

# **Not the End of the Line: Data selection and sustainability in the Crossrail archive**

Part Two: The Digital Archive at the ADS

Kieron Niven, Archaeology Data Service

## Outline

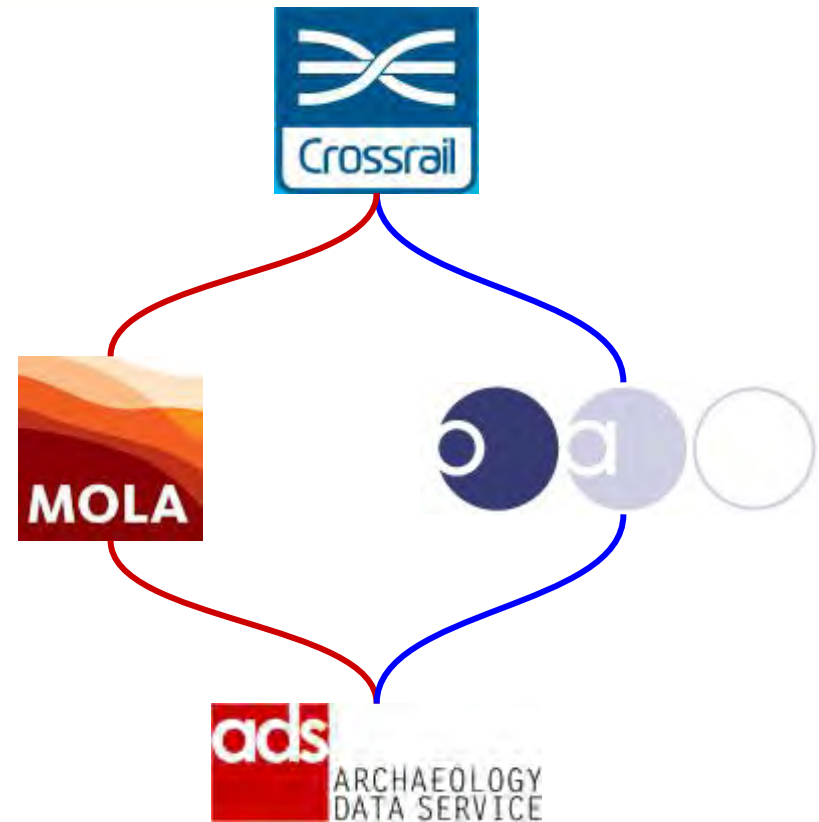
This presentation will focus on:

- Just the digital data
- Its size and content
- Project planning and deposition
- Largely focussed on the MOLA project archives



## Programme Overview

- Crossrail specify overarching archive content, dissemination structure, and licencing the data deposit.
- MOLA and OA undertaking the work, selection processes, and deposit.
- ADS as the primary digital archive



# Programme Overview

In addition to the ADS archives:

- Crossrail 360 VR exhibition
- Crossrail Archaeology website
- MOLA and OA publications

Numerous other Crossrail outputs



## ARCHAEOLOGY REPORT ARCHIVE



### Introduction

Crossrail's archaeology programme has produced an extensive 'grey literature' library (grey literature is the term for content produced in the course of research which does not form part of the eventual published academic papers). This consists of built heritage and archaeology fieldwork reports, desk-based assessments, and Written Schemes of Investigation (WSIs).

This archive provides public access to these resources. Copies shall also be included in the full fieldwork archives that are provided to the London Archaeological Archive and Research Centre (LAARC) for works in London and other local authority Historic Environment Records (HER) for works that were undertaken outside Greater London.

Archive items deposited with the LAARC or HERs shall also include the primary fieldwork records and digital components such as CAD, GIS, and database files, photographs and other primary research materials.

### Organisation

The archive is organised as a series of geographic datasets that contain documents related to a specific location. Dates attributed to each document are the date of the latest accepted version and may not reflect the date the document was first produced or the year in which the actual work was undertaken.

