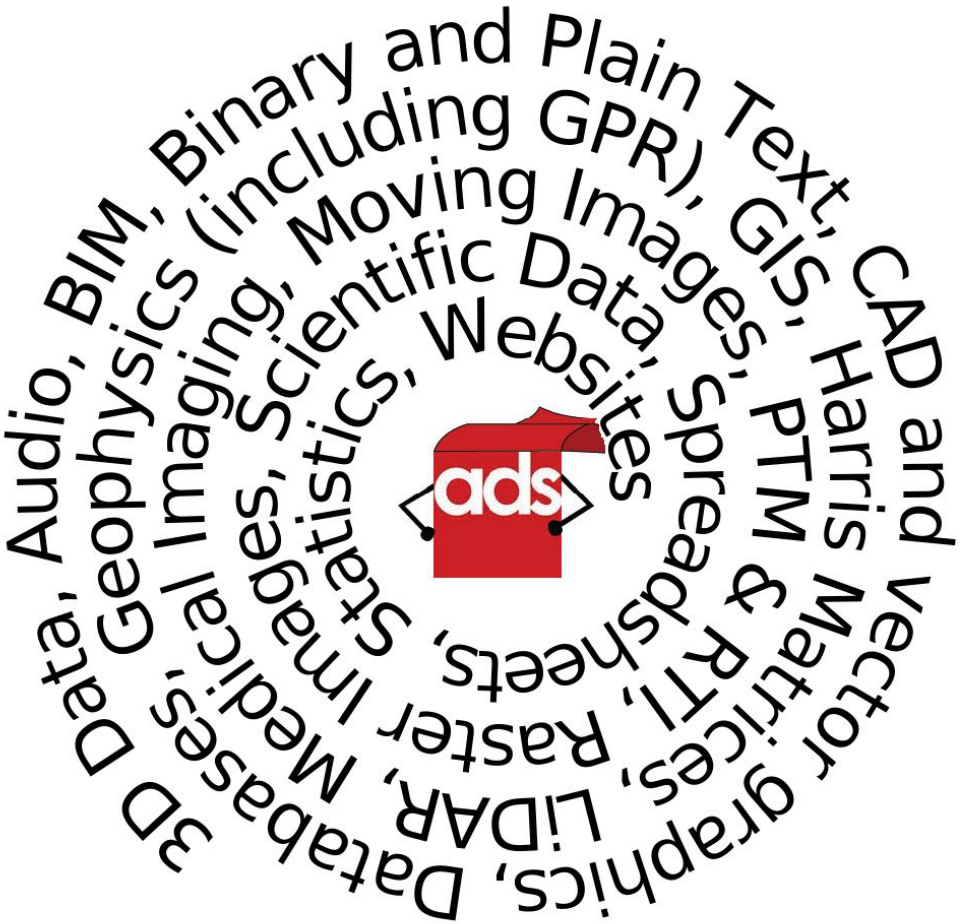
25 years of archiving: Exploring what people see as deposit worthy

Teagan Zoldoske
Archaeology Data Service


CAD and Vector graphics, GIS, Harris Matrices, PTM & RTI, Raster Images, Spreadsheets, Statistics, Websites, Scientific Data, Moving Images, Geophysics (including GPR), Imaging, Medical Images, Databases, LiDAR, 3D Data, Audio, BIM, Binary and Plain Text,
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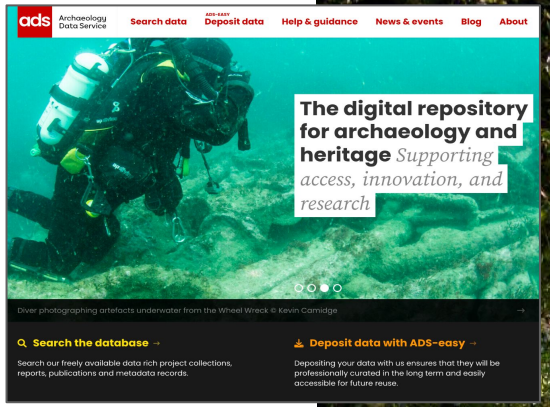

Website © ADS

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

Image © University of York

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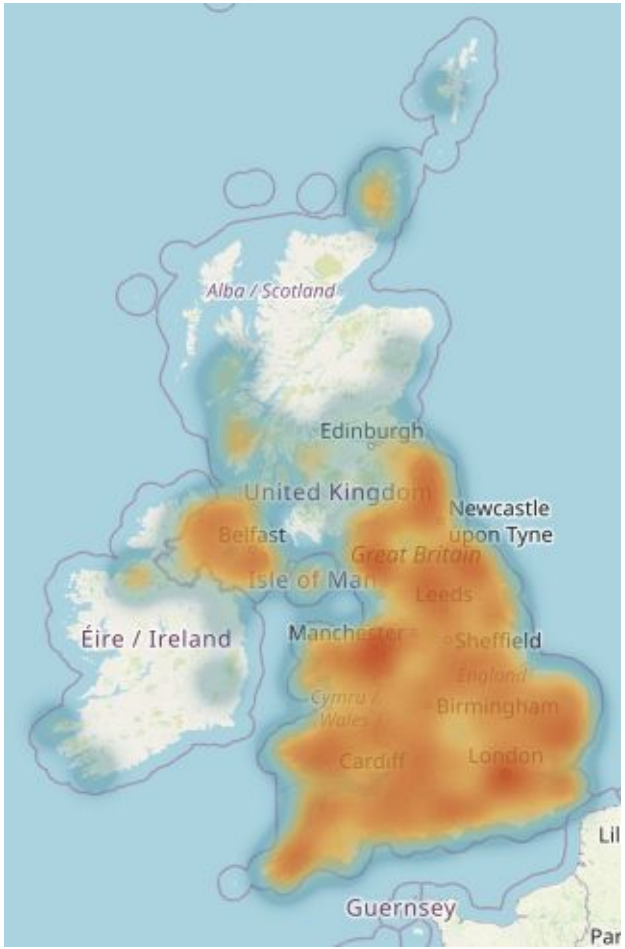
Where does our data come from?

- Mainly England, also 90 other countries around the world
- Over 1.4 m records of UK archaeology
- Comes from fieldwork, grey literature, building surveys, research projects, infrastructure projects, and more



Heat map of ADS records from the Ariadne Portal

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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)

