

Born digital data; a view from the archive

Olivia Foster, Archaeology Data Service





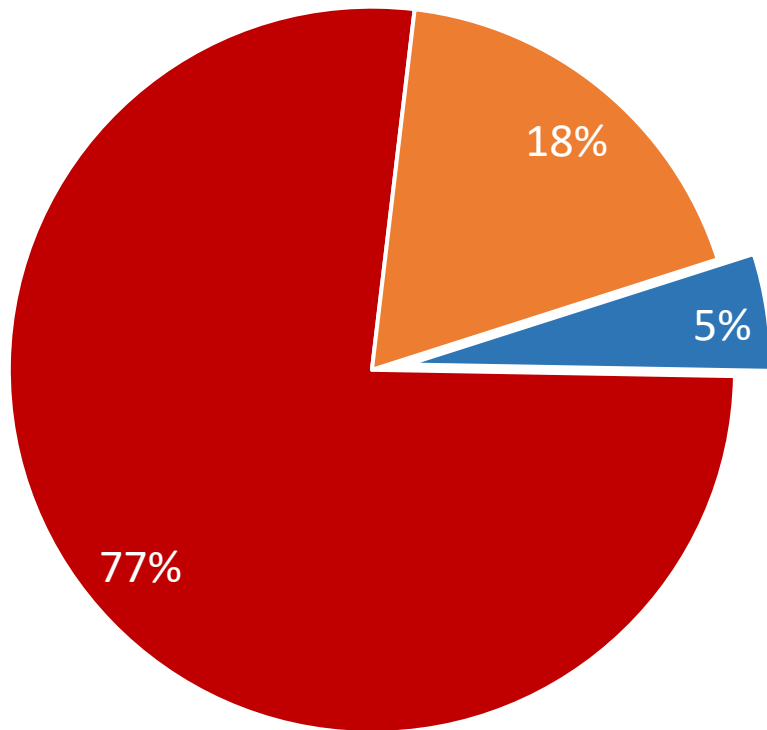
The Archaeology Data Service

“ The aim of the Archaeology Data Service (ADS) is to collect, describe, catalogue, preserve, and provide user support for digital resources that are created as a product of archaeological research. ”