### Scope

The current (2016) content is limited to works undertaken in the Crossrail Central Section (Old Oak Common to Stratford and Plumstead). Further reports that have been produced for the outer sections of the Crossrail Route shall be made available in due course.

### Learning Legacy Themes

#### Environment

Environmental Requirements

Environmental Management

Air Quality

Biodiversity

Resource Management

Energy Efficiency and Carbon

Environmental Design

Environmental Behaviours and Incentives

Noise and Vibration

#### Archaeology

• Archaeology Report Archive

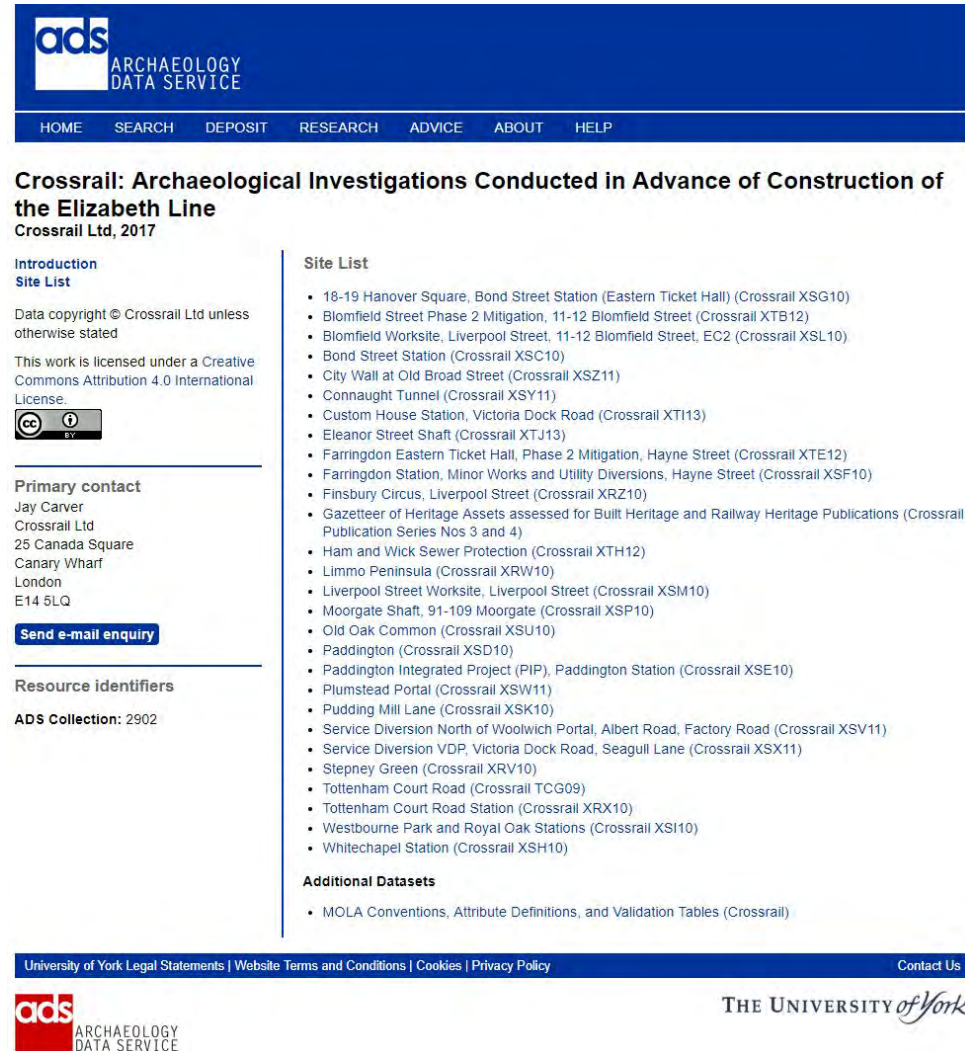
Environment Webinar Series



# Programme Timeline

## Summary of the archive:

- Project started during 2016 with initial discussions
- Finished January 2019 with final deposit (will be released April 2019)
- Covers 29 sites/archives: 21 from MOLA, 8 from OA



