revised date for the site, should help to narrow down the documentary search for the name of the wreck.

#### O Thematically similar

Thematically similar resources based on terms in common of:

Subject & Time period ~

Silver Threepence. Threepence: Elizabeth I, 1561-1582 (N 1998)

Silver Threenenes Threenenes: Elizabeth L 1561 (500 (N 1000)



#### ADS Main Website

#### Back to Archives Search | Help

#### Wheel Wreck Investigation 2018

Kevin Camidge, 2019. https://doi.org/10.5284/1055091. How to cite using this DOI

- Introduction
- **Overview** Downloads Metadata **Usage Statistics**

#### Protected Historic Shipwrecks in the Isles of Scilly

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Introduction

The waters around the Isles of Scilly contain a formidable number of historic shipwrecks, including five protected wreck sites. One of the most intriguing and enigmatic of these is the Wheel Wreck, a collection of corroded iron machinery lying in an orderly pile on the seabed in 16m of water.

In April 2018, CISMAS carried out a six-day survey of the site. The cargo mound was measured, surveyed and enumerated. This has allowed the production of a cargo list, site plan and identification of most of the cargo items lying on the seabed. A limited search around the cargo mound produced a small quantity of pottery and glass which was used to indicate an earlier dat Downloads

It has not been possible to identify the vessel which carried Metadata hold size, beam and tonnage of the vessel from the disposUsage Statistics the revised date for the site, should help to narrow down th wreck.

**Protected Historic Shipwrecks in** the Isles of Scilly

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CICIS Archaeology Data Service