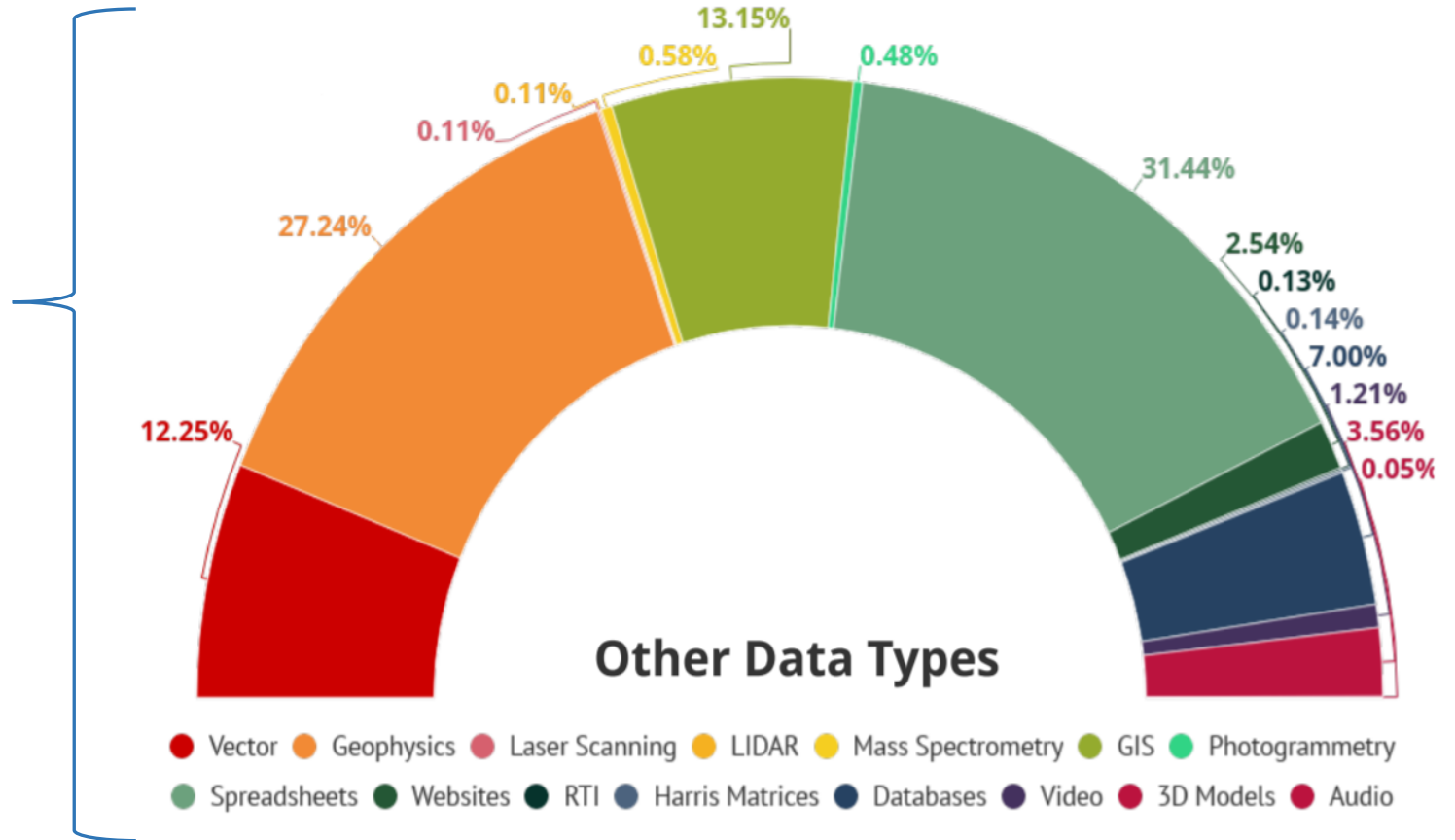
Born digital data; a view from the archive

- What we see as a digital archive
- Typical deposits and data types
- What does more comprehensive born digital site recording look like?
- How can born digital recording impact data re-use and access?

The ADS Archive by Data Type

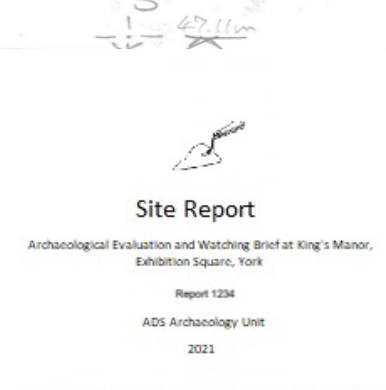
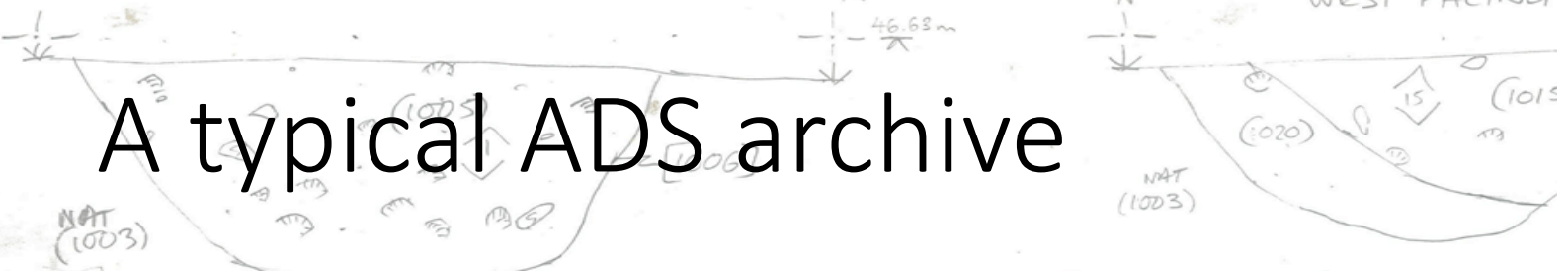