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HOME SEARCH DEPOSIT RESEARCH ADVICE ABOUT HELP


### Crossrail: Archaeological Investigations Conducted in Advance of Construction of the Elizabeth Line

Crossrail Ltd, 2017

**Introduction**  
**Site List**

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**Primary contact**  
 Jay Carver  
 Crossrail Ltd  
 25 Canada Square  
 Canary Wharf  
 London  
 E14 5LQ

[Send e-mail enquiry](#)

**Resource identifiers**  
 ADS Collection: 2902

**Site List**

- 18-19 Hanover Square, Bond Street Station (Eastern Ticket Hall) (Crossrail XSG10)
- Blomfield Street Phase 2 Mitigation, 11-12 Blomfield Street (Crossrail XTB12)
- Blomfield Worksite, Liverpool Street, 11-12 Blomfield Street, EC2 (Crossrail XSL10)
- Bond Street Station (Crossrail XSC10)
- City Wall at Old Broad Street (Crossrail XSZ11)
- Connaught Tunnel (Crossrail XSY11)
- Custom House Station, Victoria Dock Road (Crossrail XTI13)
- Eleanor Street Shaft (Crossrail XTJ13)
- Farringdon Eastern Ticket Hall, Phase 2 Mitigation, Hayne Street (Crossrail XTE12)
- Farringdon Station, Minor Works and Utility Diversions, Hayne Street (Crossrail XSF10)
- Finsbury Circus, Liverpool Street (Crossrail XRZ10)
- Gazetteer of Heritage Assets assessed for Built Heritage and Railway Heritage Publications (Crossrail Publication Series Nos 3 and 4)
- Ham and Wick Sewer Protection (Crossrail XTH12)
- Limmo Peninsula (Crossrail XRW10)
- Liverpool Street Worksite, Liverpool Street (Crossrail XSM10)
- Moorgate Shaft, 91-109 Moorgate (Crossrail XSP10)
- Old Oak Common (Crossrail XSU10)
- Paddington (Crossrail XSD10)
- Paddington Integrated Project (PIP), Paddington Station (Crossrail XSE10)
- Plumstead Portal (Crossrail XSW11)
- Pudding Mill Lane (Crossrail XSK10)
- Service Diversion North of Woolwich Portal, Albert Road, Factory Road (Crossrail XSV11)
- Service Diversion VDP, Victoria Dock Road, Seagull Lane (Crossrail XSX11)
- Stepney Green (Crossrail XRV10)
- Tottenham Court Road (Crossrail TCG09)
- Tottenham Court Road Station (Crossrail XRX10)
- Westbourne Park and Royal Oak Stations (Crossrail XSI10)
- Whitechapel Station (Crossrail XSH10)

**Additional Datasets**

- MOLA Conventions, Attribute Definitions, and Validation Tables (Crossrail)

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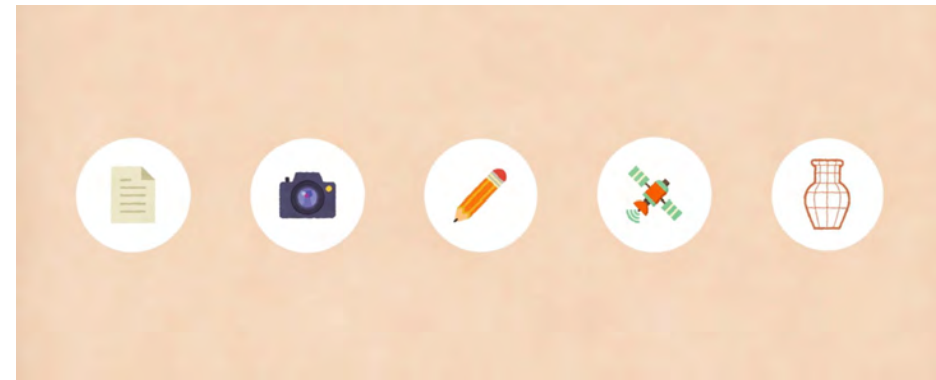
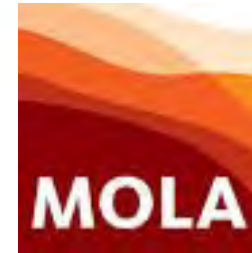
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## Data Overview

