

HS2

Phase One Heritage Sub-group

6th December 2022 (10.00-12.30)

Agenda

- | | |
|--|-------------|
| 1. Welcome & Introduction | 10.00-10.05 |
| 2. Team News | 10.05-10.10 |
| 3. Post excavation update | 10.10-10.20 |
| 4. Enabling research & knowledge sharing | 10.20-10.35 |
| 5. Digital data | 10.35-10.50 |
| 6. BREAK | 10.50-11.05 |
| 7. Area updates | |
| • Burials | 11.05-11.15 |
| • Route wide buildings | 11.15-11.30 |
| • South | 11.30-11.50 |
| • North | 11.50-12.10 |
| • Central | 12.10-12.30 |

AOB

Post-excavation Services - recap

- Phase 1 and 2a
- 8 years in total
- 'Design and build'
 - 2 years design
 - Mobilisation
 - Project Design
 - Management Plan
 - 4 years delivery
 - Analysis
 - Publication
 - Archiving
- Repeated for Phase 2a offset by two years.

Contract Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8*
Phase One services	Phase One: Stage One		Phase One: Stage Two					
	Mobilisation (archive transfer from EWC/MWCC supply chain)		Delivery of Project Design (via instructed Work Package Orders, including cross-Phase deliverables)					
	Management Plan							
	Project Design							
Phase 2a services			Phase 2a: Stage One		Phase 2a: Stage Two			
			Mobilisation (archive transfer from ACW supply chain)		Delivery of Project Design (via instructed Work Package Orders, including cross-Phase deliverables)			
			Revision of Phase One Project Design and Management Plan (accounting for Phase One lessons learned)					

Post-excavation Services

- Two-stage tender process – first stage (*the* PQQ) completed
 - Preparing for the second stage, ITT.
 - Finalising the Works Information
 - HS2 governance
 - ITT
 - Hot starts
 - Bidders submit
 - HS2 evaluation
 - Award
 - Preparing the business
-

Enabling research and knowledge sharing

Archaeological Approaches

Current projects

- Testing geophysical survey data against excavation results: PhD (U. Brighton)
- Public benefit from archaeology (UKRI/MOLA)

Further requests:

- Testing predictive models for the Roman period (U. Oxford)
- Linear earthworks in Britain (UCL)
- Organic residue analysis (U. Bristol)



Human Remains

Francis Crick Institute

- 1000 Ancient Genomes Project

UCL

- Anglo-Saxons in the Chilterns; testing a British enclave hypothesis

University of Reading

- Infant and maternal health in industrial England

University of Liverpool

- Burial management - current policies and public perceptions

University of Sheffield

- Foetal and maternal mortality

University of Cambridge/U. Tartu

- Evidence for the Justinian Plague in A/S England



[News & reports](#)

Uncovering 5,000 years of genetic evolution: from the Stone Age to the 21st century

25 October 2019

Human Biology

News

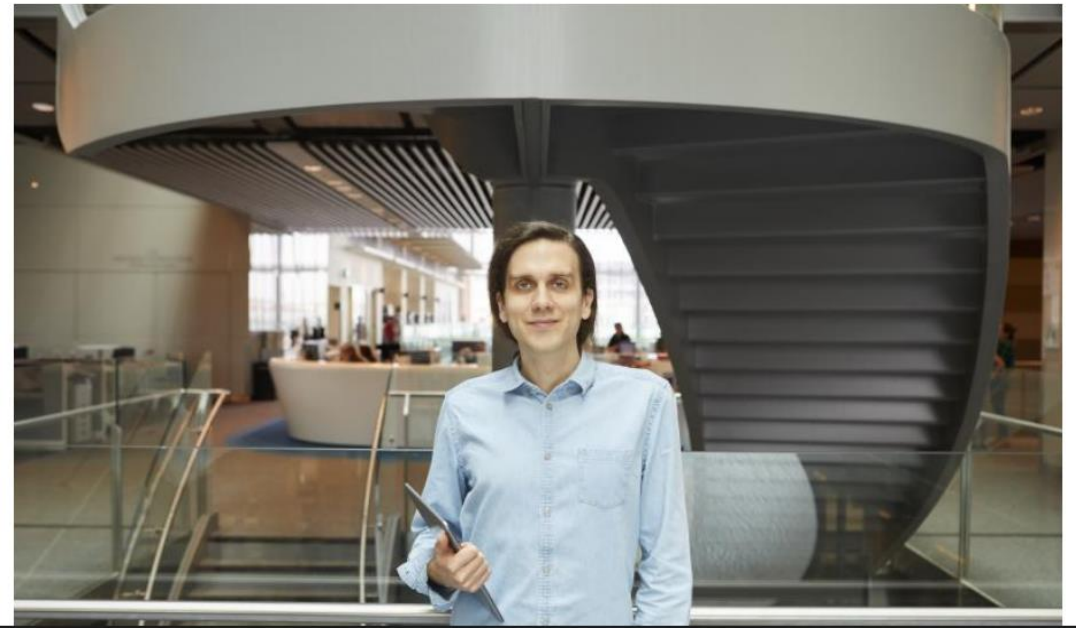


The Crick's [Pontus Skoglund](#) has been awarded a £1.7m [Wellcome Trust](#) [grant](#) to unearth new insights into human evolution and disease.