■ Image ■ Text ■ Other data types



● Vector ● Geophysics ● Laser Scanning ● LIDAR ● Mass Spectrometry ● GIS ● Photogrammetry
 ● Spreadsheets ● Websites ● RTI ● Harris Matrices ● Databases ● Video ● 3D Models ● Audio

A typical ADS archive



PDF



PDF

Intc.	Height	Reduced level	Remarks
44.53c	44.245	E. END TOP	
	43.245	Btm	
	42.245	TOP	
	41.245	Btm	
	40.245	TOP	
	39.245	SEC. 1/1 TOP	
	38.245	(104) BASE	
	37.245	NAT. BASE	
	36.245	N. END BOTTOM	
	35.245	TOP	
	34.245	REF. SEC. W. END TOP	
	33.245	SEC X SEC 1/1	
	32.245	SEC X SEC 2/1	
	31.245	TRENCH 2 PUNTS/BEEF	
	30.245	Btm. N. END	
	29.245	BASE [203]	
	28.245	BASE [202]	
	27.245	SEC. 1/1 WATER? FEMER	
	26.245	TOP [203]	
	25.245	BASE OF [212]	
	24.245	TOP OF [212]	
	23.245	BASE OF [211]	
	22.245	TOP OF [211]	
	21.245	TOP OF []	
	20.245	TOP OF []	
	19.245	BASE OF [210]	
	18.245	TOP OF [210]	
	17.245	BASE S. END (NAT)	
	16.245	BASE S. END	
	15.245	TOP S. END	
	14.245	SEC 6/2	
	13.245	SEC 3/2	
	12.245	SEC 8/2	
	11.245	SEC 10/2	
	10.245	SEC 11/2	
	9.245	SEC 12/2	
	8.245	SEC N. END REF. SEC.	
	7.245	44.100	TR. 5 SL 13/3
	6.245	44.310	TR. 5 SL 14/3