So where did we start?

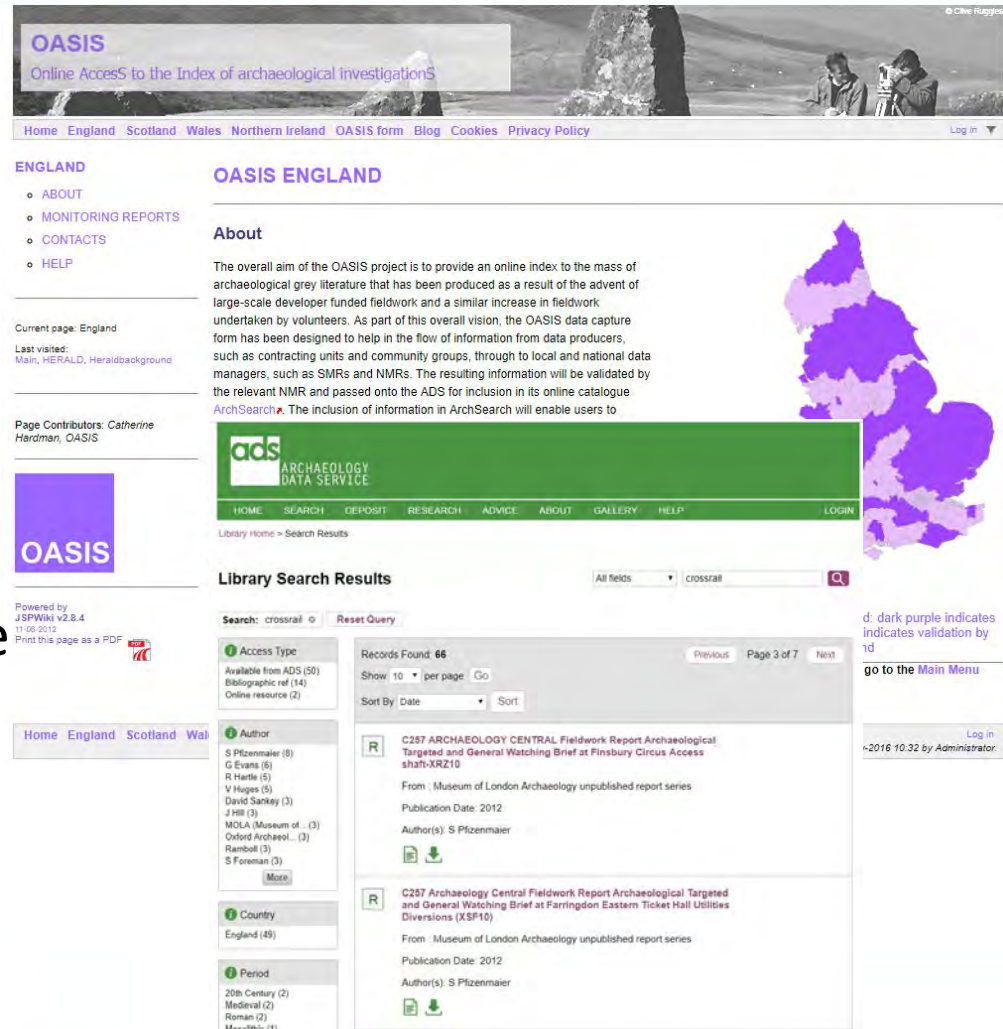
- Planning for the archive
- Visited MOLA in Feb. 2017
- Discussed deposit formats
- Metadata requirements.  
What is already in place?  
(MOLA registers)