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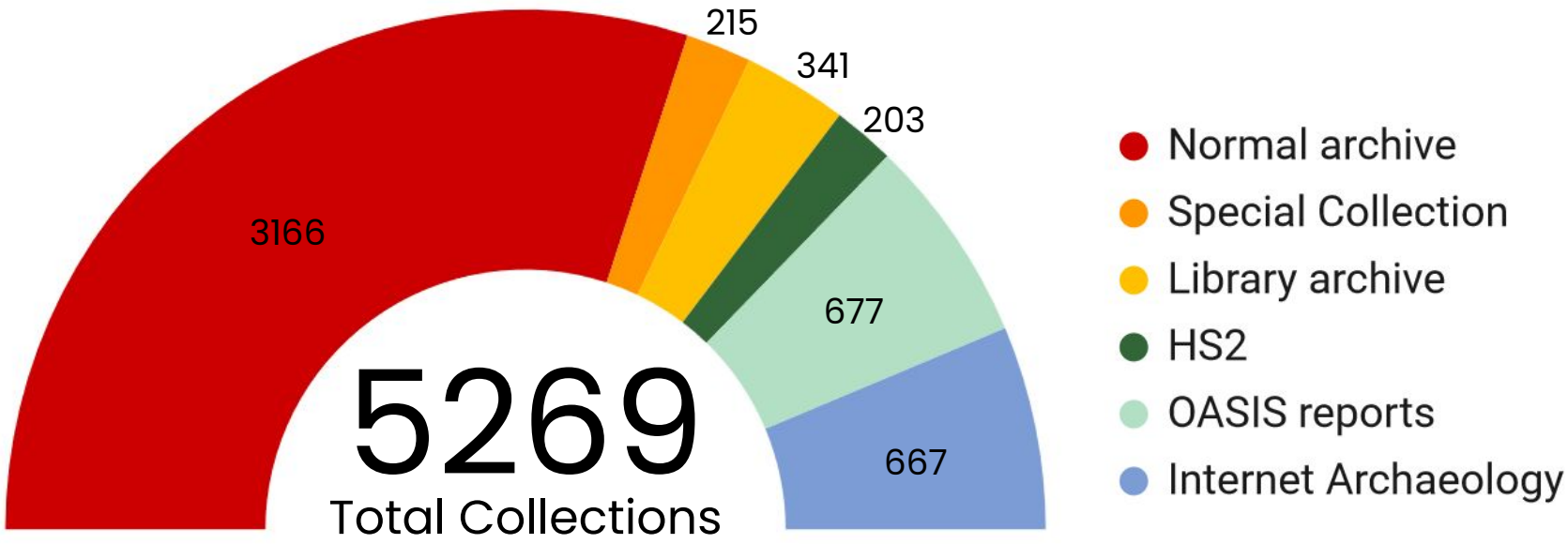
Total Objects: 817,107
Total size: 43 TB

Collections by Type as of August 2022



Archaeology Data Service

Total Objects: 817,107
Total size: 43 TB

Collections over the years

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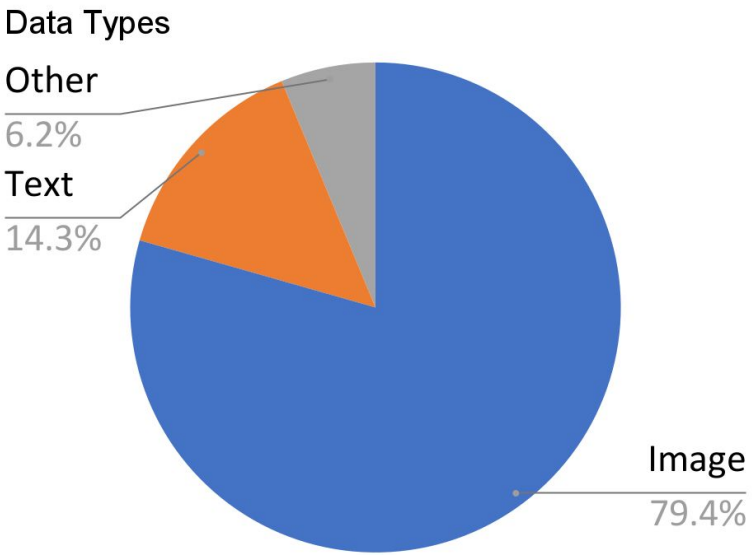
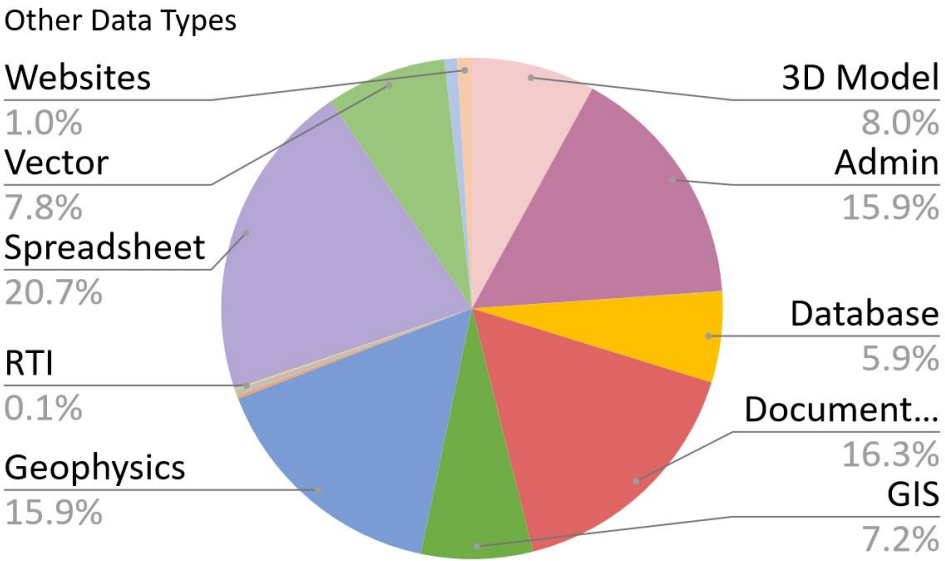
Total Objects: 817,107
Total size: 43 TB

Objects per data type





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.

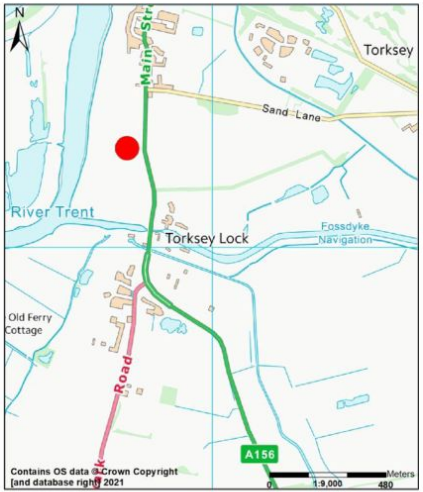


Figure 1: Location of the Castle Field site (indicated by the red dot) to the south of Torksey.

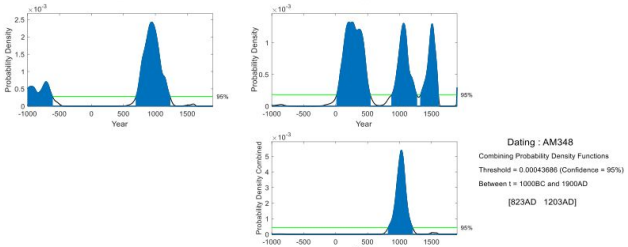


Figure 6: Probability density for AM348 produced by the Archaeomagnetic Dating Tool for Matlab. Top row shows master secular variation curves for the observation site (red bold curves with red error bands) of the declination and inclination with the archaeomagnetic directions (blue line) and associated 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 Meriden) 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

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

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

Radiocarbon Date Certificate

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 ^{14}C Age:	745±29 BP
Fraction corrected	using AMS δ^{13}C

