



Archaeology
Data Service

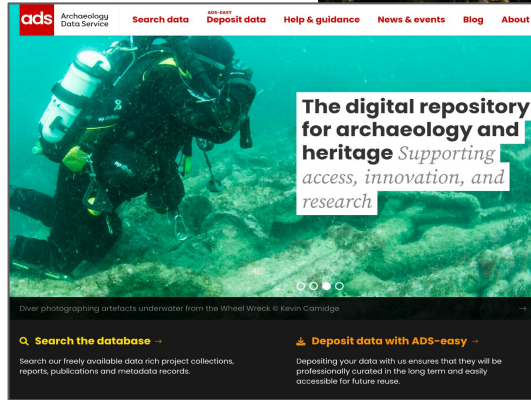
Digital archives – can changes in workflows improve accessibility?

Teagan Zoldoske

Archaeology Data Service



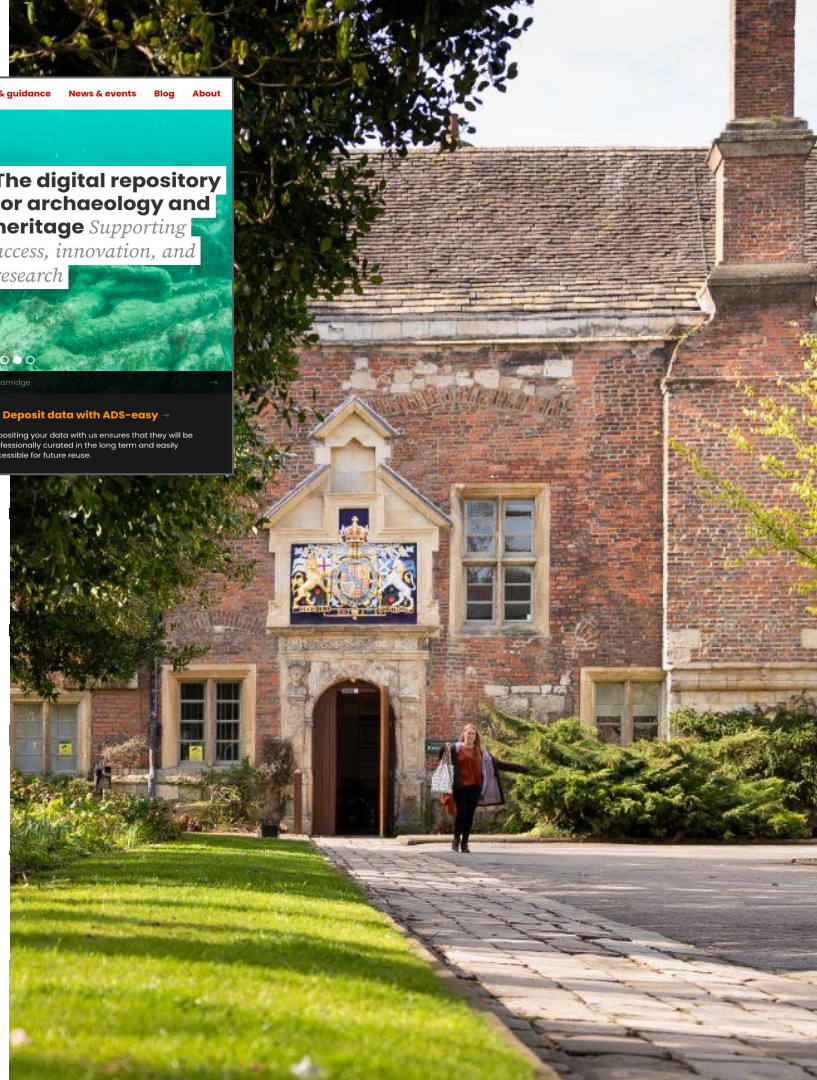
Archaeology Data Service



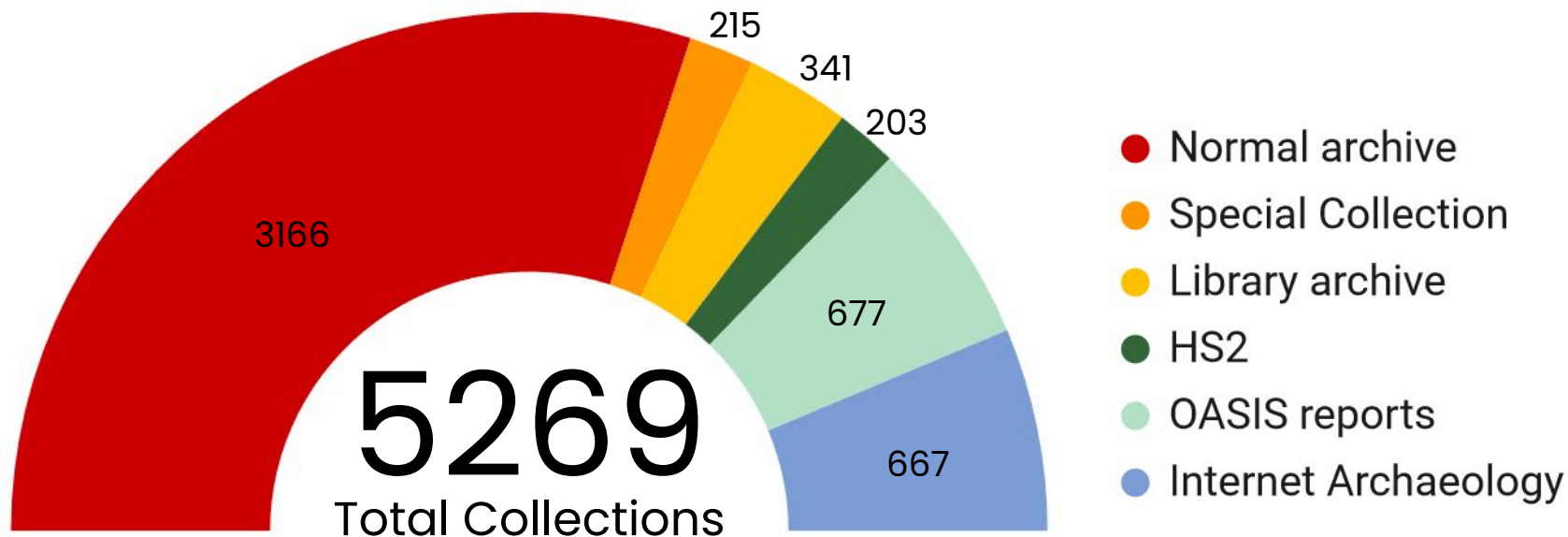
Website © ADS

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

Image © University of York



Collections by Type as of August 2022

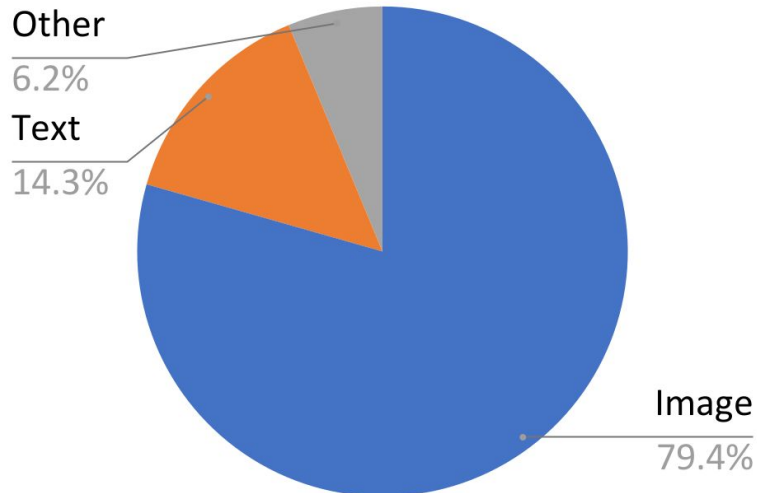


Collections over the years

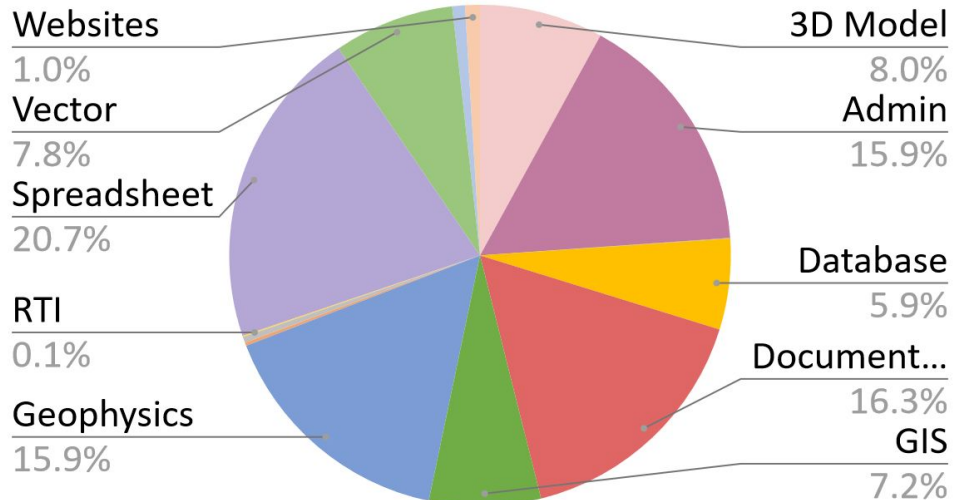


Objects per data type

Data Types



Other Data Types



**What are these
objects?**



Text Example, Reports

INTRODUCTION

Archaeomagnetic samples were taken from a feature suspected to have been heated, uncovered during an archaeological evaluation by trial trenching at Castle Field, Torksey, Lincolnshire (NGR SK 83645 78408), see Figure 1. The sampling and laboratory measurements were undertaken by Ann Wilkinson as part of a PhD research project. One of the objectives of this research is to obtain dated magnetic directions from archaeological contexts relating to the first millennium AD, for inclusion in the British secular variation curve with the intention of increasing the number of data points and improving archaeomagnetic dating in this period. The magnetic directions from this feature may be incorporated into the dataset used to construct the secular variation curve if supported by independent dating evidence and will also be used in the PhD thesis.

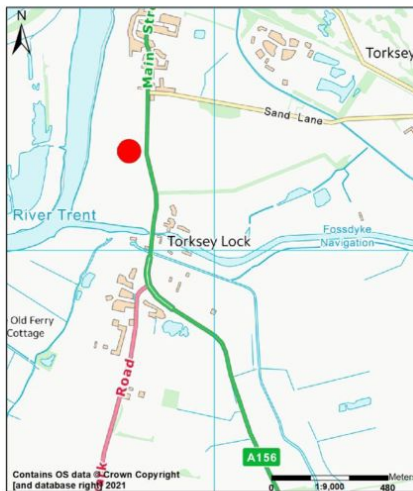


Figure 1: Location of the Castle Field site (indicated by the red dot) to the south of Torksey.

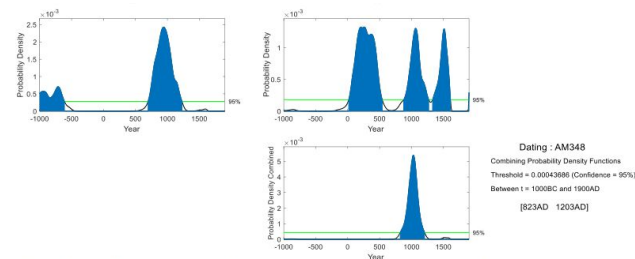