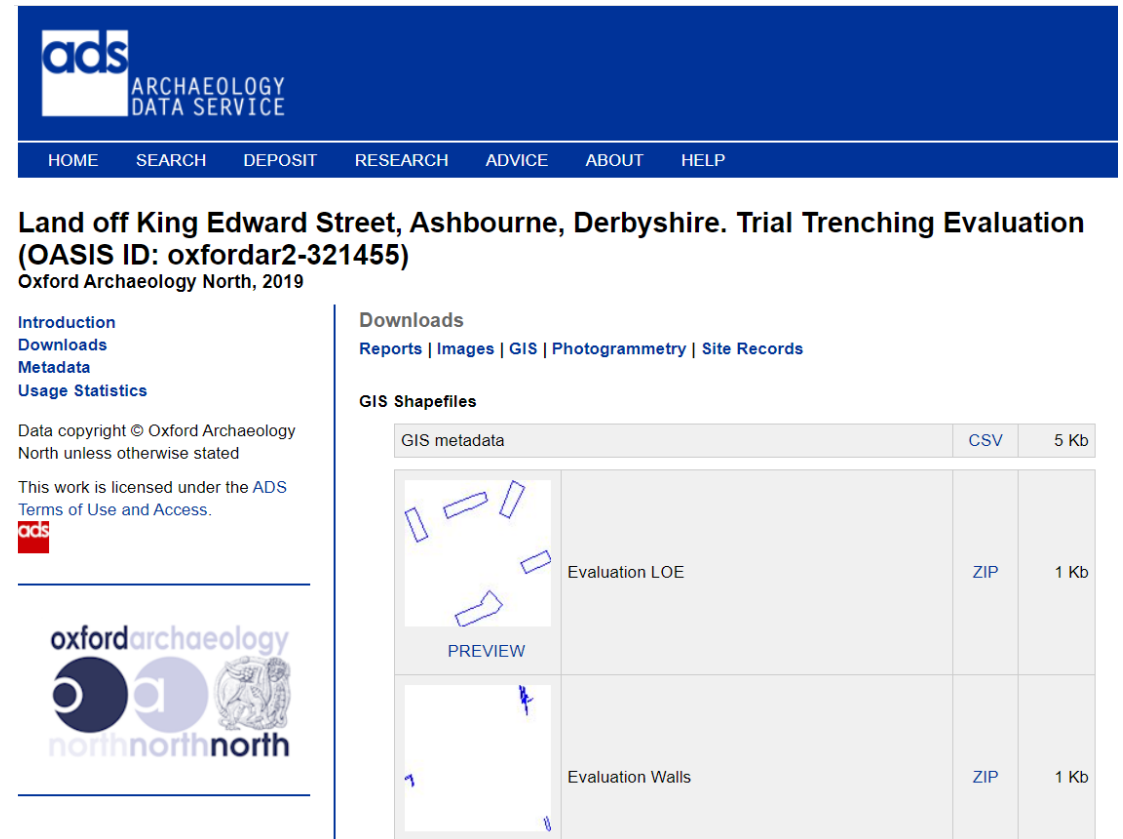
JPG

- Blend of born digital and digitised material
- What does more comprehensive born digital site recording look like?

What does more comprehensive born digital site recording look like?



Oxford Archaeology North (2019) *Land off King Edward Street, Ashbourne, Derbyshire. Trial Trenching Evaluation* (OASIS ID: oxfordar2-321455) [data-set].
York: Archaeology Data Service
[distributor] <https://doi.org/10.5284/1052203>



ads ARCHAEOLOGY DATA SERVICE

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Land off King Edward Street, Ashbourne, Derbyshire. Trial Trenching Evaluation
(OASIS ID: oxfordar2-321455)
Oxford Archaeology North, 2019

Introduction
Downloads
Metadata
Usage Statistics

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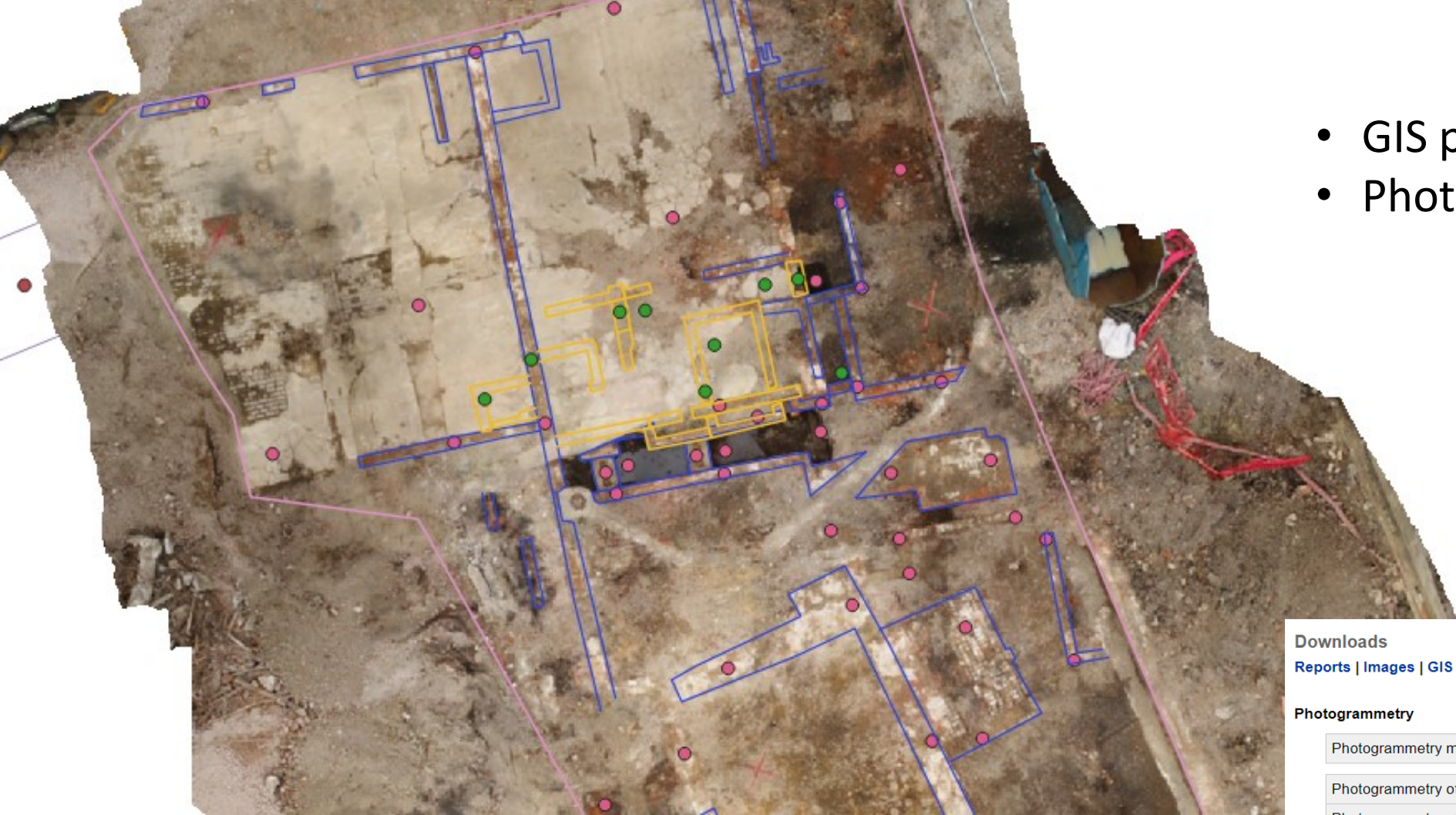
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Downloads
Reports | Images | GIS | Photogrammetry | Site Records