	A	B	C	D	E	F	G	H	I	J	K	L	M					
1	Archive_num (.jpg)	Sitecode	Direction	Comments	Accession Number	Material	Object	Context	Subject	Ki	Period	Ter	Term	2	Creator	Organisation	Copyright Holder	Publication
101	09911005.tif	XSM10	NW	RAILWAY TAVERN VIEW											MOLA	Crossrail/MOLA		
102	09911006.tif	XSM10	NW	GENERAL SITE VIEW FROM THE RAILWAY TAVERN PUB											MOLA	Crossrail/MOLA		
103	09911007.tif	XSM10	NW	GENERAL SITE VIEW FROM THE RAILWAY TAVERN PUB											MOLA	Crossrail/MOLA		
104	09911008.tif	XSM10	NW	GENERAL SITE VIEW FROM THE RAILWAY TAVERN PUB											MOLA	Crossrail/MOLA		
105	09911009.tif	XSM10	W	TRENCH 7 - DITCH [229], WEST AT TOP				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
106	09911010.tif	XSM10		TRENCH 7 - DITCH [229], CLOSE UP, WEST AT TOP				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
107	09911011.tif	XSM10	W	TRENCH 7 - EXCAVATING DITCH 229, WEST AT TOP, WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
108	09911012.tif	XSM10	N	TRENCH 7 - EXCAVATING DITCH [229], WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
109	09911013.tif	XSM10	E	TRENCH 7 - EXCAVATING DITCH [229], WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
110	09911014.tif	XSM10	E	TRENCH 7 - RECORDING DITCH 229, WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
111	09911015.tif	XSM10	E	TRENCH 7 - RECORDING DITCH 229, WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
112	09911016.tif	XSM10	W	TRENCH 7 - RECORDING DITCH 229, WORKING SHOT WITH MG				229 P			C 1000/1450, TRUNCATED MOLA					Crossrail/MOLA		
113	09911017.tif	XSM10	SE	TRENCH 7 LOCATION											MOLA	Crossrail/MOLA		
114	11011001.tif	XSM10	N	SKELTON [268] (RIGHT) AND PIT BURIAL [268] (LEFT) TR13				268 SK			JULY 1569 TO 1 MARCH 17 MOLA					Crossrail/MOLA		
115	11011002.tif	XSM10	N	RECORDING IN TR13, WORKING SHOT WITH RGH AND MG				268 SK			JULY 1569 TO 1 MARCH 17 MOLA					Crossrail/MOLA		
116	11011003.tif	XSM10	NE	RECORDING TR13, WORKING SHOT WITH RGH				268 SK			JULY 1569 TO 1 MARCH 17 MOLA					Crossrail/MOLA		
117	11011004.tif	XSM10	NW	TR13, WORKING SHOT WITH RGH				268 SK			JULY 1569 TO 1 MARCH 17 MOLA					Crossrail/MOLA		

# Data Overview

- OASIS records being created
- Avoid data duplication
- Allow reuse of metadata (site level)
- Ensure these are linked at deposit (ADS Library)



**OASIS**  
Online Access to the Index of archaeological investigations

Home England Scotland Wales Northern Ireland OASIS form Blog Cookies Privacy Policy Log in

**ENGLAND**

- ABOUT
- MONITORING REPORTS
- CONTACTS
- HELP

Current page: England  
Last visited: Main, HERALD, Heraldbackground

Page Contributors: Catherine Hardman, OASIS

**OASIS ENGLAND**

**About**

The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork and a similar increase in fieldwork undertaken by volunteers. As part of this overall vision, the OASIS data capture form has been designed to help in the flow of information from data producers, such as contracting units and community groups, through to local and national data managers, such as SMRs and NMRs. The resulting information will be validated by the relevant NMR and passed onto the ADS for inclusion in its online catalogue ArchSearch. The inclusion of information in ArchSearch will enable users to