Figure 6: Probability density for AM348 produced by the Archaeomagnetic Dating Tool for Matlab. Top row shows master secular variation curves for the observation site (red bold curves with red error bands) of the declination and inclination with the archaeomagnetic directions (blue line) and associated scatter (green lines). Middle row shows the individual probability density functions for the declination and inclination – the green line indicates the 95% probability threshold. Bottom row shows the combined probability density marked with the green line of 95% probability, and the archaeomagnetic age range.

	Mean Declination	Mean Inclination	Alpha-95 (α_{95})	Date ranges at 95% confidence level
AM348	17.0°	64.1°	4.1°	AD823-AD1203

Table 4: Summary of the mean magnetic directions (not corrected to Meridian) and alpha-95 obtained from the final ChRM analysis (see Table 3) and the calibrated date range.

[Julian D Richards](#), [Dawn Hadley](#), [Elizabeth Craig-Atkins](#), [Gareth Perry](#) (2021) *Digital Archive from an Investigation into the Early Medieval Town at Torksey, Lincolnshire 2012 - 2021* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1083529>

Text Example, Dating

Sarah Salisbury
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Sheffield, South Yorkshire
S3 7QY
United Kingdom
VAT No. GB 648 2388 08



¹⁴CHRONO Centre
Queens University
Belfast
42 Fitzwilliam Street
Belfast BT9 6AX
Northern Ireland

Radiocarbon Date Certificate

UBANo	Sample ID	Material Type	¹⁴ C Age	±	F14C	±	uAC
UBA-23400	TO12/B23	Human bone	1023	27	0.8804	0.0030	47.4
UBA-23401	TO12/A23	Human bone	745	29	0.9114	0.0033	47.5

Laboratory Identification: UBA-23401
Date of Measurement: 2013-08-15
Site: Torksey (Lincolnshire)
Sample ID: TO12/A23
Material Dated: bone, antler or tooth root
Pretreatment: Collagen
Submitted by: Dawn Hadley