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

Archaeology Data Service

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

Reports over the years

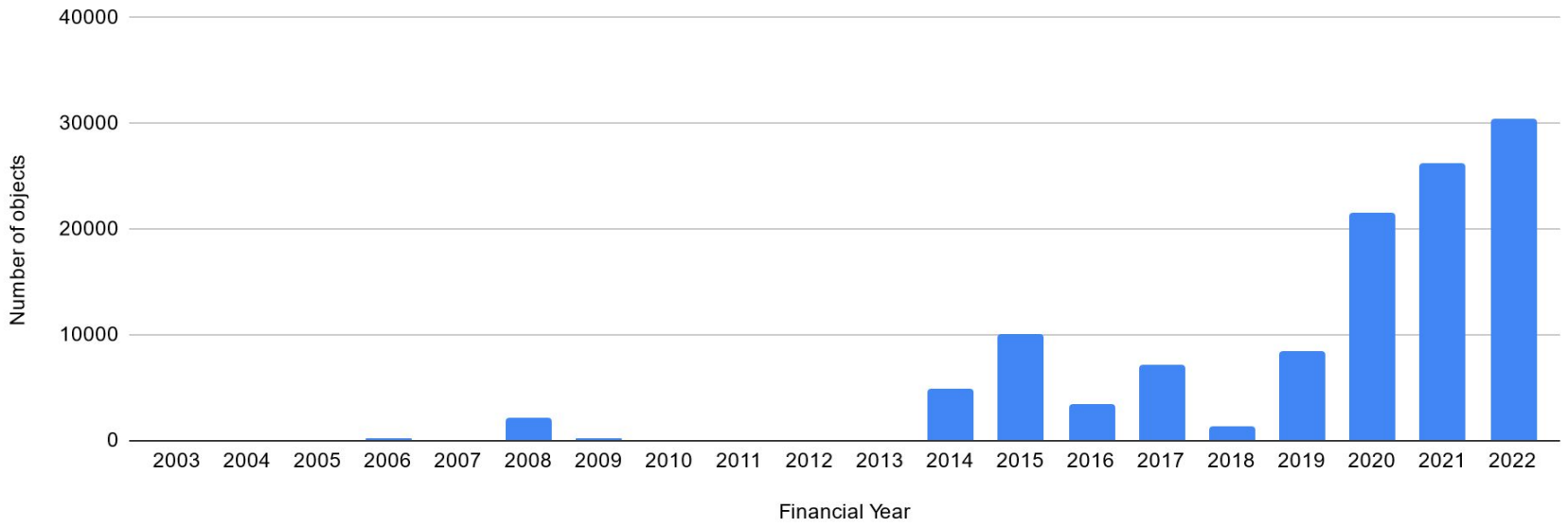


Image example

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

Archaeology Data Service

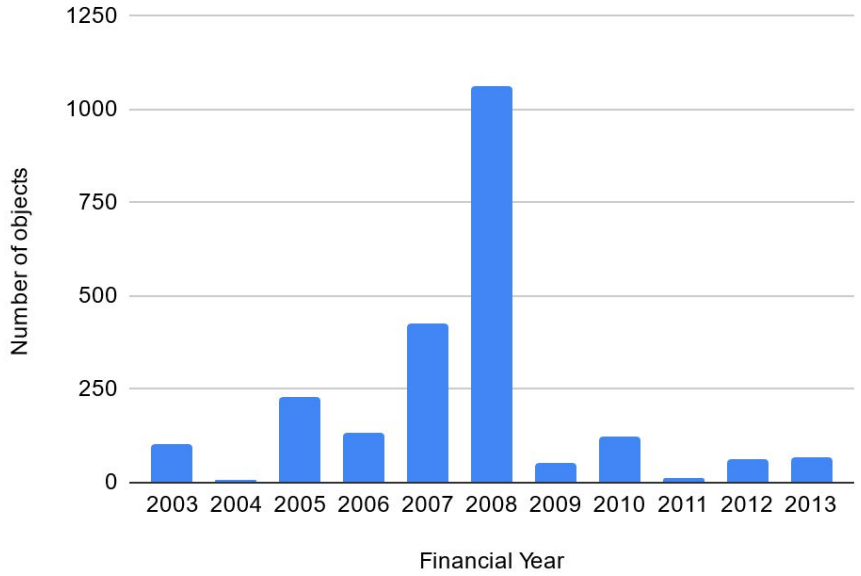
Image example

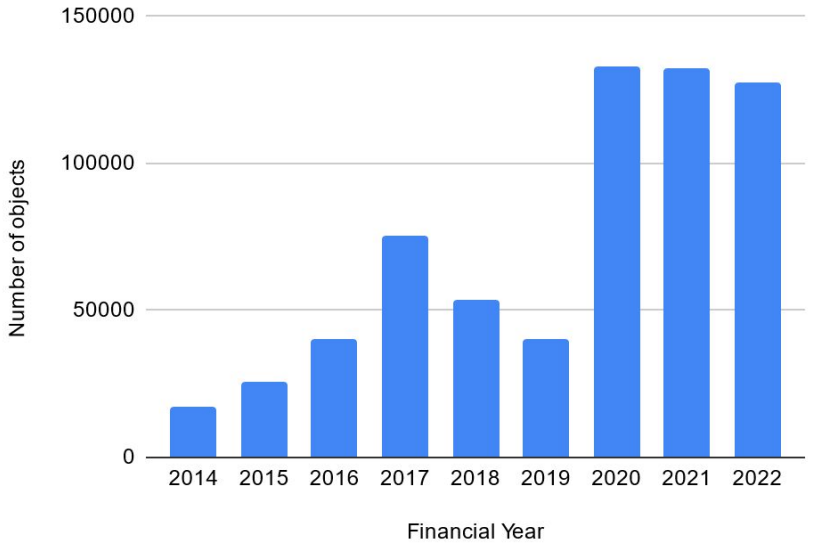
Museum of London Archaeology (2019) *The Prittlewell princely burial: excavations at Priory Crescent, Southend-on-Sea, Essex 2003* [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1050095

Archaeology Data Service

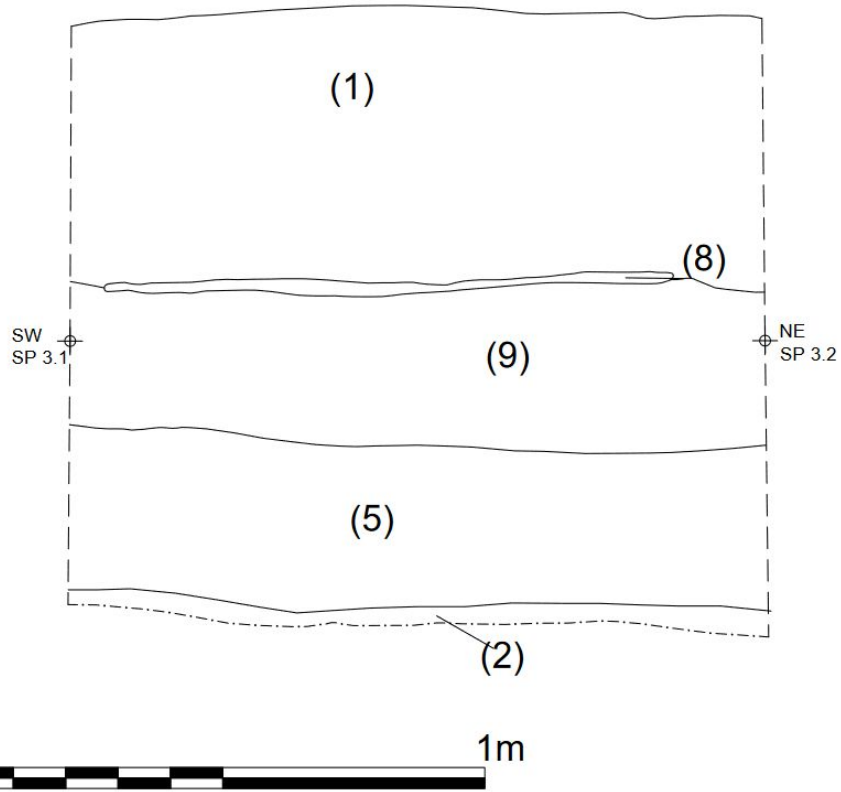
Average for past 5 years: 97,503 per/year