The Investigator Award is funding research into how the genetics of people in Britain changed over thousands of years including in response to events like infectious disease, changes in diet and urbanisation.

By identifying what genetic changes took place and matching these changes against key moments in history, the study will uncover new insights into the evolution of humans and disease.

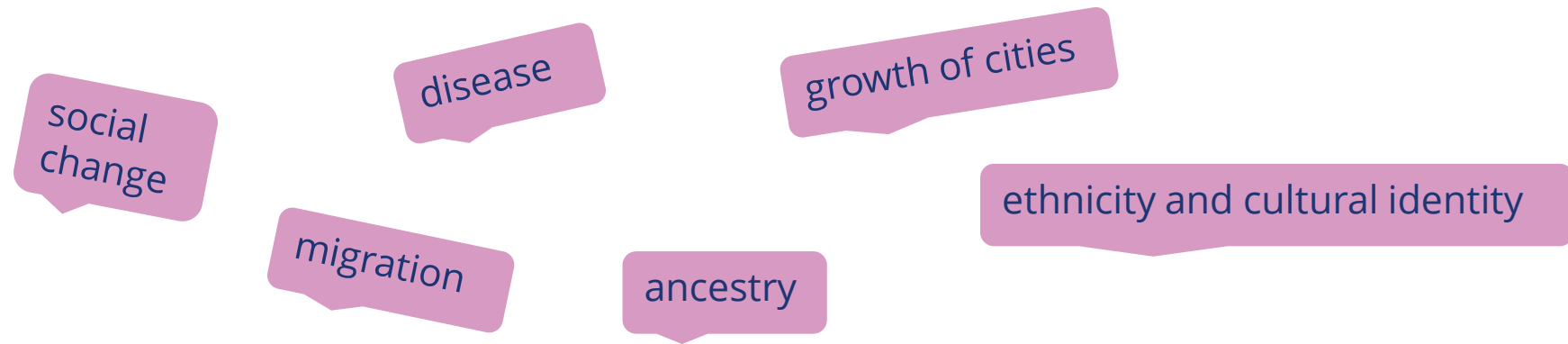
Over five years, researchers will sequence the whole-genomes of more than 1,000 ancient British people, using skeletal samples from the last 5,000 years.



[Site selection strategy developed with Historic England]

Site	St James's Gardens	Park Street Gardens	St Mary's Churchyard	Wellwick	Ellesborough	Fleet Marston	Blackgrounds	Lower Radbourne	Greatworth
Sample	95 Post Med	118 Post Med	81 3 RB, 11 early Med, 21 pre and 14 post Black Death, 14 Med, 17 PM + 1 unusual	6 BA, IA, RB/Sax	111 Sax	59 IA/RB	86 IA/RB	25 Med	15 LR/Sax

HS2 HERDS specific objectives:





Tobacco
Health & History



UNIVERSITY OF
LEICESTER

[Team](#) | [News](#) | [Blog](#) | [Contact](#)



**UK
RI**
UK Research
and Innovation

HS2

Sample:
300 adults and 50 sub adults from St James's Gardens

TOBACCO, HEALTH & HISTORY

This project is the first to look at the long-term consequence of tobacco use in a population.
These findings will be useful in understanding modern health dilemmas.

Book chapter forthcoming (Anna M Davies-Barrett and Sarah A Inskip): Who smokes anymore? Documentary, archaeological and osteological evidence for tobacco consumption and its relationship to social identity in industrial England (AD 1700-1850). *women; group membership; social marginalisation*

Conference presentations

- **EAA 2022**-‘Big Project: Big Data’ session papers by HS2, ADS and others
- **London and Middlesex, Annual Conference** (HS2, Fusion, MOLA, L-P, SCS)
- **World Congress on Railway Research** -HS2 presentation and stand
- **Festival of Science**, Great Missenden
- **Bucks Arch Soc Conference**