Conventional	745±29
¹⁴ C Age:	BP
Fraction	using AMS
corrected	δ ¹³ C

Average for past 5 years: 17,632 per/year

Reports over the years

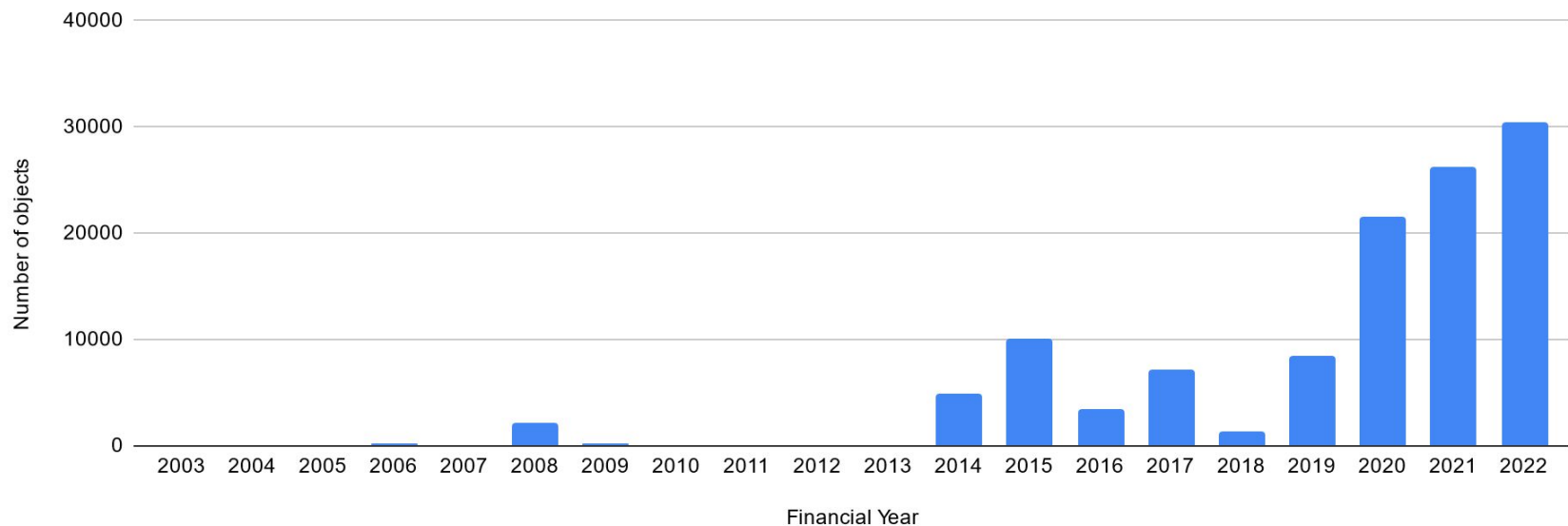


Image example



Birmingham Archaeology (2017) *Abberton to Wormingford Pipeline route: Colchester Borough. Archaeological Evaluation* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1045795>

Cotswold Archaeology (2017) *Land to the rear of 90 East Street, Olney, Milton Keynes. Archaeological Evaluation* (OASIS ID: *cotswold2-293913*) [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1044397>

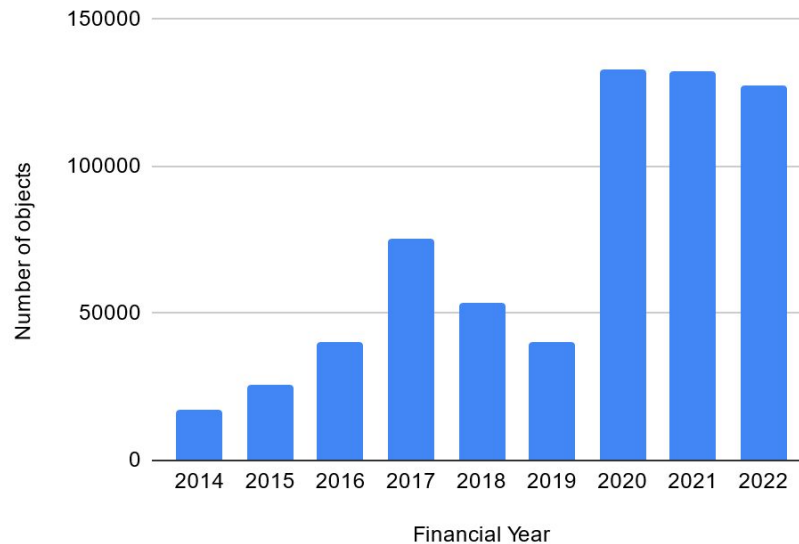
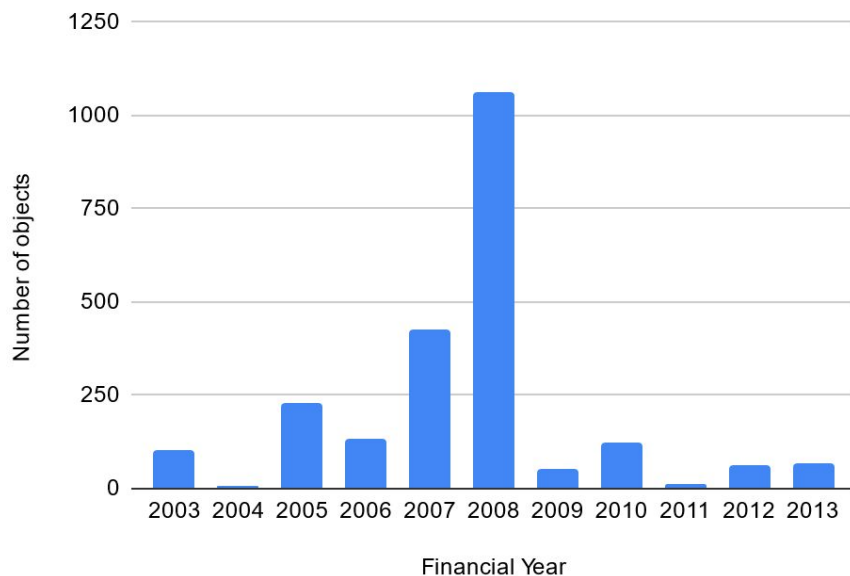
Image example



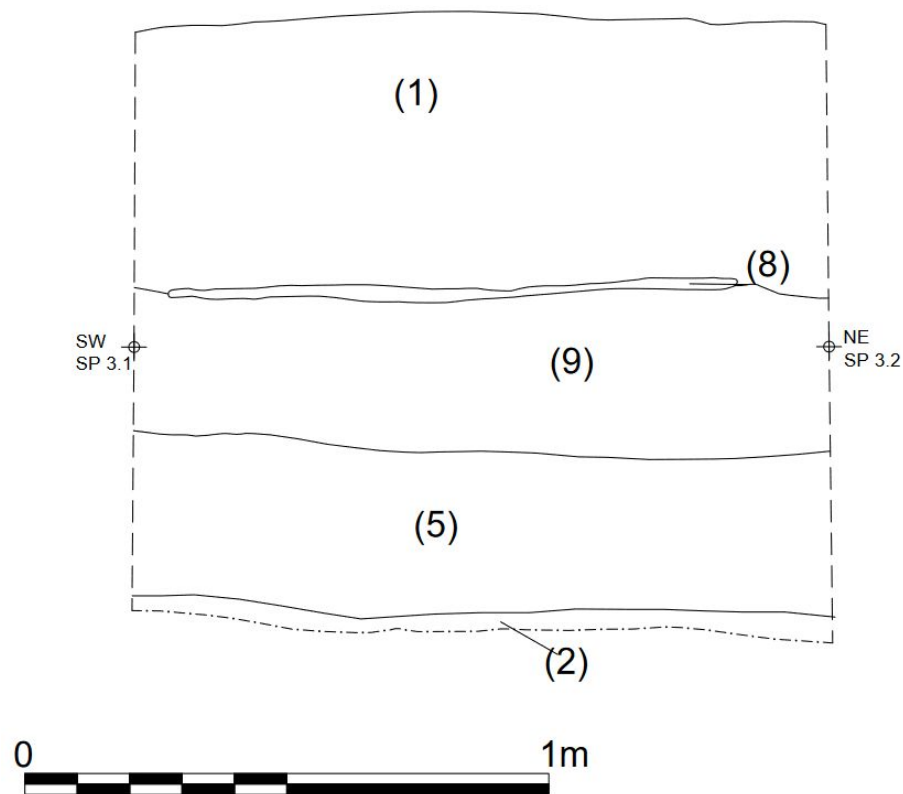
Museum of London Archaeology (2019)
*The Prittlewell princely burial: excavations
at Priory Crescent, Southend-on-Sea,
Essex 2003* [data-set]. York: Archaeology
Data Service [distributor]
<https://doi.org/10.5284/1050095>