#### **ADS Main Website**

Back to Archives Search | Help

#### Wheel Wreck Investigation 2018

Kevin Camidge, 2019. https://doi.org/10.5284/1055091. How to cite using this DOI

Introduction Overview

**Downloads** 

Wheel Wreck Investigation: Plans and Drawings Metadata

Wheel Wreck raster metadata plans

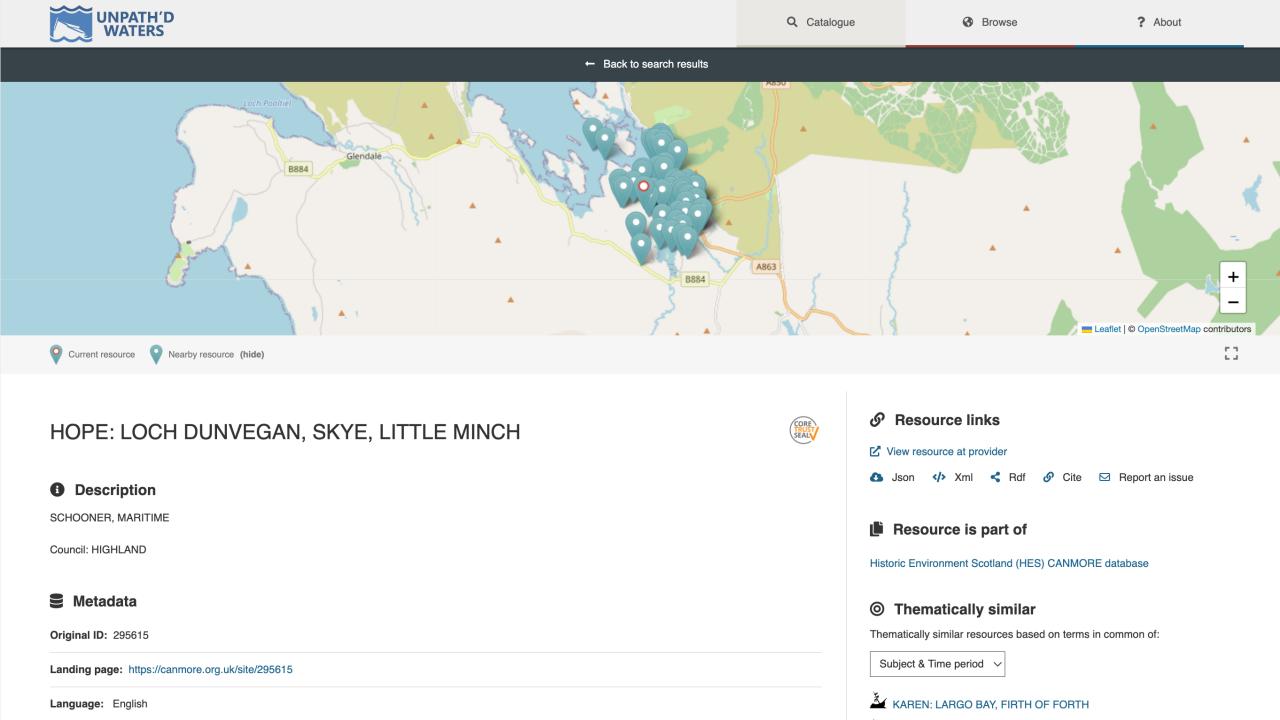
back to contents

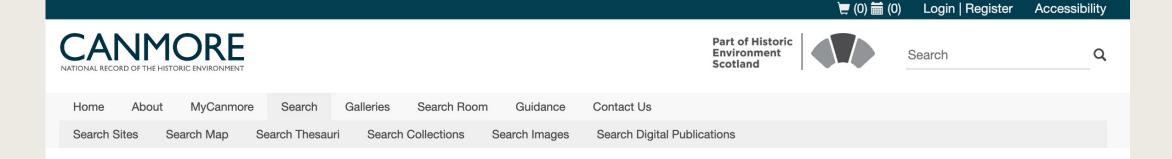
3 Kb

CSV

#### Records 1 - 13 of 13

	Plan of the cargo mound and cylinder fragments. The cargo items are colour coded by type. Grid references are in UTM (Cargo_mound_and_cylinder_plan.png)	PNG	4.28 Mb
	Plan of the cargo mound. The cargo items are colour coded by type. Grid references are in UTM (Cargo_mound_plan.png)	PNG	6.13 Mb
• •	A reconstruction drawing of the large clack valves CL1 to CL6 (Clack_valve_large.png)	PNG	184 Kb





### Hope: Loch Dunvegan, Skye, Little Minch

Details

Overview Collections

Activities

References

Administrative Areas

Archaeology Notes

MyCanmore Images

MyCanmore Text

Collections (1) Images

#### Schooner

**Site Name** Hope: Loch Dunvegan, Skye, Little Minch

**Classification** Schooner

Alternative Name(s) Dunvegan, Old Inn; Hope

Canmore ID 295615

Site Number NG24NW 8004

NGR NG 2424 4787

NGR Description NG c. 2424 4787

Datum Datum not recorded

Permalink http://canmore.org.uk/site/295615



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Toggle Aerial | View on large map



✓ Resource type	
Enter text to filter on Resource types.	Name Hits 🗸
Site/monument	84304
Fieldwork report	207
Fieldwork archive	82
✓ Getty AAT Subjects	
Enter text to filter on Getty AAT Subjects.	Name Hits 🗸
Wrecks (sites)	37542
Cargo vessels	18198
1 Boats	16472
3 Schooners	3733
1 Fishing vessels	3435
Fore-and-aft-rigged vessels	2885
Sloops (sailing vessels)	2557
1 Aircraft	2365
1 Hazards	2316
3 Steamships	2311
Brigs (sailing vessels)	2080

Q Catalogue 🚱 Browse

? About

rargely constructed within the yard. It is the smaller of the two, standing som high, with a span of 140m & can lift 640 tonnes. Both cranes run on 800m of track which span Harland & Wolff's Building Dock and Block Assembly Area. In operation, ..