**Library Search Results**

Search: crossrail Reset Query

Records Found: 66

Show 10 per page Go

Sort By Date Sort

**Access Type**

- Available from ADS (50)
- Bibliographic ref (14)
- Online resource (2)

**Author**

- S Pfizenmaier (8)
- G Evans (6)
- R Hartle (5)
- V Huges (5)
- David Sankey (3)
- J Hill (3)
- NOLA Museum of... (3)
- Oxford Archaeol... (3)
- Ramboll (3)
- S Foreman (3)

**Country**

- England (49)

**Period**

- 20th Century (2)
- Medieval (2)
- Roman (2)
- Mesolithic (1)

**C257 ARCHAEOLOGY CENTRAL Fieldwork Report Archaeological Targeted and General Watching Brief at Finsbury Circus Access shaft-XXZ10**

From : Museum of London Archaeology unpublished report series

Publication Date: 2012

Author(s): S Pfizenmaier

**C257 Archaeology Central Fieldwork Report Archaeological Targeted and General Watching Brief at Farringdon Eastern Ticket Hall Utilities Diversions (XSF10)**

From : Museum of London Archaeology unpublished report series

Publication Date: 2012

Author(s): S Pfizenmaier

d: dark purple indicates indicates validation by id

go to the Main Menu

Log in

© 2016 10:32 by Administrator



## Data Overview

- Look at potential 'unexpected' data
- CT and x-ray datasets
- File formats (DICOM)
- Metadata requirements





## Data Delivery

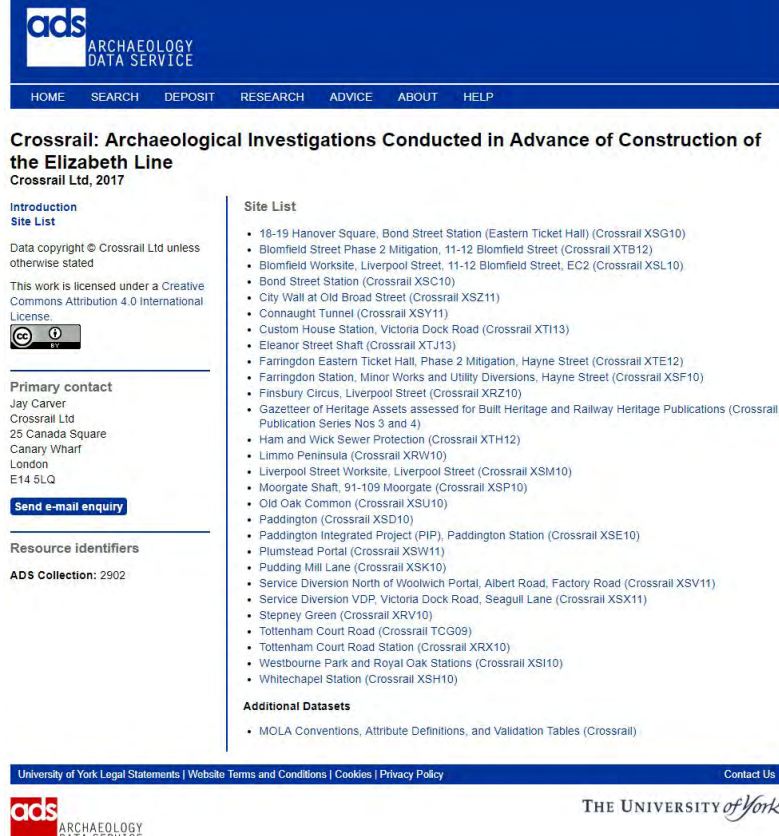
- Deposit process started March - May 2017
- Finished January 2019 (final MOLA archive)
- Data selection largely by MOLA and OA
- Site-by-site approach - allowed minor issues to be dealt with as they occurred rather than at end of project.