Images over the years



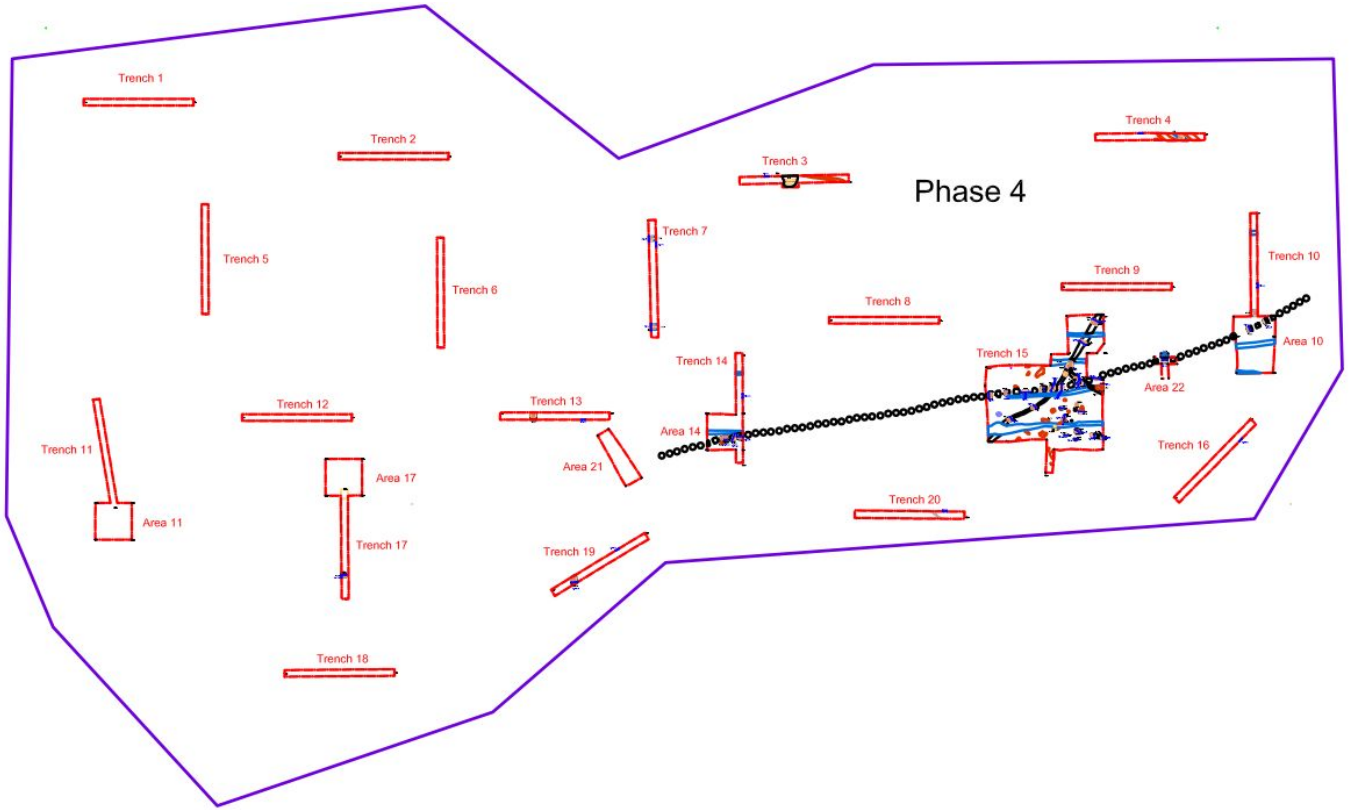


CAD example



Archaeological Research Services Ltd (2023) Digital Archive from an Archaeological Watching Brief at 76 Union Street, Harthill, Harthill with Woodall, Rotherham, South Yorkshire, 2022 [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1103316

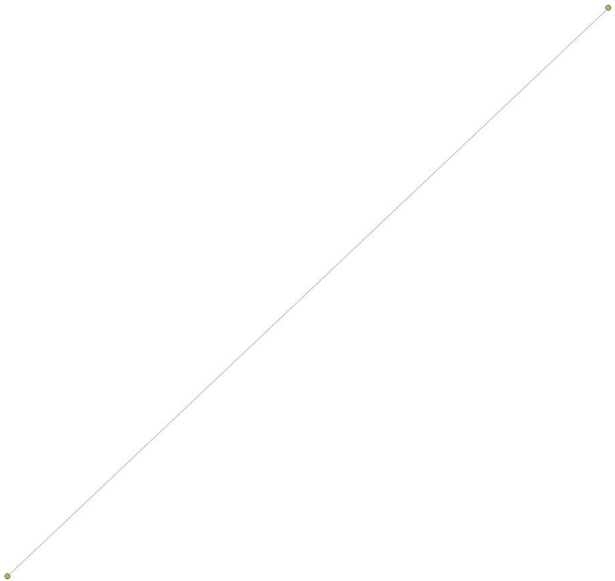
CAD example



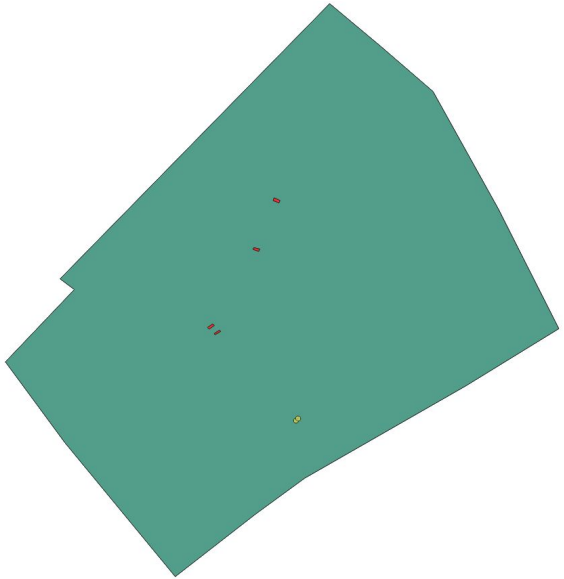
Oxford Archaeology (South) (2017) Boulton Moor, Chellaston, Derby (Phase 4). Archaeological Evaluation and Excavation (OASIS ID: oxfordar1-295869) [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1044661