Average for past 5 years: 97,503 per/year

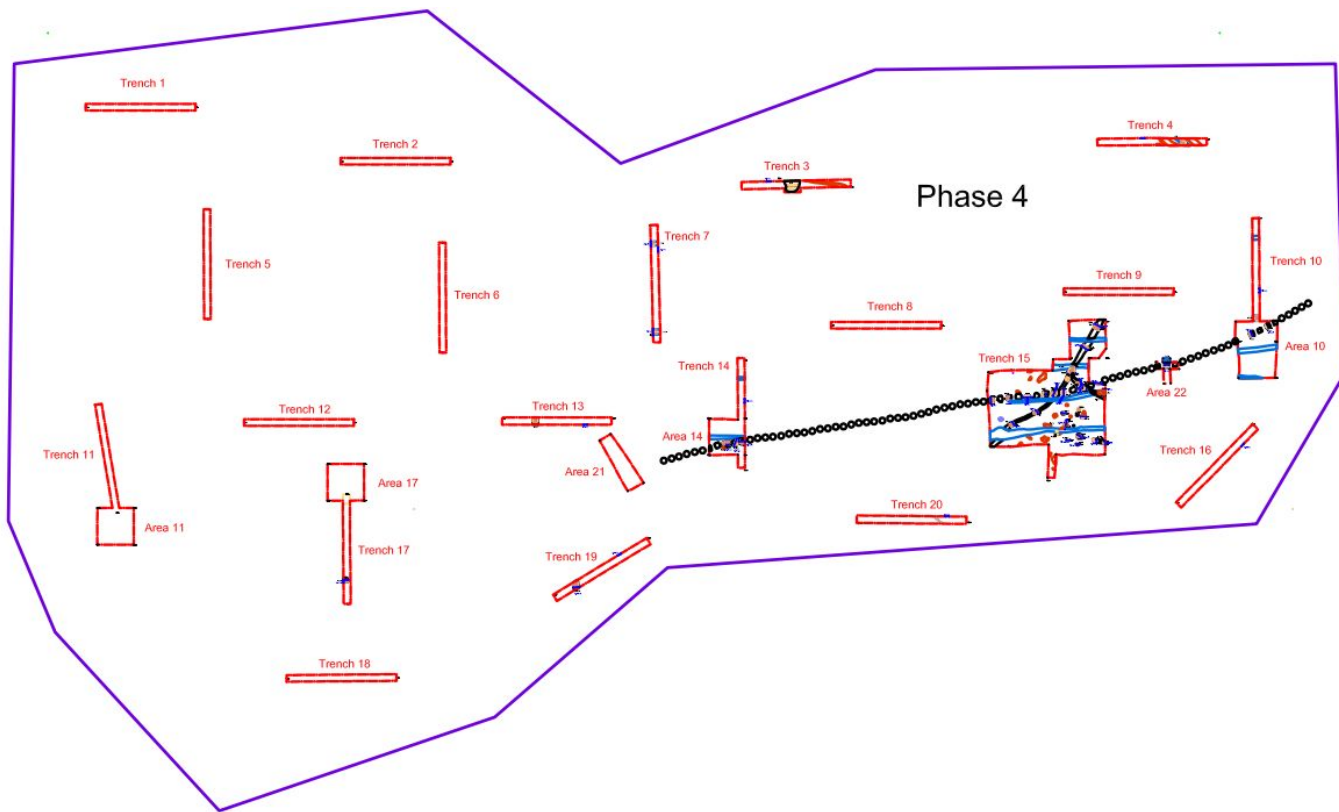
Images over the years



CAD example

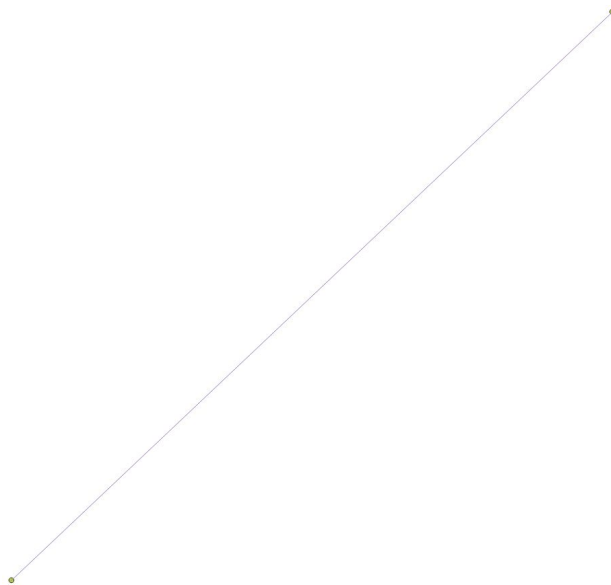


CAD example

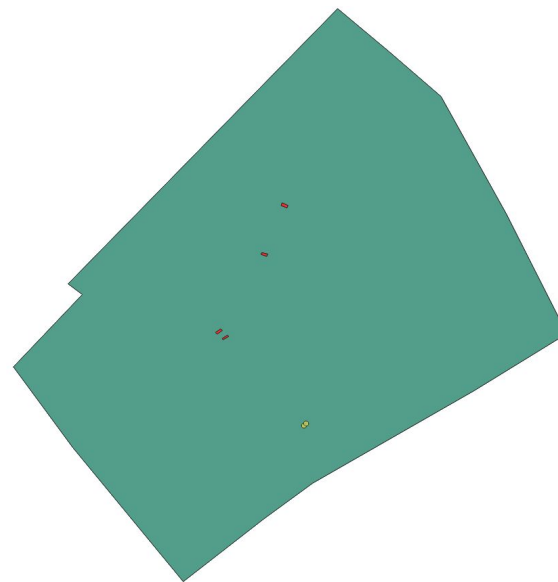


GIS example

Line and point data from survey



Data from survey



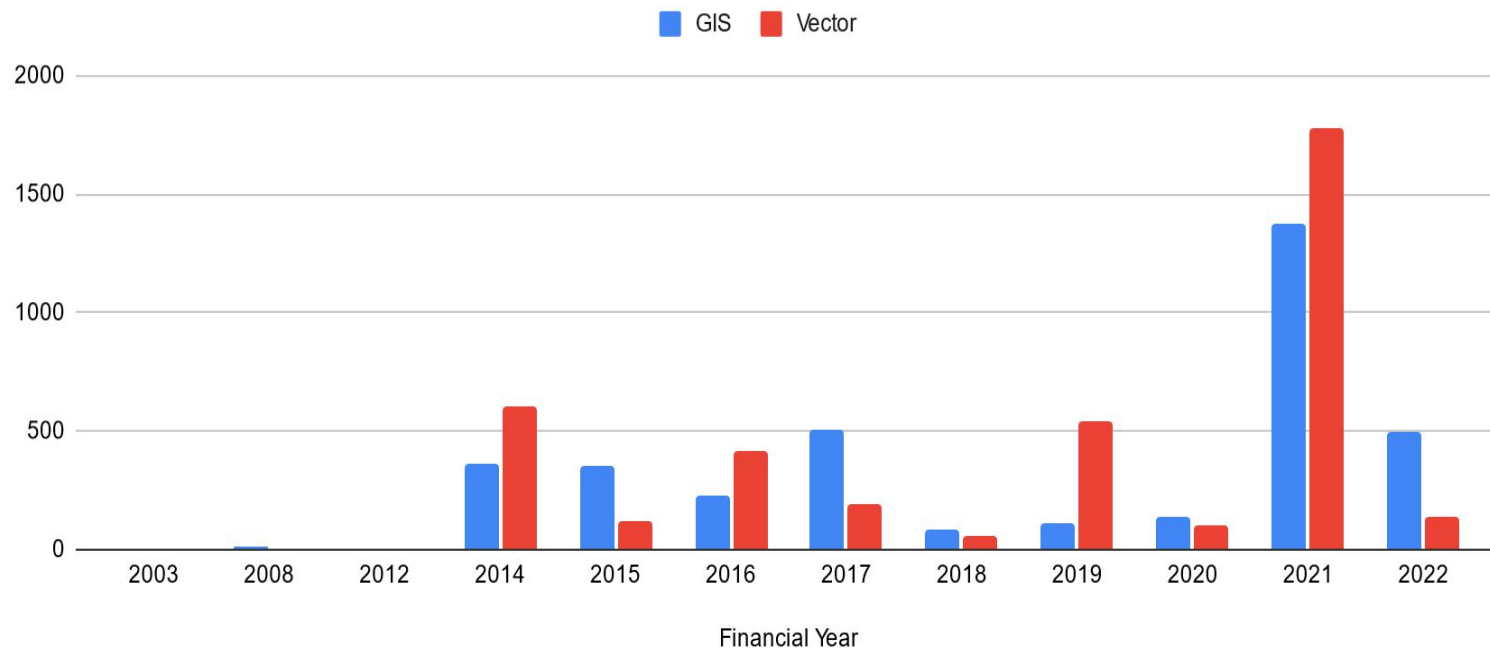
GIS example



MOLA (nd) Data from an Archaeological Recording at St Mary's Church and Churchyard, Stoke Mandeville, Buckinghamshire, 2020-2022 (HS2 Phase One) [data-set]. York: Archaeology Data Service [distributor]