GIS Shapefiles

File Name	Format	Size
GIS metadata	CSV	5 Kb
Evaluation LOE	ZIP	1 Kb
Evaluation Walls	ZIP	1 Kb

oxfordarchaeology
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- GIS point and line data
- Photogrammetry (GeoTIFF)

Downloads

[Reports](#) | [Images](#) | [GIS](#) | [Photogrammetry](#) | [Site Records](#)

Photogrammetry

Photogrammetry metadata	CSV	1 Kb
Photogrammetry of Trench 4, plus 4 Geo-Referencing files	ZIP	22 Mb
Photogrammetry of the area beneath the concrete, plus 2 Geo-Referencing files	ZIP	335 Mb
Photogrammetry of whole site, plus 2 Geo-Referencing files	ZIP	521 Mb
Photogrammetry of Trench 2, plus 3 Geo-Referencing files	ZIP	40 Mb
Photogrammetry of Trench 3, plus 4 Geo-Referencing files	ZIP	29 Mb

Oxford Archaeology North (2019) *Land off King Edward Street, Ashbourne, Derbyshire. Trial Trenching Evaluation (OASIS ID: oxfordar2-321455)* [data-set].
York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1052203>

Creating born digital data



Land off King Edward Street,
Ashbourne, Derbyshire
Archaeological Evaluation, Excavation and
Watching Brief Report

June 2018
Client: Orion Heritage Ltd
Issue No: 2018-19/1923
OA Reference No: L11134
NGR: SK 1797 4647



- 2.2.3 All trenches were excavated in a stratigraphic manner. The trenches were located by use of a differential **Global Positioning System (dGPS)**, accurate to within 0.02-0.03m, and altitude information was established with respect to Ordnance Survey Datum.
- 2.2.4 During the excavation phase, aerial photographs were obtained using an **Unmanned Aerial Vehicle (UAV; a small remote-controlled helicopter)**, in order to establish a photogrammetric survey of the site. Control was established for this survey by the placement of survey control targets across the site, located using the GPS. Photogrammetric processing of resulting digital images was undertaken using Agisoft software which provided detailed modelling using the overlaps of the photographs, and created a detailed DTM (Digital Terrain Model) of the site. The photographs were then digitally draped over the model to create an accurate three-dimensional representation of the ground surface. The primary output, however, was an accurate two-dimensional image that was used to provide plan information and generate appropriately scaled drawings.