Delivering skills and education in a post pandemic world

09:30 – 09:40	Welcome & introduction to the session <i>Emma Hopla, HS2/Atkins</i>
09:40 – 10:00	To teach is to learn twice: The Archaeological Research Services approach to training <i>Clive Waddington</i>
10:00 – 10:10	The Archaeological Research Services Training Academy – structured for success <i>Georgina Doonan</i>
10:10 – 10:20	Understanding behavioural tendencies to grow the Archaeological Research Services team <i>Linzi Robinson</i>
10:20 – 10:40	Bridging the skills gap: developing a distance learning training programme for mid-career upskilling <i>Martin Locock</i>
10:40 – 11:00	Questions followed by a panel discussion: supporting individual learning and behaviour change <i>Chair: Andrea Bradley (Independent Consultant)</i>
11:00 – 11:30	Break
11:30 – 11:50	St Mary's Field Museum: planning and delivering intrapandemic educational opportunities <i>Lily Hawker-Yates,</i>
11:50 – 12:10	Making the most of the pandemic, for the benefit of maritime heritage <i>Peta Knott</i>
12:10 – 12:30	Back to school for HS2: learning how to unlock virtual engagement for schools during lockdown <i>Caroline Adams, Clemency Cooper</i>
12:30 – 12:50	Collaboration, flexibility and sustainability in engagement <i>Mary Ruddy</i>
12:50 – 13:00	Discussion and networking <i>Chair: Emma Hopla, HS2/Atkins</i>



HS2, Atkins, suppliers and partners

Discussion topics

- How approaches to training and education have changed since 2019
- New ways of engaging with the public
- How we can support learners better in our own organisations
- Making training bespoke, increasing access, scalability

Festival of Archaeology and events

- **Family archaeology day** at The Core, Solihull: LM/Wessex (160 attendees)
- **Coleshill Open Day** (Town Hall): LM/Wessex (108 attendees)
- **Discovery Bucks** talks: Fusion - Wendover Saxon Cemetery, St Mary's
- **Bucks Museum Display:** Roman statues from St Mary's



Events



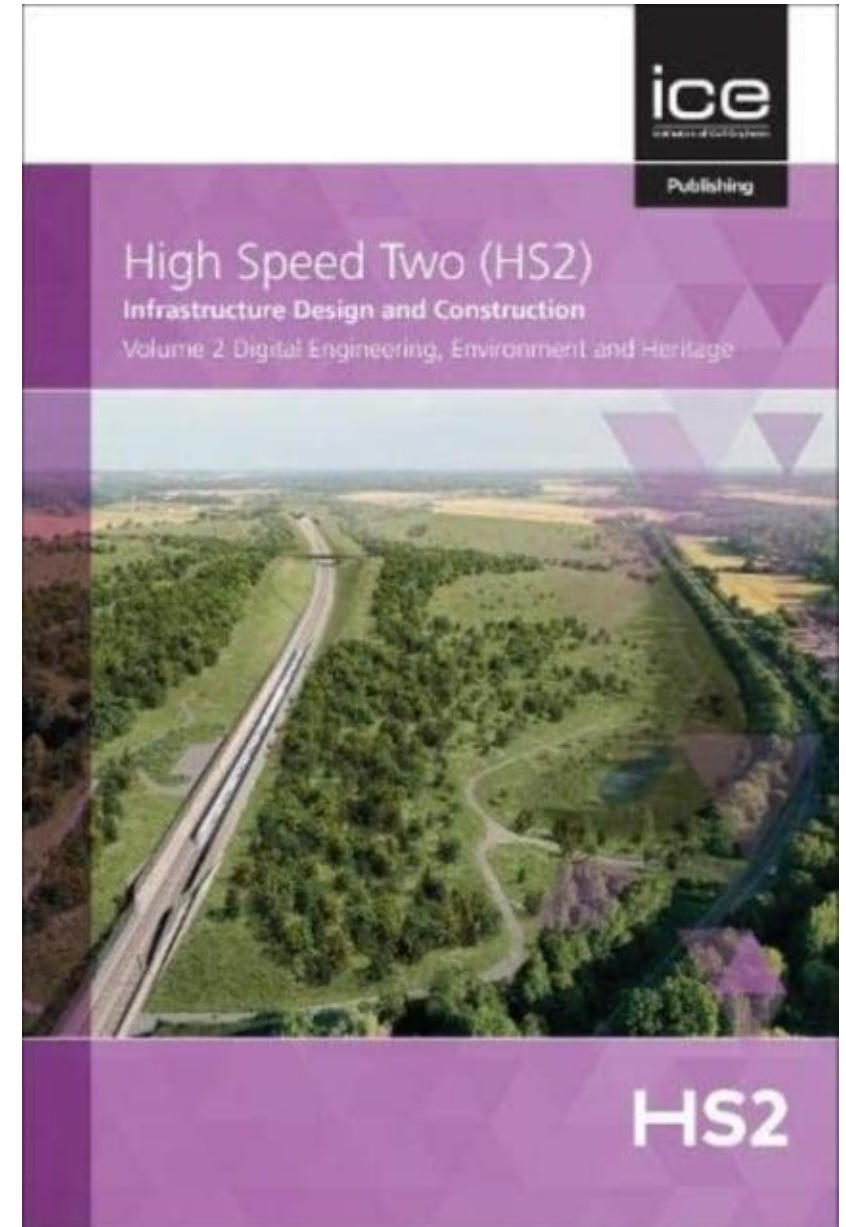
Publications

HS2 technical papers

Published: HS2: Infrastructure Design and Construction Vol 2, Digital Engineering, Environment and Heritage