Average CAD for past 5 years: 514 per/year
Average GIS for past 5 years: 441 per/year

The GIS and the CAD over the years

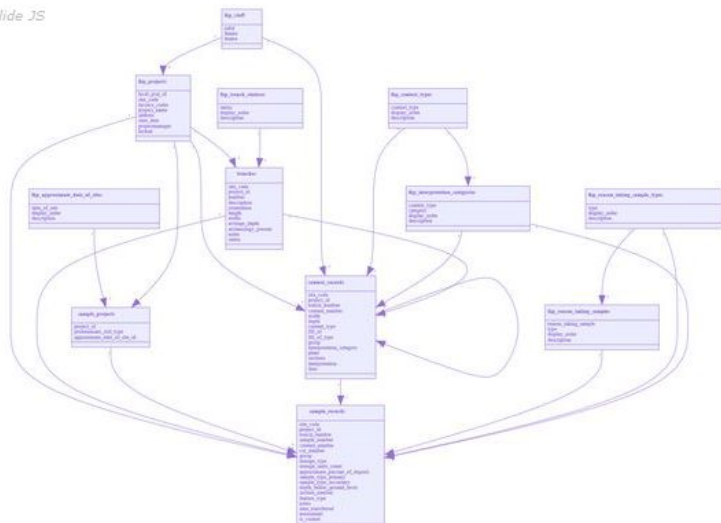


Spreadsheet example

Context	Fabric	Form	No.	Wt (g)	Th (mm)	Condition	Comments
5/008	T1	tile	1	20			Flat tile fragments.
8/005	B1	brick	4	178		A	Broken fragments of very low fired brick (although equally could be fired clay)
2/010	T1	tile	1	15	16		