GIS example

Line and point data from survey

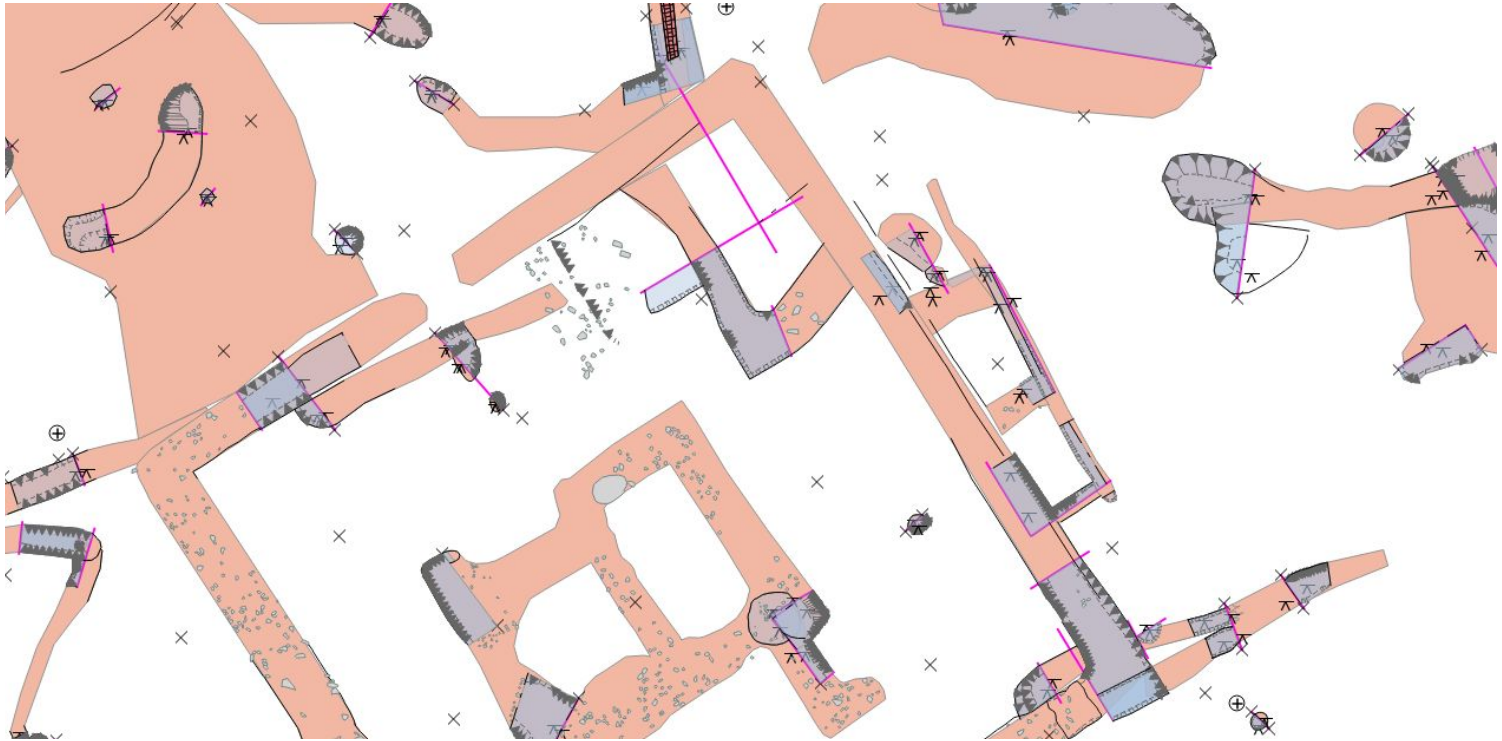


Data from survey



Cotswold Archaeology (2023) Images and GIS from an Archaeological Evaluation at 54 Woodmarsh, North Bradley, Wiltshire, September 2022 [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1105604

GIS example

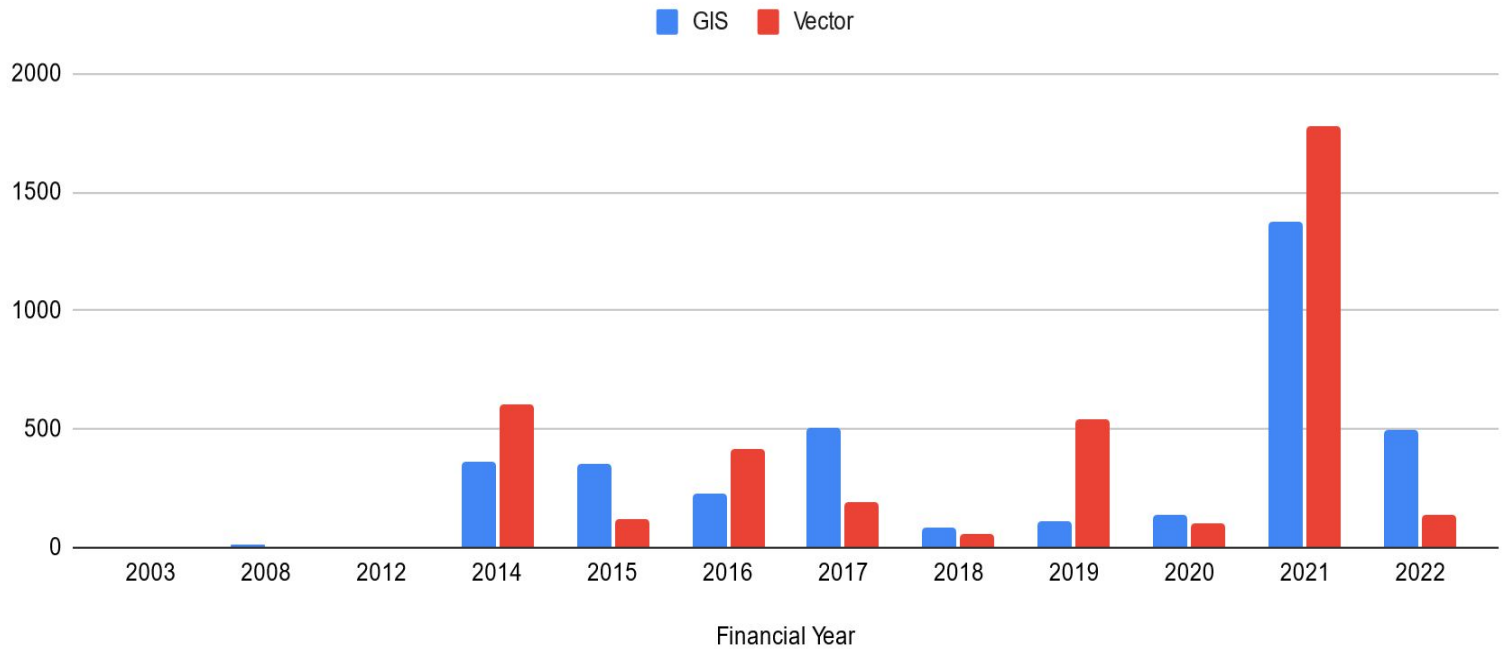


MOLA (nd) Data from an Archaeological Recording at St Mary's Church and Churchyard, Stoke Mandeville, Buckinghamshire, 2020-2022 (HS2 Phase One) [data-set]. York: Archaeology Data Service [distributor]

Archaeology Data Service

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



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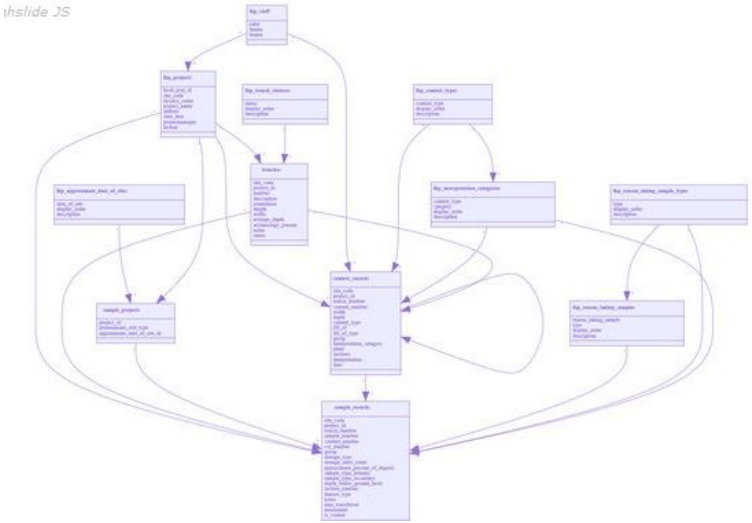
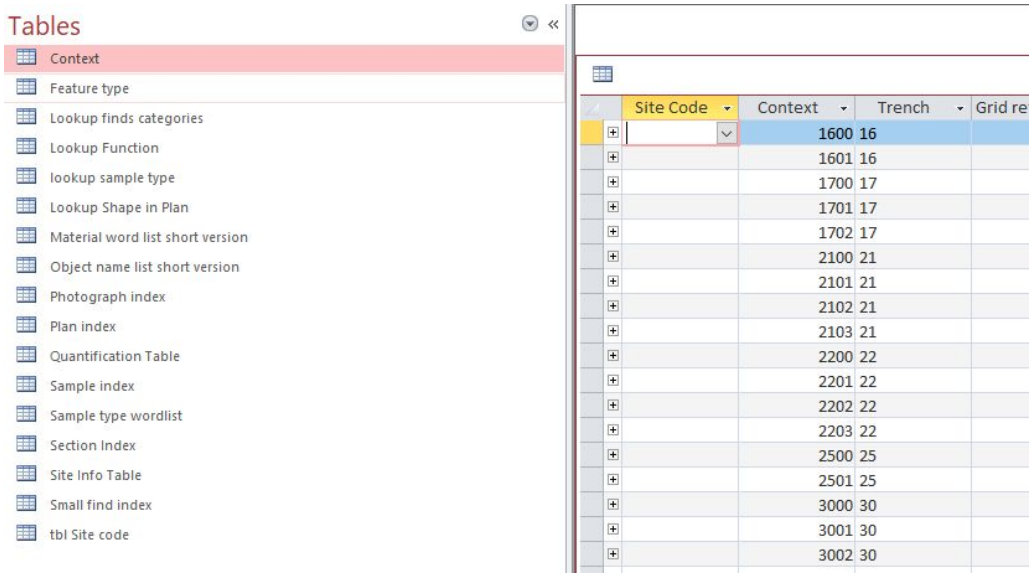
Spreadsheet example