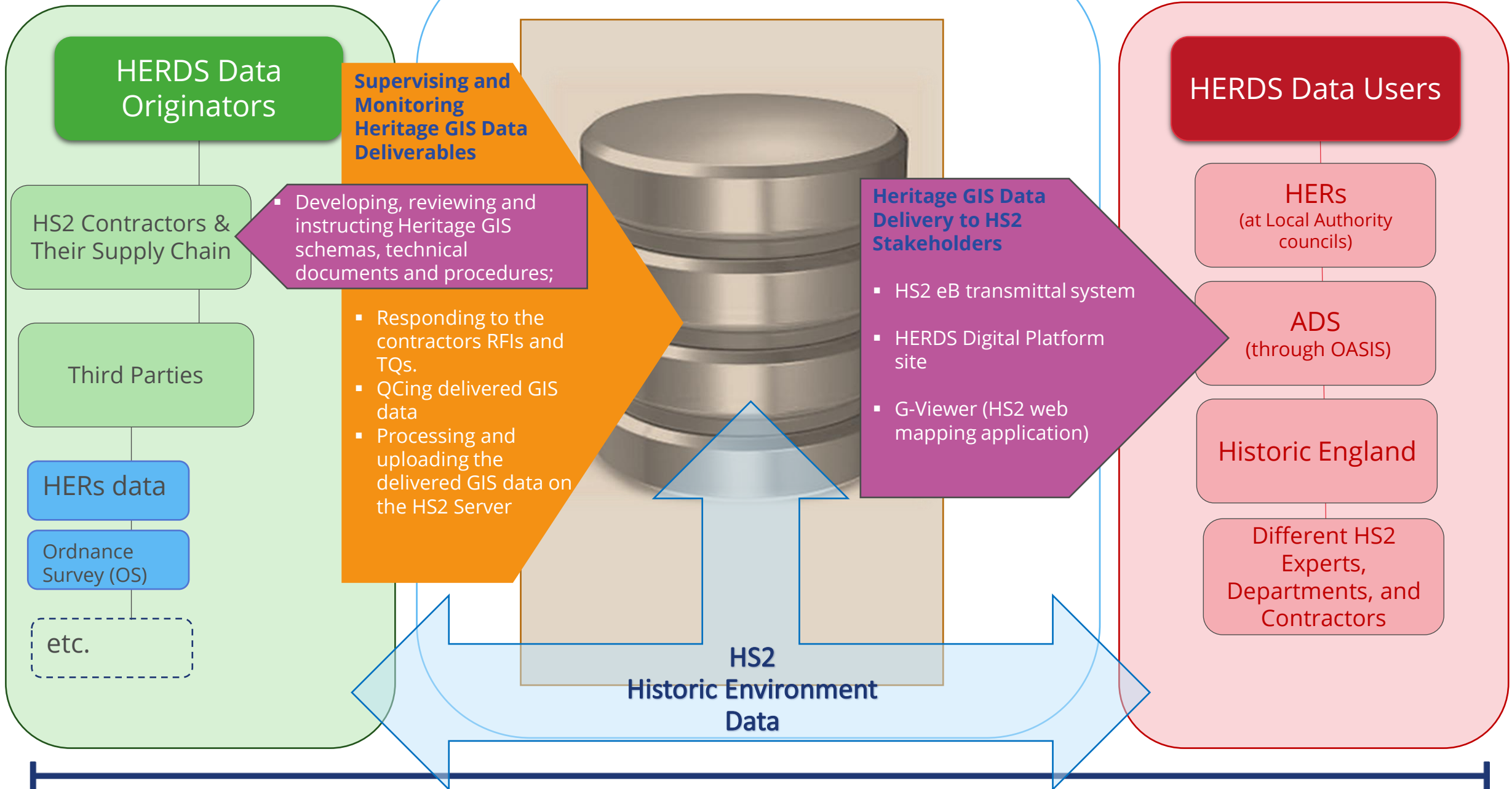
Internet Archaeology

- Data paper in prep
- EAA 2022 papers, in prep

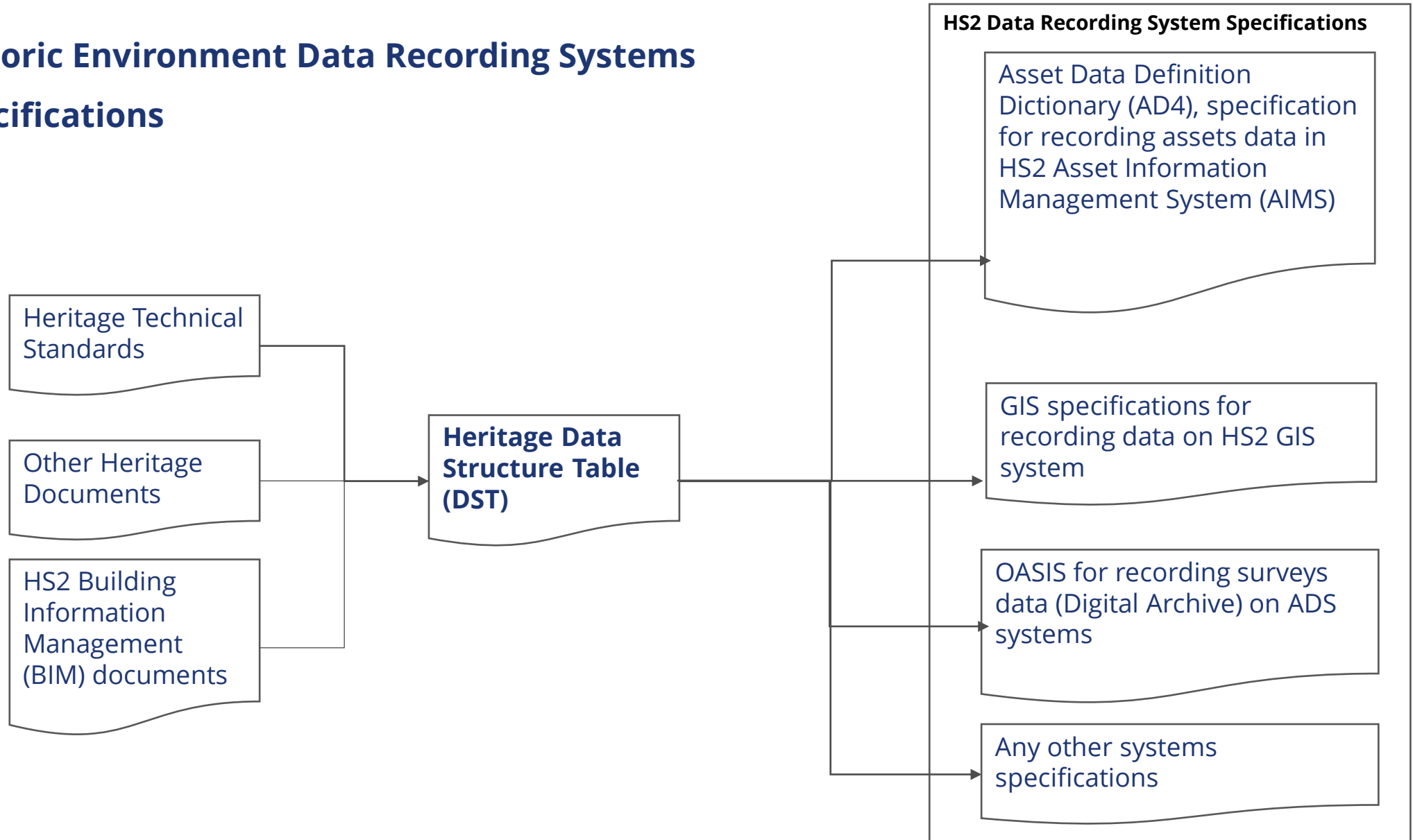


HS2

Digital Data Highlights