GIS point and line data overlaid with photogrammetry

Attribute table for levels data



Walls_Beneath_Concrete_Levels — Features Total: 9, Filtered: 9, Selected: 0

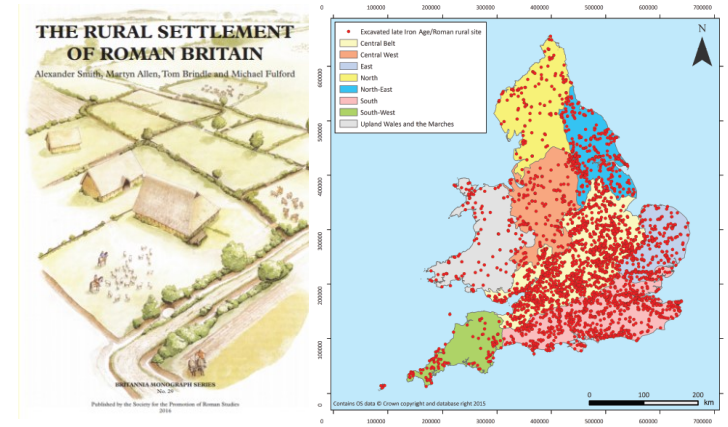
	EASTING_LO	NORTHING_L	ORTHO_HEIG	POINT_CODE	POINT_ID
1	418002.660600	346473.093830	118.22	LVL	0099
2	417993.975370	346472.455050	118.67	LVL	0097
3	417995.106710	346473.419850	118.62	LVL	0096
4	417997.265500	346474.579160	118.44	LVL	0095
5	418001.602800	346475.376430	118.45	LVL	0094
6	417999.342990	346472.644980	118.58	LVL	0093
7	417999.566260	346473.777190	117.67	LVL	0092
8	418000.798610	346475.244920	118.14	LVL	0091
9	417997.879610	346474.614830	118.11	LVL	0090

Show All Features

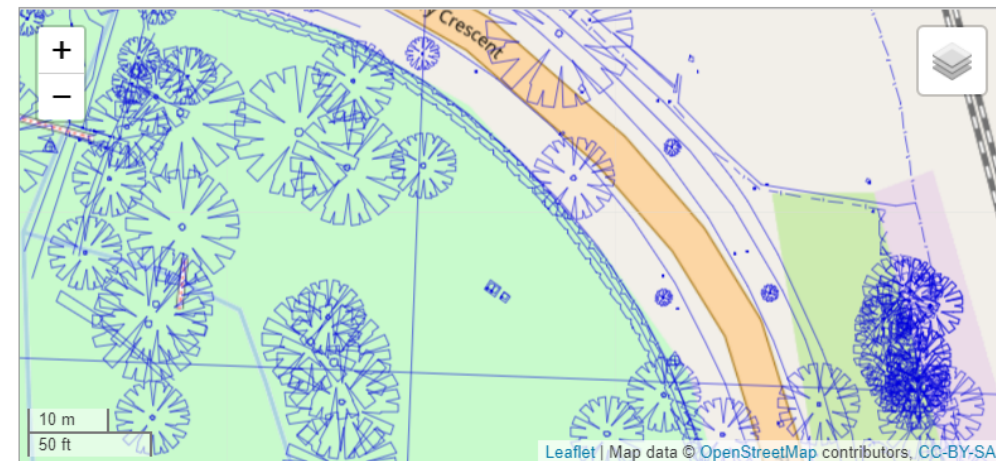
Oxford Archaeology North (2019) *Land off King Edward Street, Ashbourne, Derbyshire. Trial Trenching Evaluation (OASIS ID: oxfordar2-321455)* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1052203>

Re-use and access

- Data interoperability – data that speaks to each other
- Big data – potential to stick things together
- Ease and efficiency of re-use
- Machine readable data
 - Data mining
 - Queryable
 - Accessibility



Martyn Allen, Nathan Blick, Tom Brindle, Tim Evans, Michael Fulford, Neil Holbrook, Lisa Lodwick, Julian D Richards, Alex Smith (2018) The Rural Settlement of Roman Britain: an online resource [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1030449>



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>

Is comprehensive born
digital recording always
necessary?



Illustration credit: Ainsley Seago.



Data Standards?

Metadata standards?

Thank you