Resource type: Maritime Place: Belfast, queen's island, northern ireland Publisher: Archaeology Data Service Original subject: Shipyard

#### ALEXANDRA GRAVING DOCK - C.F. IHR10486-010-00 for details

The Alexandra Graving dock on Queens Island was built between 1885-1889. It is 830ft long & the design reflected the new leaner ships of the C19th. This is an IHR site, given an SMR no. for scheduling purposes - c.f. IHR10486-010-00 for further details. Archaeological monitoring around the dock required the excavation of 5 pits to check the suitability for new moorings for the HMS Caroline. Loca..

Resource type: Maritime Place: Belfast, queens island, northern ireland Publisher: Archaeology Data Service Original subject: Dry dock

#### THOMPSON GRAVING DOCK - c.f. IHR 10486"B for details

The Thompson graving dock, built 1903-1911 was, at the time of construction, the longest graving dock of its kind in the world. The site is of world significance in terms of ship building history & with the other docks tells the story of the development of the ship-building industry in Belfast. This is an IHR site given an SMRno for scheduling - c.f. IHR 10486"B...

Resource type: Maritime

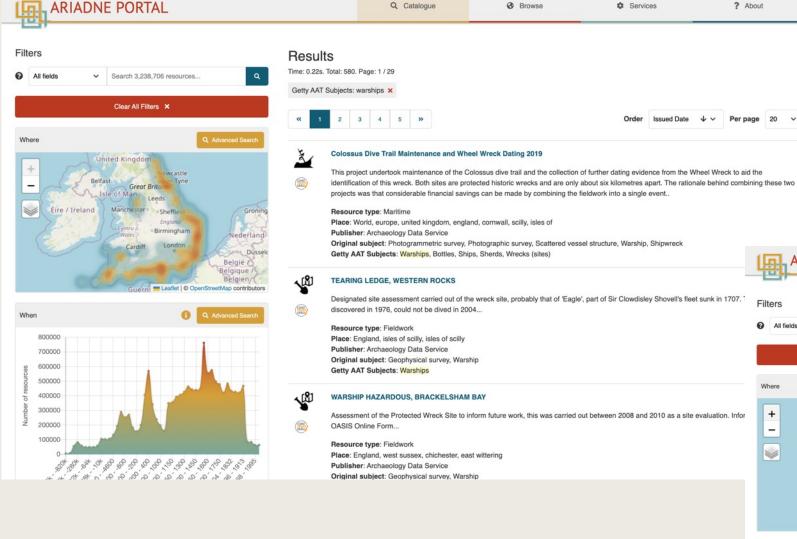
CORE

Place: Belfast, queen's island, northern ireland Publisher: Archaeology Data Service Original subject: Dry dock

#### **TRAVELLING CRANE & BUILDING DOCK - SAMSON**

"Samson" and its building dock is one of a pair of cranes in the Harland & Wolff shipyard, along with "Goliath" [Dow 004:504]. It was erected in 1974 and is the larger of the two, standing 106m high, with a span of 140m & can lift 840 tonnes. Both cranes run on 800m of track which span Harland & Wolff"s Building Dock and Block Assembly Area. In operation, each crane moves at c. 30m per minute..

Resource type: Maritime Place: Belfast, queen's island, northern ireland Publisher: Archaeology Data Service Original subject: Shipyard



Searching on "warships" only: 580 resources; England only

#### Searching on "warships" and narrower terms: 1023 resources **ARIADNE PORTAL** Q Catalogue Browse Results Time: 0.11s. Total: 1,023. Page: 1 / 52 Search 3.238,706 resources... Getty AAT Subjects: warships × Clear All Filters X 2 3 4 5 » UNKNOWN: NORTH SEA SUBMARINE, MARITIME Council: ABERDEEN, CITY OF. Resource type: Maritime Place: Scotland, maritime - aberdeen city of, aberdeen, city of Publisher: Historic Environment Scotland Original subject: Submarine U-297 [POSSIBLY]: ATLANTIC SUBMARINE, MARITIME Council: MARITIME. Deutschland Resource type: Maritime eetMap contributors Place: Scotland, maritime - offshore, maritime Publisher: Historic Environment Scotland (i) Q. Advanced Sea Original subject: Submarine U-36: ATLANTIC SUBMARINE, MARITIME Council: MARITIME. Resource type: Maritime Place: Scotland, maritime - offshore, maritime Publisher: Historic Environment Scotland Original subject: Submarine