❑ Historic Environment Data Recording Systems Specifications



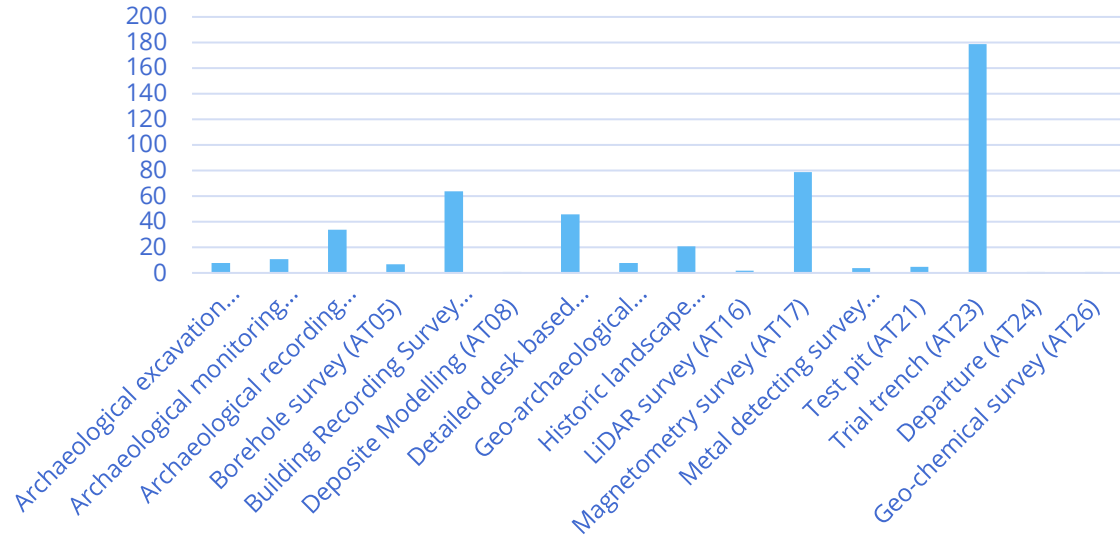
Phase One Historic Environment Primary Assets, delivered in GIS Data format