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		

Archaeology South-East (2023) Digital Archive from an Archaeological Evaluation East of Aldeburgh Road, Aldringham, Suffolk, January 2018 [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1105523

Database example



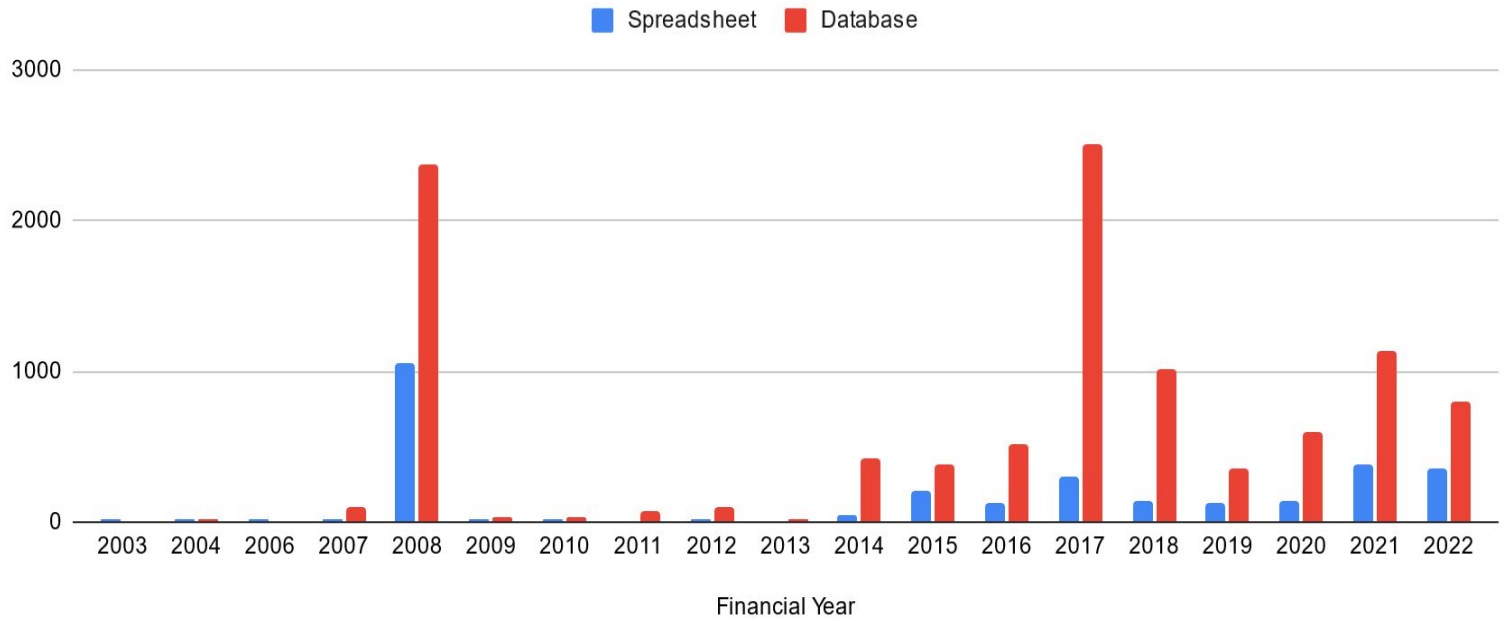


Oxford Archaeology (East) (2022) Digital Archive from an Archaeological Evaluation at Place Farm, Ingham, Suffolk 2020 [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1101254

Archaeology Data Service

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

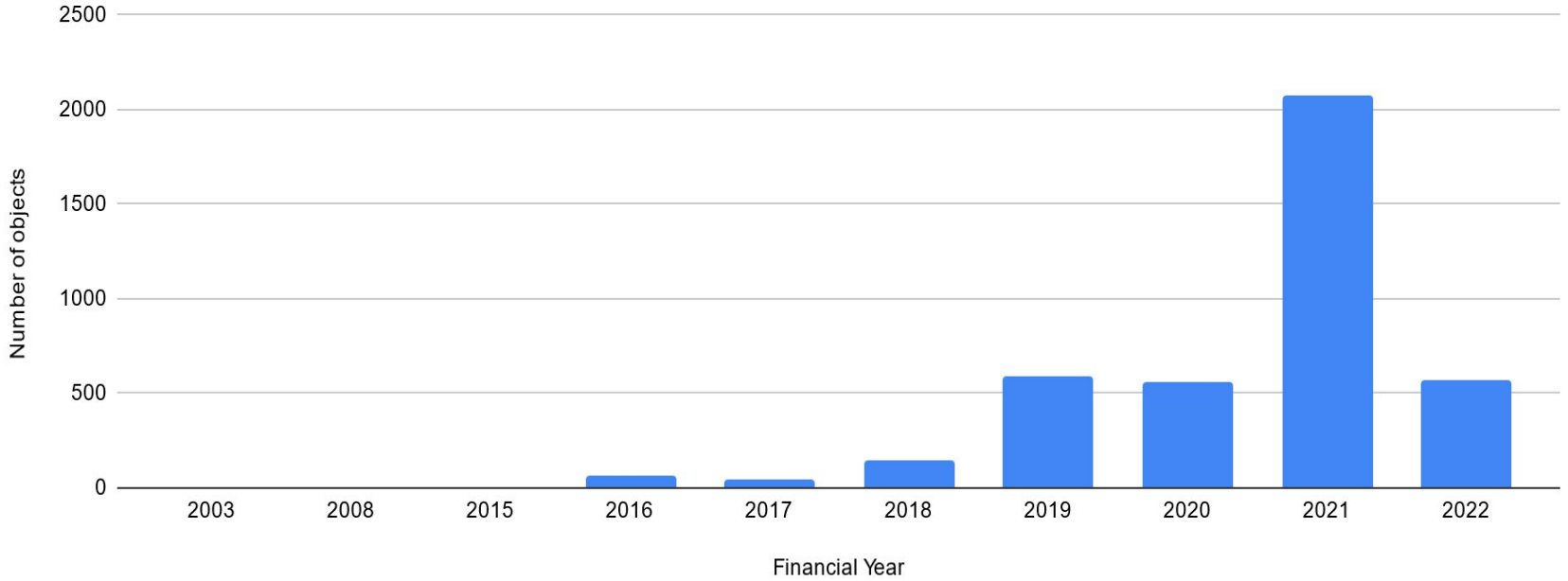
Title: *Reiter tombstone of Insus son of Vodallus, Lancaster - ES30 3D Model (OBJ)* **Filename:** ES30-OBJ.zip (150 MB)	ZIP	Info Download
 **Title:** *Reiter tombstone of Insus son of Vodallus, Lancaster - ES30* **Filename:** ES30.jpg (2 MB)	JPG	Info Download
Title: *Reiter tombstone of Insus son of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