Database example

ihslide JS



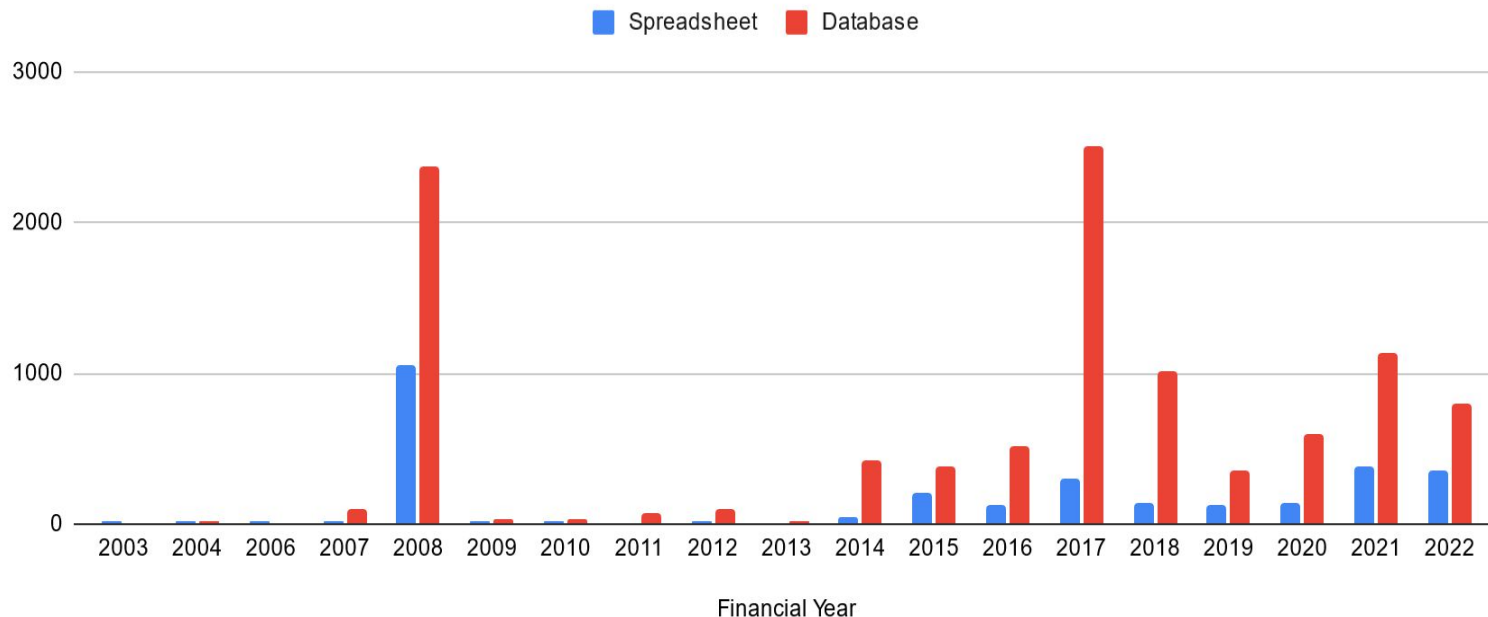
Tables

- Context
- Feature type
- Lookup finds categories
- Lookup Function
- lookup sample type
- Lookup Shape in Plan
- Material word list short version
- Object name list short version
- Photograph index
- Plan index
- Quantification Table
- Sample index
- Sample type wordlist
- Section Index
- Site Info Table
- Small find index
- tbl Site code

Site Code	Context	Trench	Grid re
1600	16		
1601	16		
1700	17		
1701	17		
1702	17		
2100	21		
2101	21		
2102	21		
2103	21		
2200	22		
2201	22		
2202	22		
2203	22		
2500	25		
2501	25		
3000	30		
3001	30		
3002	30		





Average Spr for past 5 years: 784 per/year
Average Dat for past 5 years: 230 per/year

Spreadsheet and databases data over the years



3D example

Files

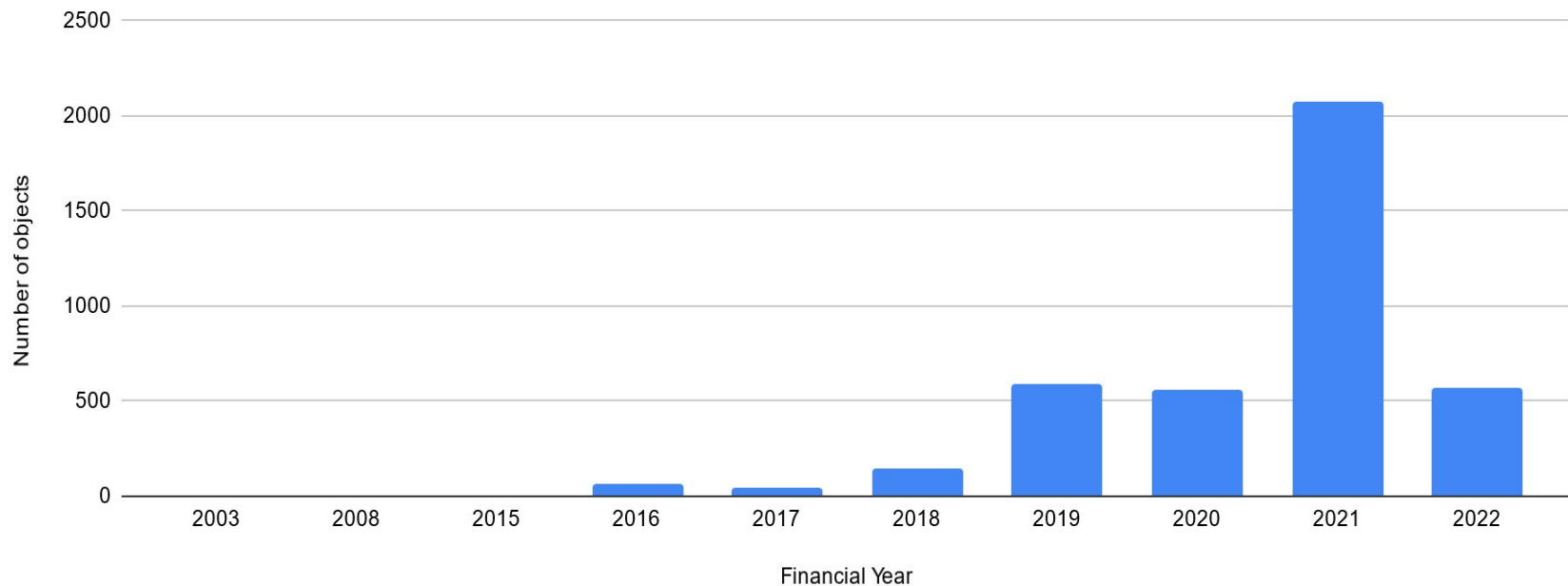
<p>Title: Reiter tombstone of Insus son of Vodallus, Lancaster - ES30 3D Model (OBJ) Filename: ES30-OBJ.zip (150 MB)</p>	 ZIP	<p>Info Download</p>	
	<p>Title: Reiter tombstone of Insus son of Vodallus, Lancaster - ES30 Filename: ES30.jpg (2 MB)</p>	 JPG	<p>Info Download</p>
<p>Title: Reiter tombstone of Insus son of Vodallus, Lancaster - ES30 Leo 1-1 (WRL) Filename: ES30_Leo_1-1.zip (1228 MB)</p>	 ZIP	<p>Info Download</p>	