HE Primary Assets	Count
LSWSI	208
Project Plan	471
WSI Intervention	25309
Archaeological Feature	31727
Significant Archaeological Object	27588

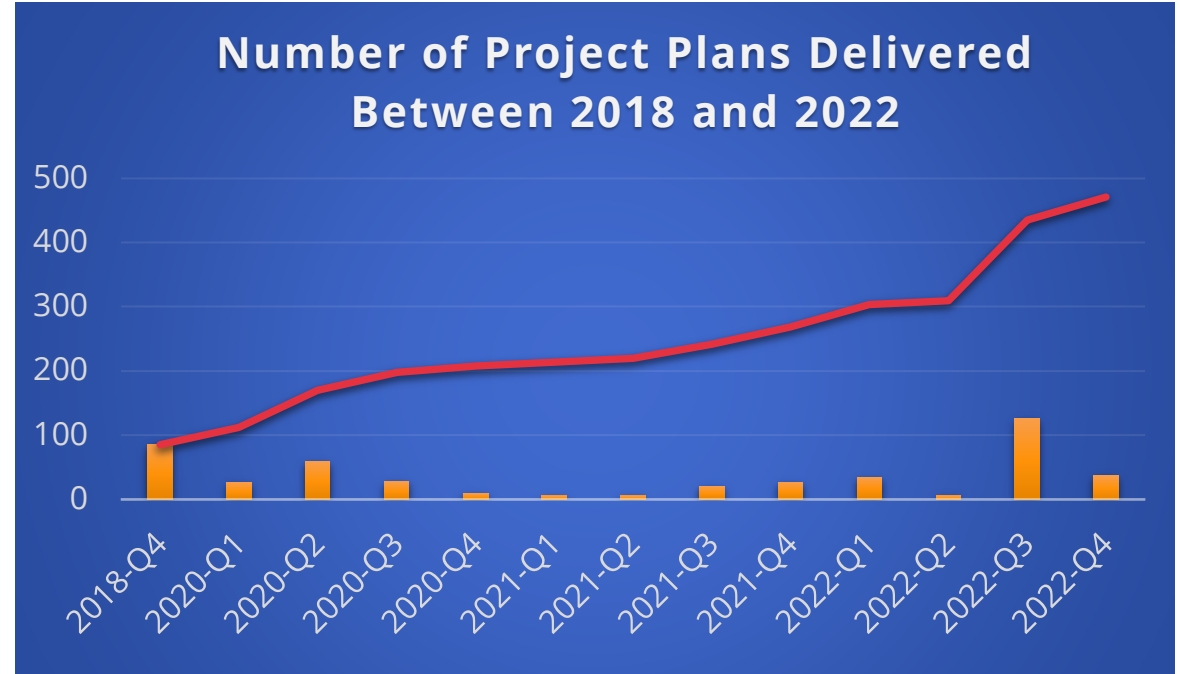


Phase One Project Plans Delivered

Number of Project Plans Delivered Based on Their Activity Type



Number of Project Plans Delivered Between 2018 and 2022

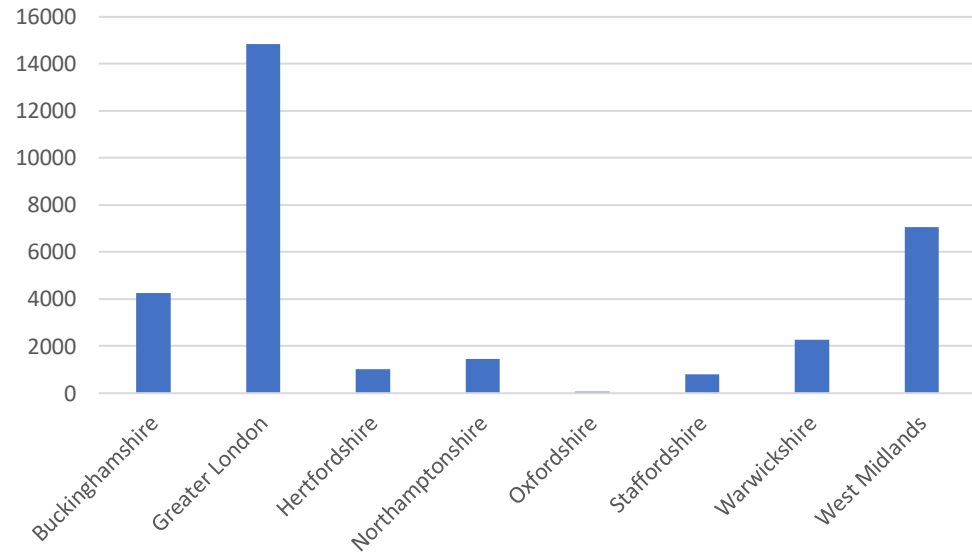


Year	2018	2018 Total	2020				2020 Total	2021				2021 Total	2022				2022 Total	Grand Total
	Q1		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		
Archaeological excavation of human burials (AT01)				1		2	3							2	3	5	8	
Archaeological monitoring (AT02)					9		9							2		2	11	
Archaeological recording (AT03)				1	14		15	1	1			2	1	16		17	34	
Borehole survey (AT05)	1	1		2			2						1	3		4	7	
Building Recording Survey (AT06)	2	2	1	1	2		4	1	1	17		19		32	7	39	64	
Deposite Modelling (AT08)	1	1															1	
Detailed desk based assessment (AT10)	37	37	5				5			3		3			1	1	46	
Geo-archaeological investigation (AT13)	1	1	3				3							4		4	8	
Historic landscape recording (AT15)						8	8			1	1	2	2	9		11	21	