20

Filters

Where

+

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When

800000

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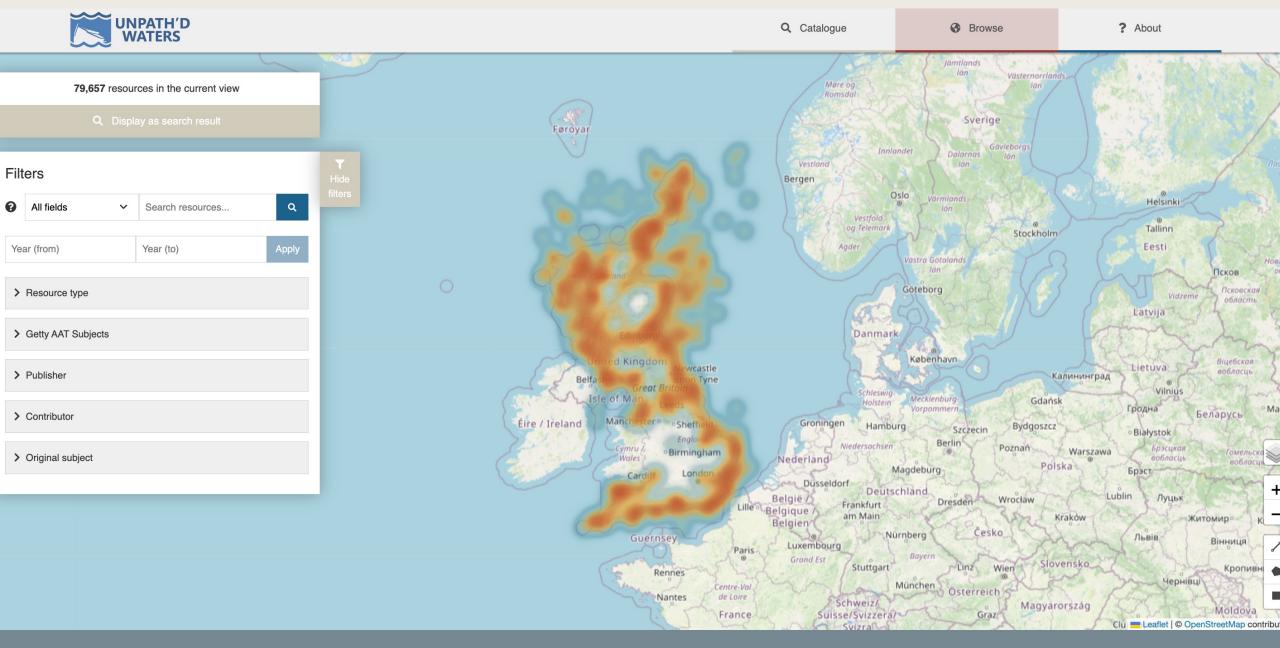
dne-portal-dev.d4science.org/search?g=&derivedSubject=warships#