# The Archive

## What was delivered?

- 29 site archives
- 17,512 files: 16,440 from MOLA
- 1,072 from Oxford Archaeology
- 113GB in total
- Transfer of data by a variety of means:  
web transfer, email, hard disc.



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### Crossrail: Archaeological Investigations Conducted in Advance of Construction of the Elizabeth Line

Crossrail Ltd, 2017

**Introduction**  
**Site List**

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- Custom House Station, Victoria Dock Road (Crossrail XT113)
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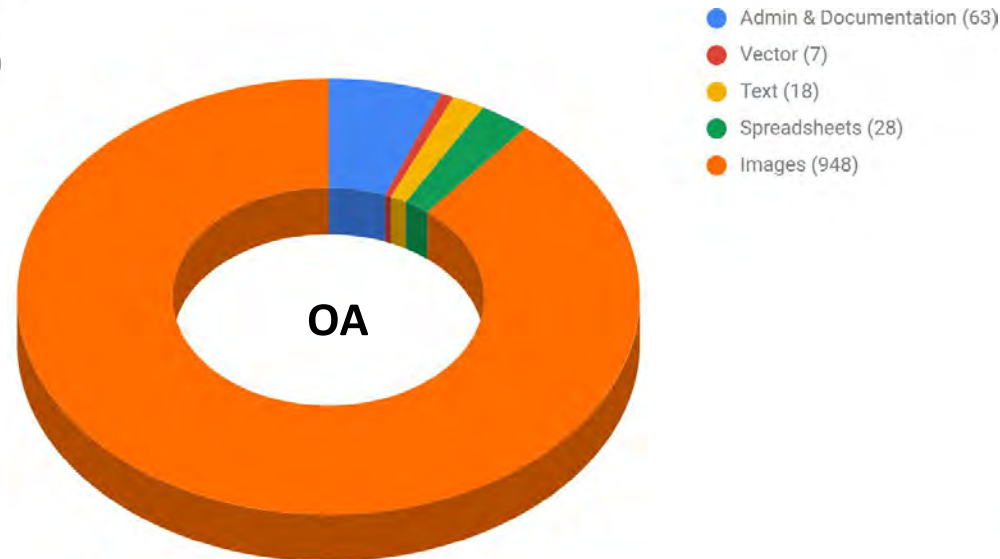
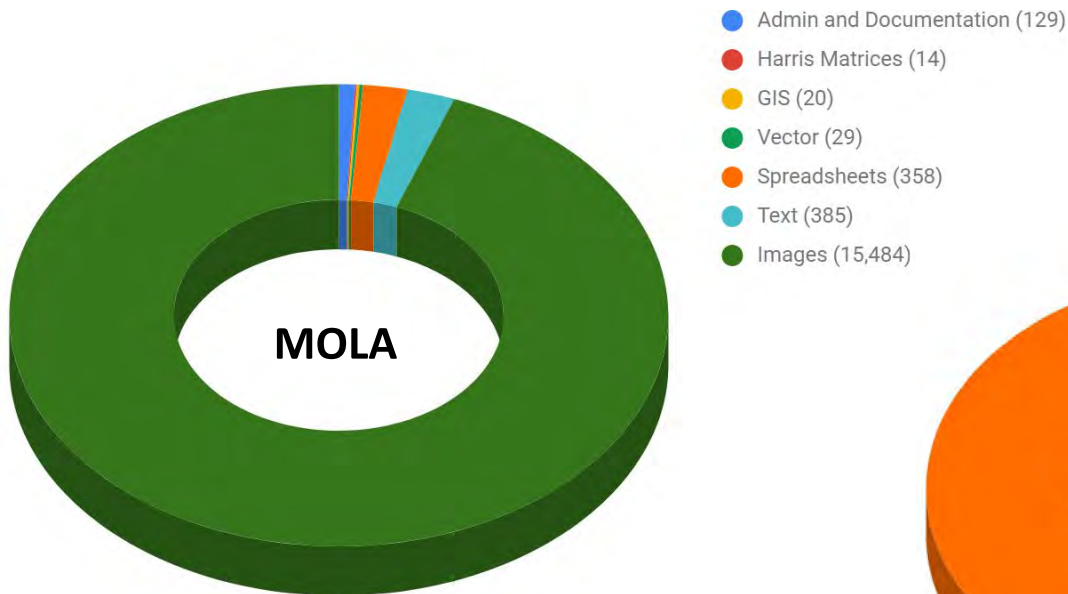
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## The Archive