LiDAR survey (AT16)			1				1							1		1	2	
Magnetometry survey (AT17)			14	37	1		52				24	24		3		3	79	
Metal detecting survey (AT19)	1	1									1	1	2			2	4	
Test pit (AT21)					1		1	1				1		2	1	3	5	
Trial trench (AT23)	42	42	3	16	1		20	3	4		1	8	29	6	50	24	179	
Departure (AT24)														1		1	1	
Geo-chemical survey (AT26)														1		1	1	
Grand Total	85	85	27	58	28	10	123	6	6	21	27	60	35	6	126	36	203	471

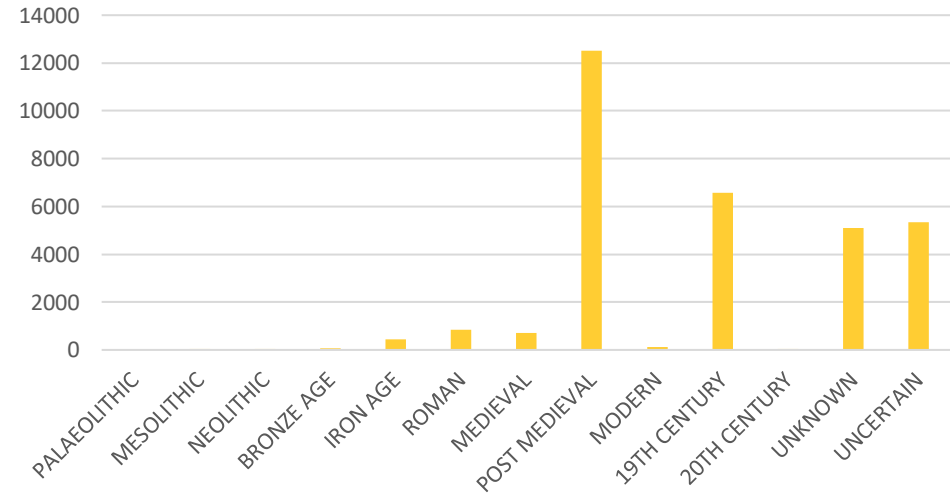
Phase One Archaeological Features Found

Area Name	Count (Grand Total)	PALAEOLITHIC	MESOLITHIC	NEOLITHIC	BRONZE AGE	IRON AGE	ROMAN	MEDIEVAL	POST MEDIEVAL	MODERN	19TH CENTURY	20TH CENTURY	UNKNOWN	UNCERTAIN
Buckinghamshire	4253			1	13	186	250	220	67	32			1369	2114
Greater London	14823		1		34	3	22	172	12139	15	12	14	537	1874
Hertfordshire	1019			1	5	33	164		38				621	157
Northamptonshire	1437					128	95	24	40	16	2		1049	83
Oxfordshire	68						1	1					49	17
Staffordshire	796				5	32	207		15	13	1		259	264
Warwickshire	2266				7	46	108	280	28	24	1		969	803
West Midlands	7065				1	19	3	1	192	11	6561	12	242	22
Total Sum	31727	0	1	2	65	447	850	698	12519	111	6577	26	5095	5334