All fields

#### UNKNOWN: NORTH CHANNEL

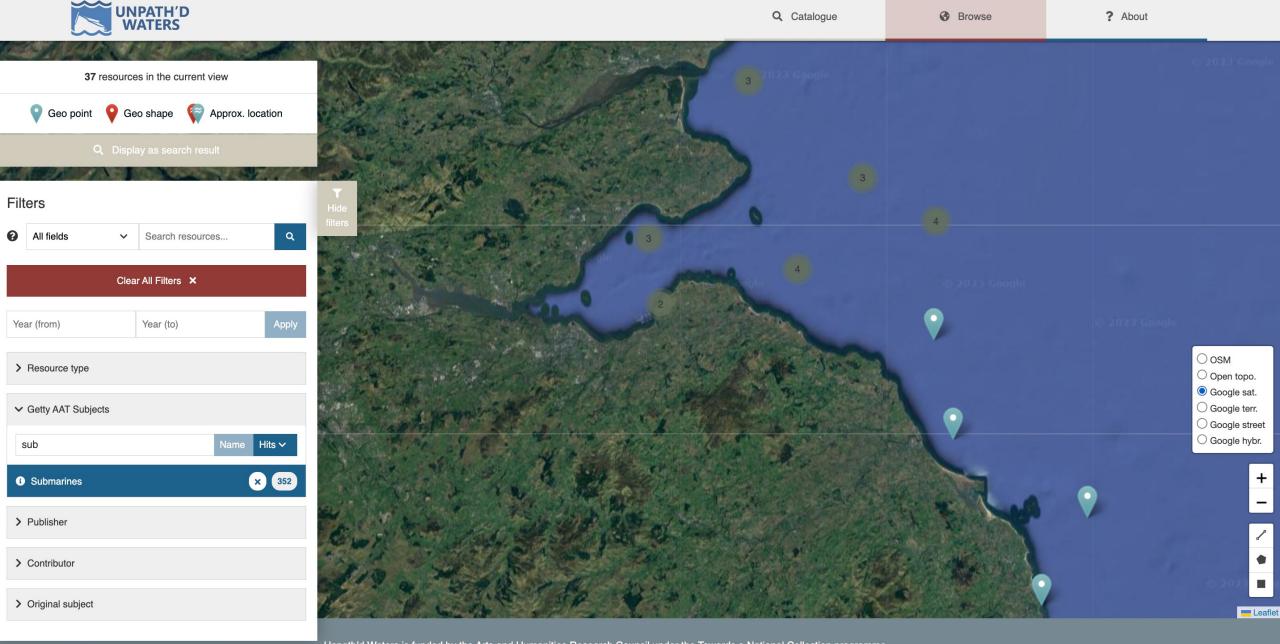
SUBMARINE, MARITIME Council: ARGYLL AND BUTE.

Resource type: Maritime





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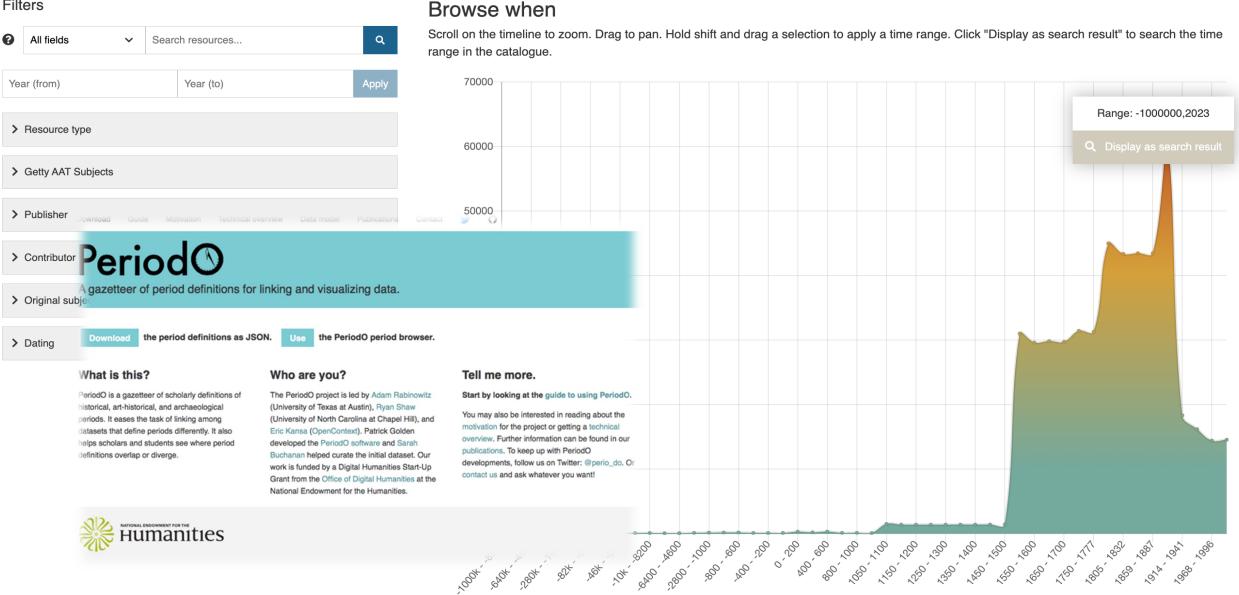