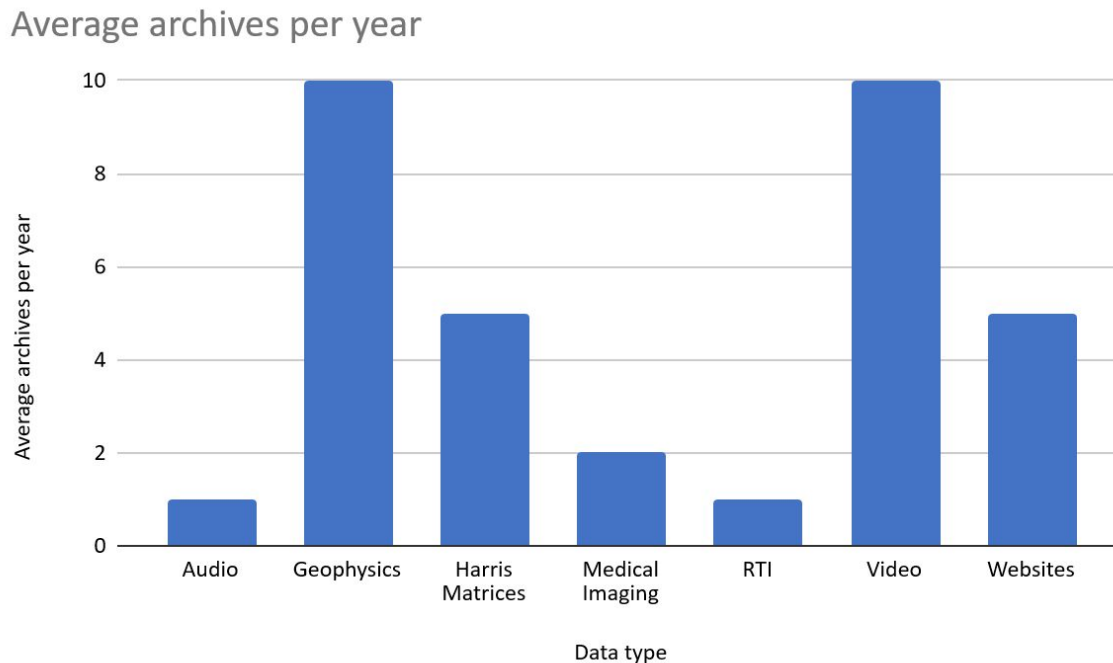
Powered by 3DHOP

Average for past 5 years: 791 per/year

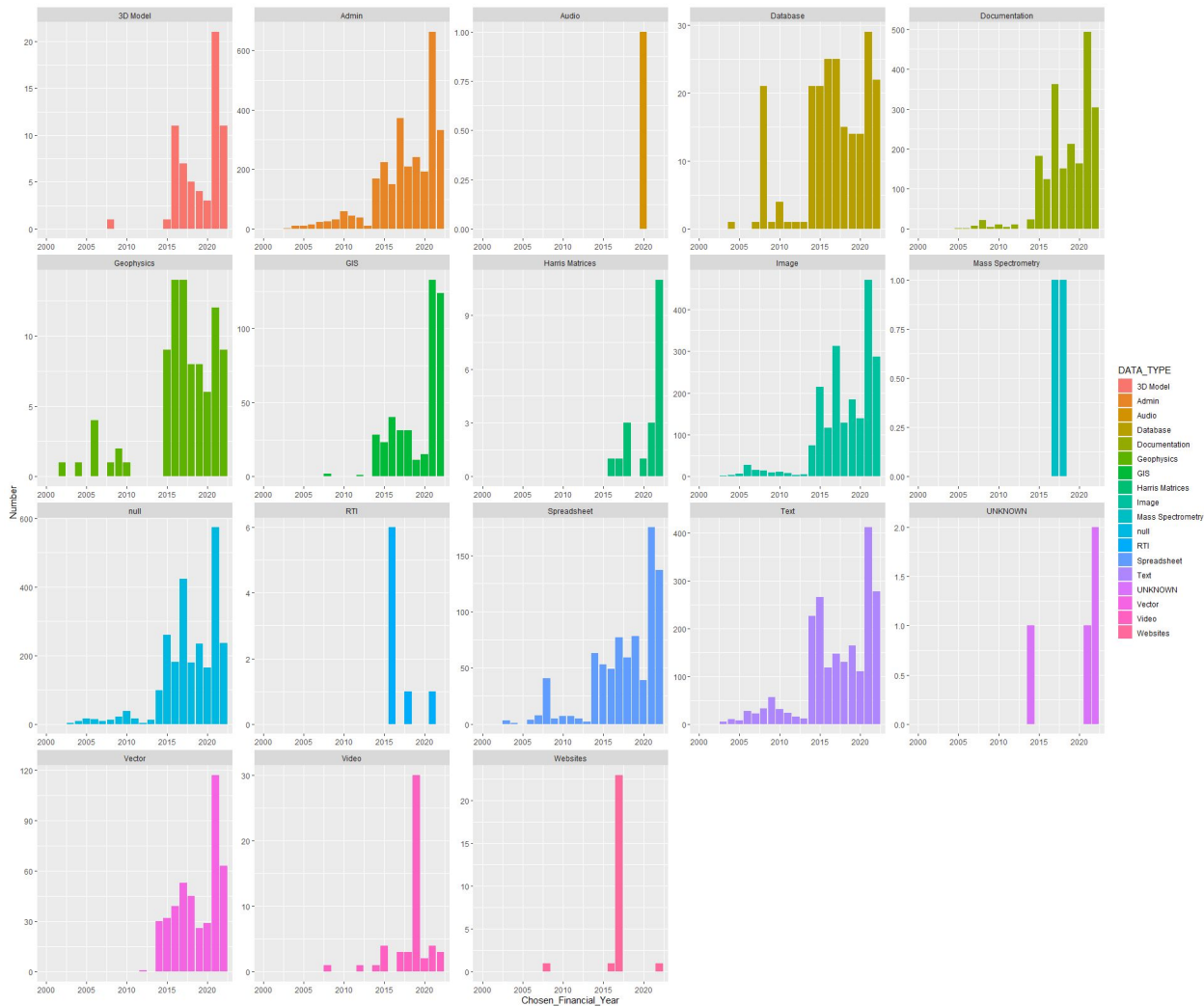
3D data over the years



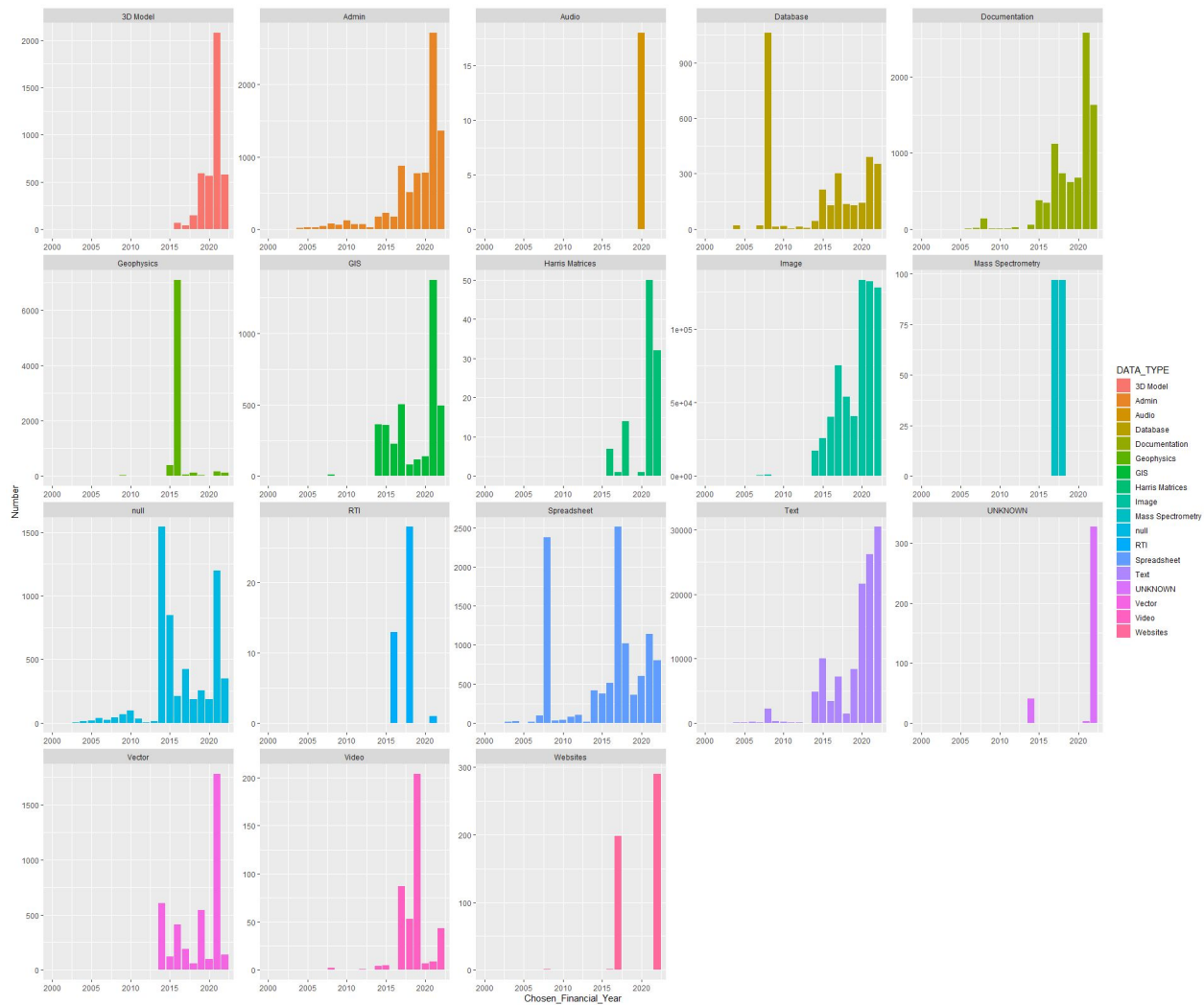
What the data shows over the past few years