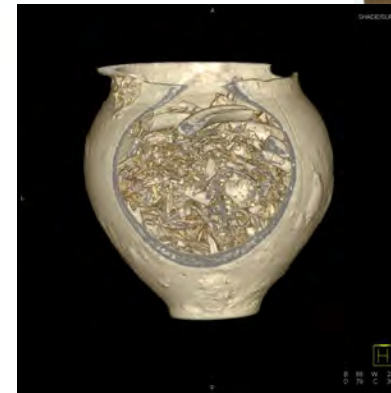

- Large amount of data in a small number of formats





## The Archive

- Range of content within limited variety of formats
- Site Reports
- Specialist Reports
- Images
- GIS, CT, X-rays, Harris Matrices

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### Bond Street Station (Crossrail XSC10)

Oxford Archaeology (South), 2017

Introduction  
Downloads  
Metadata  
Usage Statistics

Crossrail: Archaeological Investigations Conducted in Advance of Construction of the Elizabeth Line

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oxford archaeology  
south south

**Downloads**  
Reports | Images | CAD (Vector graphics) | Spreadsheets

**Reports**

Huges, V. (2016) <i>Bond Street Excavation - Archaeological Fieldwork Report</i> . Oxford Archaeology: Oxford. DOI:10.5284/1042407.	<a href="#">Go to report</a>
Wroe-Brown, R., Evans, G., Huges, V., Shelley, A. (2016). <i>Archaeological Watching Brief in Vicinity of Bond Street Station</i> . Oxford Archaeology: Oxford. DOI:10.5284/1042409.	<a href="#">Go to report</a>
Cotter, J. (2013) <i>Scan assessment of the pottery from Crossrail, Bond Street (XSC10)</i> . Crossrail: London.	PDF 175 Kb
Cotter, J. (2013) <i>Scan assessment of the clay tobacco pipes from Crossrail, Bond Street Station (XSC10)</i> . Crossrail: London.	PDF 171 Kb
Shaffrey, R. (2011) <i>Assessment of worked stone from Cross Rail</i> . Crossrail: London.	PDF 111 Kb
Cotter, J. (2013) <i>Assessment of the ceramic building material from Crossrail, Bond Street (XSC10)</i> . Crossrail: London.	PDF 191 Kb
Cotter, J. (2014) <i>Assessment of the additional ceramic building material, clay tobacco pipe and pottery from watching briefs: Crossrail, Bond Street (XSC10)</i> . Crossrail: London.	PDF 165 Kb



## Selection and Sustainability

- How does selection influence sustainability?

*“The entire archive must be compiled in a way that preserves relationships between each element and facilitates access to all parts in the future.”*

ARCHES European standard core principle #5

## Key Points

- Data **formats** can be an issue BUT limiting formats can aid ingest, preservation and, ultimately, long-term sustainability
- Archive **structure** is essential when data quantity is high, for both access and management
- **Rich metadata** facilitates discovery, access, and reuse at various levels
- Reuse of **existing metadata** (e.g. MOLA registers) and data flows saves times, avoids duplication, and allows other points of access (e.g. ADS Library)