Ian Haynes, Lindsay Allason-Jones, Alex Turner (2023) Digital Archive from the Analysing Britain's Most Elusive Roman Sculptures Project [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1090382

Archaeology Data Service

Average for past 5 years: 791 per/year

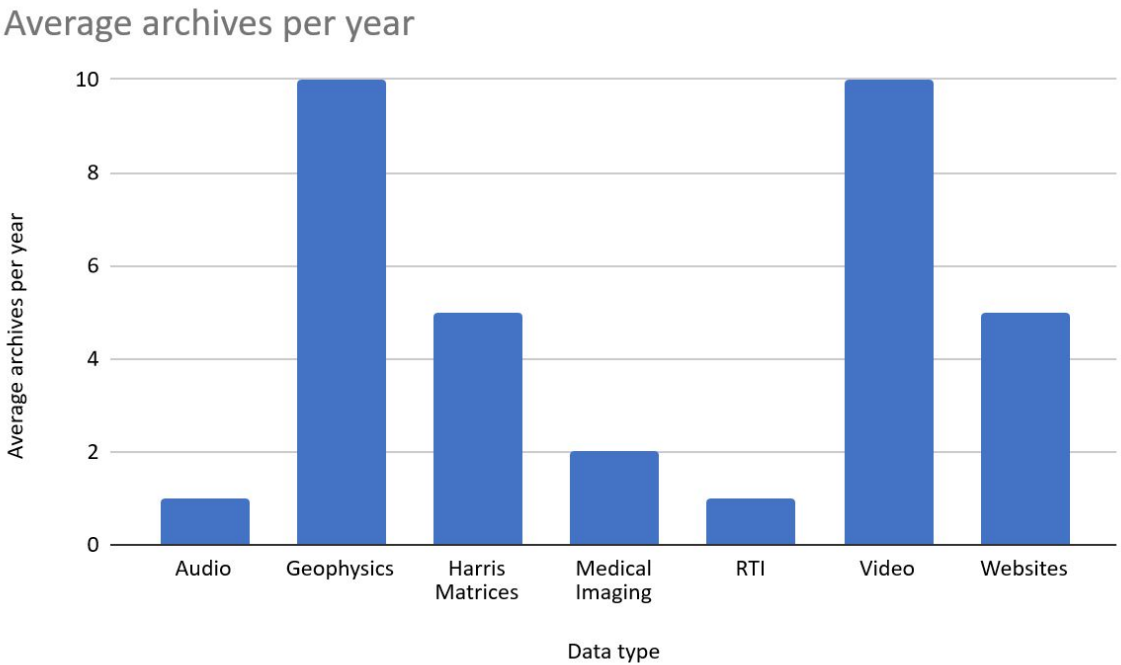
3D data over the years



Archaeology Data Service

Average for past 5 years

What the data shows over the past few years



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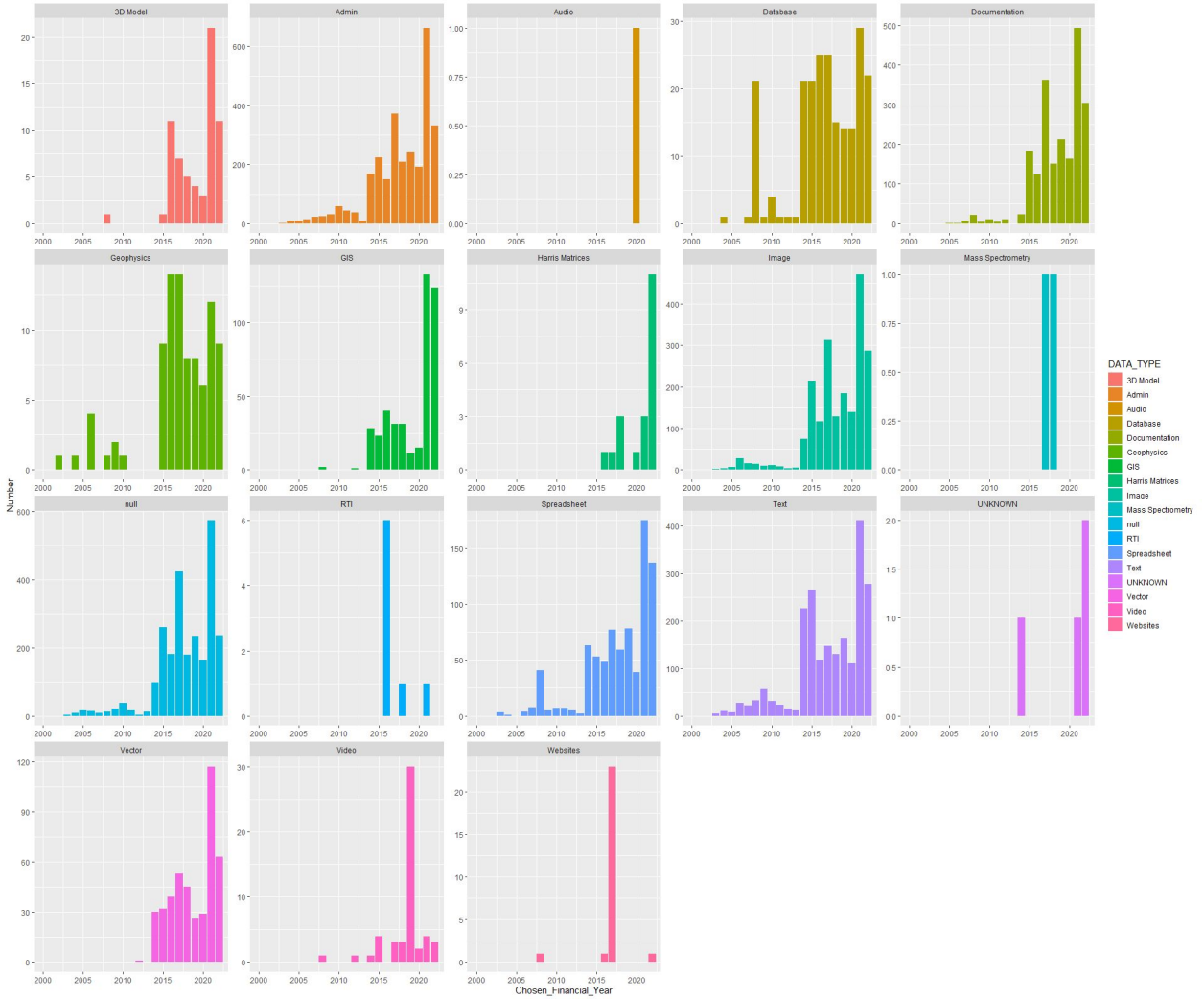
Collections per data type