Collections per data type



Objects per data type



**What's deposit
worthy?**



What do we know

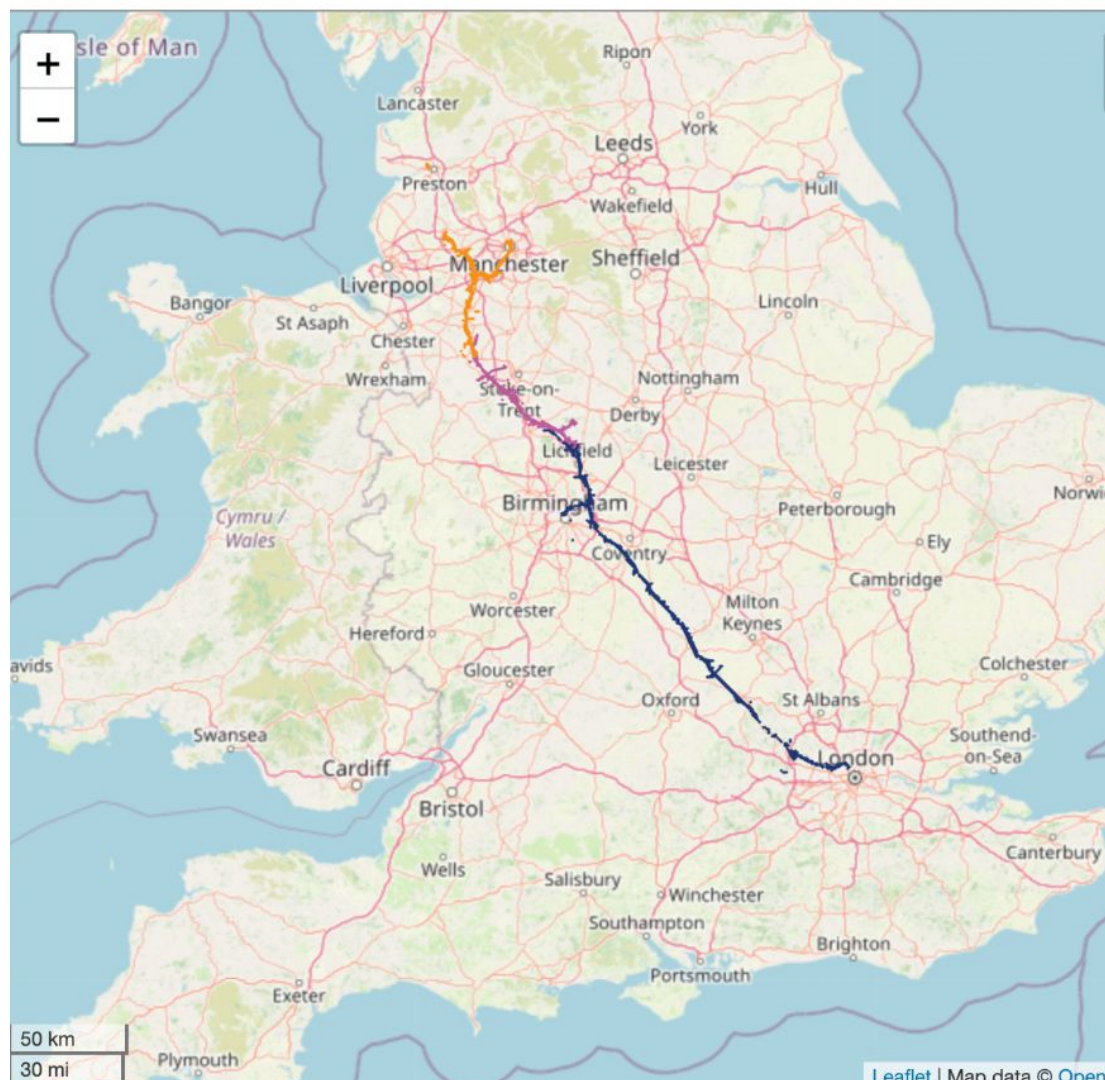
- The ADS limits the data and file types it accepts
 - Help ensure long term accessibility
 - Stability and industry standards
 - Proprietary and open software file types
 - End users
- It takes time to properly fill out metadata
- The selection and retention done by HS2 contractors

High Speed Two

- UK's largest linear infrastructure project
- Unprecedented opportunity
- Excavated by commercial archaeologists

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.



What can HS2 tell us about deposit trends?

- Incorporated into an overarching report
 - Specialist reports
 - Survey data
 - Geophysics
 - Databases and spreadsheets
- Interpreted and saved as CAD/GIS formats
 - Geophysics
 - Survey data
 - Digitized site records

What can HS2 tell us about deposit trends in photos?

- Usually selected and retained
 - Mainly contexts and features
- Not likely to be selected and retained
 - Pre-excavation
 - Working shots
 - Reinstatement photos
 - Site condition
 - Aerial photography

When do we get specific types of data?

- When it's in the project design
 - Non-digital site records scanned
 - Additional reports
 - Geophysics
 - Databases and spreadsheets
- Videos and audio
 - If used in the production of interviews, promotional, and documentary media

What about 3D data?

- Photogrammetry
 - Source photos (ADS requirement)
 - 3D model (Project Design)
 - Orthophotos
- 3D Laser Scan Data
 - Raw unregistered files (ADS/Project Design)
 - Complete registered point clouds (Project Design)
 - 3D model (ADS)
- LiDAR
 - Raw files (Project Design)
 - Derivatives (ADS)

**Deposit more than
just the reports**

A decorative graphic at the bottom of the slide consists of a white line graph with several peaks and valleys, overlaid on a light purple shaded area that also has a wavy, organic shape.

Archaeological grey literature and archives

The ADS holds ~50% of all archaeological grey literature produced in England since 1990 and in some regions it is currently receiving over 90%.

- Only 1% of that had a corresponding digital archive (Donnelly-Symes 2019)

Thank you!



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