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Browse

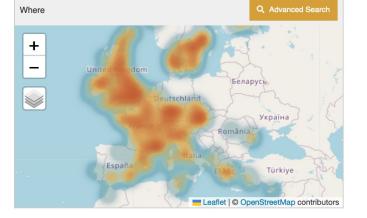
Filters



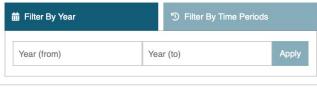


#### Filters









#### Results

CORE

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CORE

CORE

Q

Time: 0.71s. Total: 3,487,943. Page: 1 / 174398



Order Issued Date V Per page 20 V

#### Images from a Historic Building Survey of the Barn at 2 Dowbridge Way, Kirkham, 2018

This digital archive contains images from a historic building survey recording of the baren at 2 Dowbridge, Kirkham. The survey was undertaken and completed by The Archaeology Co. in 2018...

Resource type: Building survey Publisher: Archaeology Data Service Original subject: Barn, Building survey, Buildings--england, Farm, Farm buildings

#### Report and Images from Archaeological Investigations at West Road, Lympsham, Weston-Super-Mare, 2020

This collection comprises the site report and digital photographs from archaeological investigations on land at West Road, Lympsham, Weston-Super-Mare, Somerset. The work was undertaken prior to residential development by AC Archaeology in March and November 2020. The investigations uncovered evidence for archaeological features dating from the medieval and post-medieval periods with some use of ...

Resource type: Fieldwork archive Publisher: Archaeology Data Service Original subject: Antler tine, Ditch, Excavation, Excavations (archaeology)--england, Jar

### Digital Photographs and Written Scheme of Investigation from a Historic Building Survey and Archaeological Monitoring: Goldfinch Cottage, Place Lane, Compton, Winchester, Hampshire, 2018

This collection comprises digital photographs and the written scheme of investigation from a Historic Building Survey and Archaeological Monitoring works that were undertaken by Allen Archaeology Limited at Goldfinch Cottage, Place Lane, Compton, Winchester, Hampshire, 2018. The works were undertaken as a condition for planning consent for residential development. The works identified four broad..

Resource type: Building survey

Publisher: Archaeology Data Service

Original subject: Building survey, Buildings--england, Cistern, Field survey, Outbuilding

#### 

CORE

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#### Images from a Level 2 Descriptive Buildings Record Survey at 278-284 High Street West, Sunderland, 2022

This collection comprises the digital photographs from a Level 2 Descriptive Buildings Record photographic survey of 19th-century and later buildings at 278-284 High Street West, Sunderland, undertaken by Archaeological Services Durham University in 2022...

Resource type: Building survey Publisher: Archaeology Data Service Original subject: Buildings--england, Descriptive buildings record (level 2), Shop



# TaNC: Issues arising

- Discovering collections: Complexity of connectivity metadata only – or at level of data?
- Analogue to Digital: Digitisation strategy and approach to FAIRness
- Controlled vocabularies: national vs international?
- Authority: Dealing with AI enhanced metadata vs the authoritative "national" records
- Inherent issues: Missing search terms in our conventional metadata e.g. "Slavery"



# Unpath'd Waters: Keep up to date

- https://unpathdwaters.org.uk/
- https://unpathd.ads.ac.uk/

UNPATH'D WATERS