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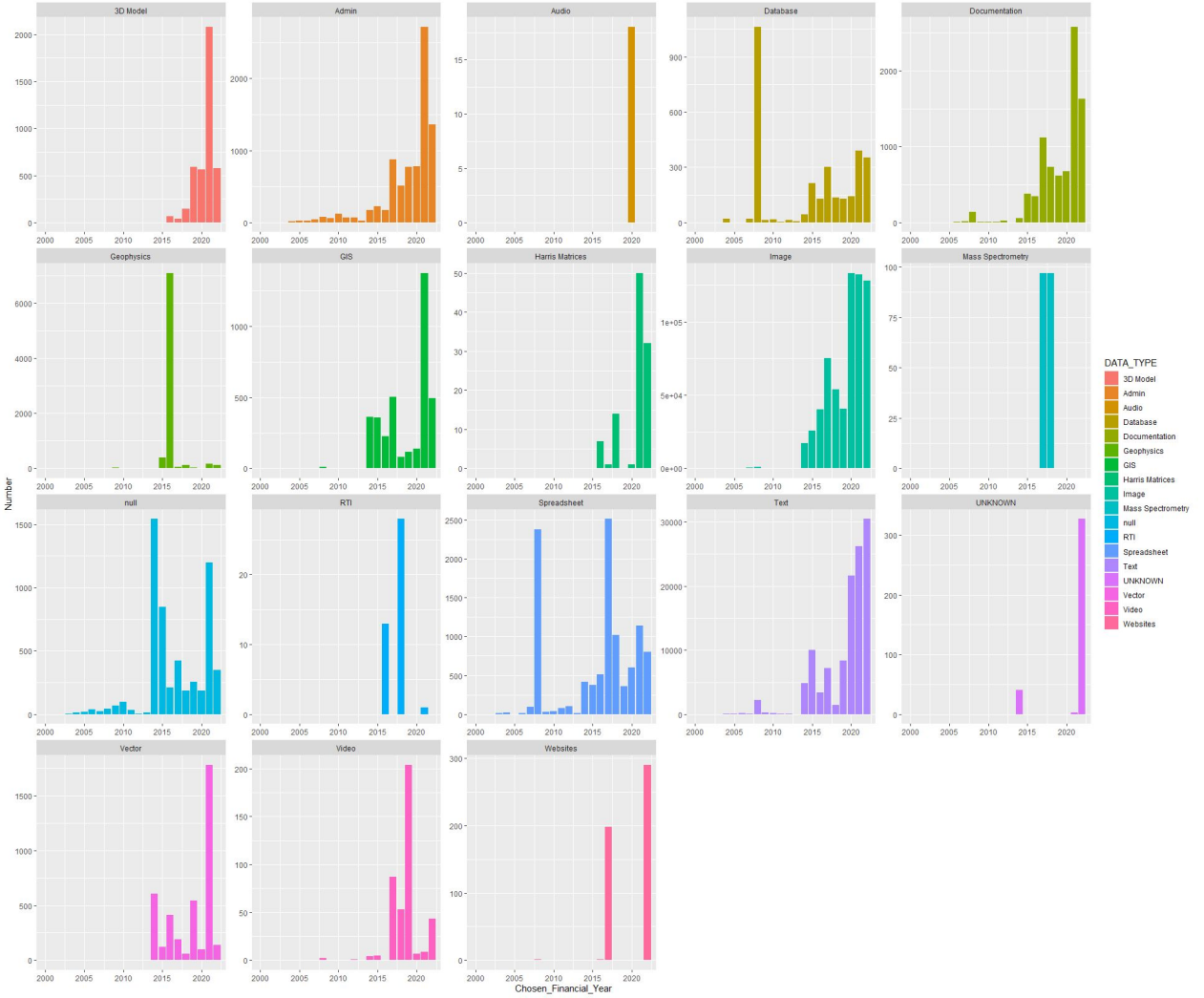
Objects per data type



What’s deposit worthy?

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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

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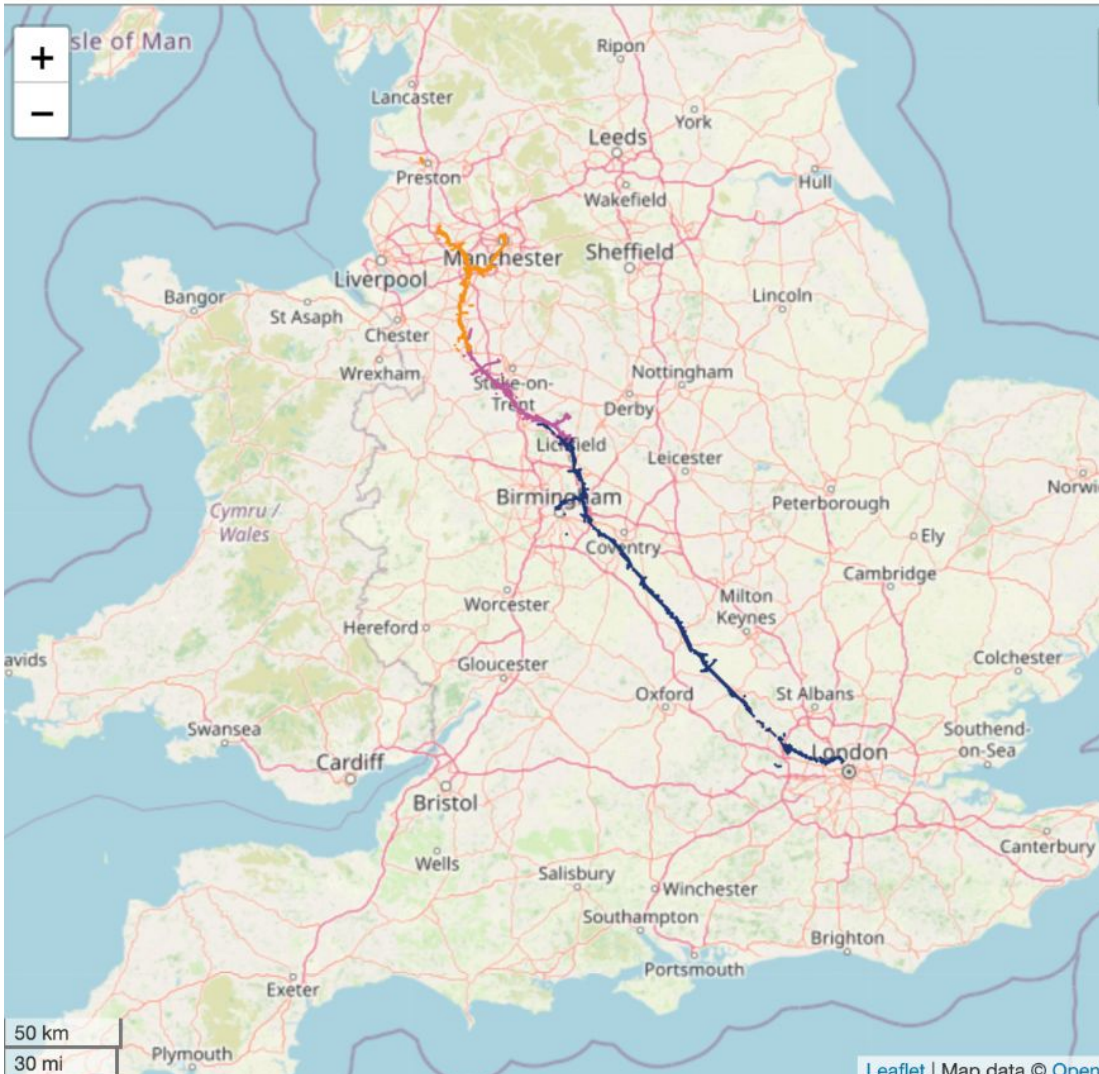
HS2

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.



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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

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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

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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

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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)

Why is this missing data important?

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Fix it by teaching

- Conferences
- Training sessions
- Improving content on website
- Communications, i.e. social media
- Targeted outreach

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Thank you!

Archaeology Data Service

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