Count of Archaeologic Features within LAs



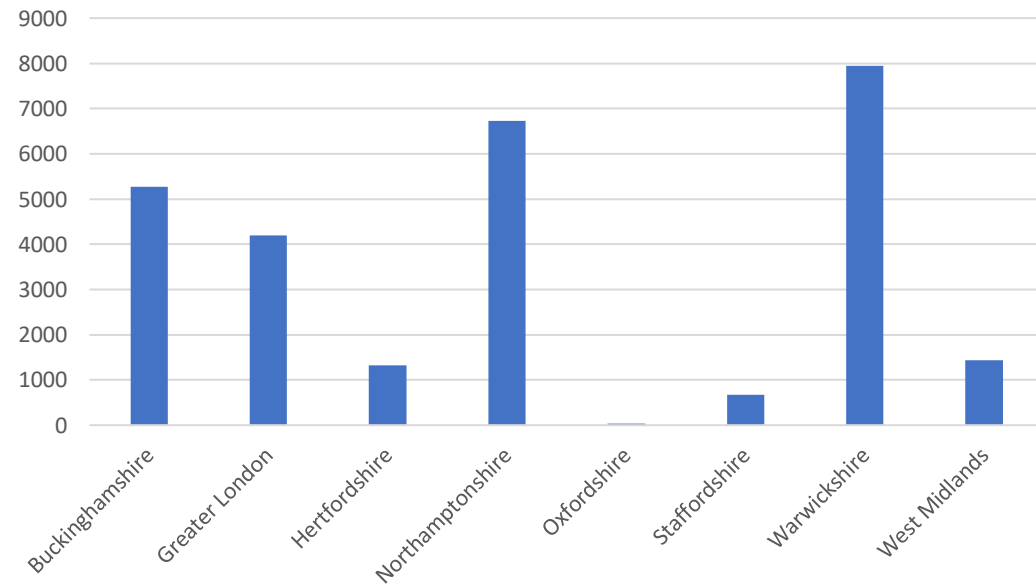
Count of Archaeologic Features Based on Period



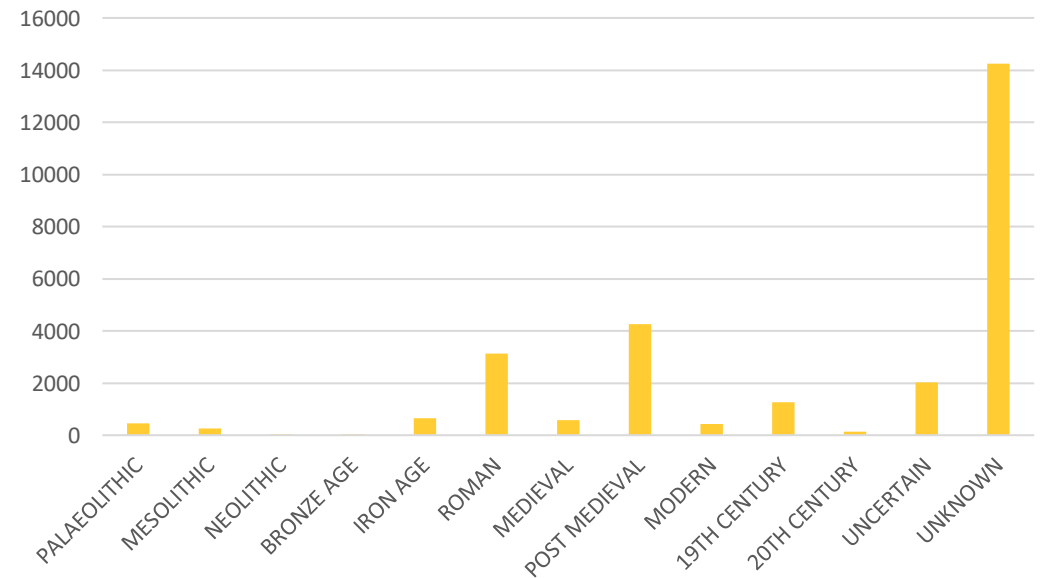
Phase One Significant (Registered) Archaeological Objects Found

Area Name	Count (Grand Total)	PALAEOLITHIC	MESOLITHIC	NEOLITHIC	BRONZE AGE	IRON AGE	ROMAN	MEDIEVAL	POST MEDIEVAL	MODERN	19TH CENTURY	20TH CENTURY	UNCERTAIN	UNKNOWN
Buckinghamshire	5270		1	11	9	184	767	320	1498	267	9	104	1232	864
Greater London	4201	1	1		1		3	9	2336	10		12	16	1812
Hertfordshire	1318			2		9	35	2	90				17	1163
Northamptonshire	6723	446	80	12	2	7	83	80	195	97	4	7	389	5249
Oxfordshire	30					2	1	4	2	2			17	2
Staffordshire	668				4	39	335	1	12	12	2	2	105	156
Warwickshire	7950	10	184	9	3	378	1891	158	66	29			245	4975
West Midlands	1428		1		1	38	13	6	67	16	1245		2	39
Total Sum	27588	457	267	34	20	657	3128	580	4266	433	1260	125	2023	14260

Significant Archaeological Objects Found within LAs



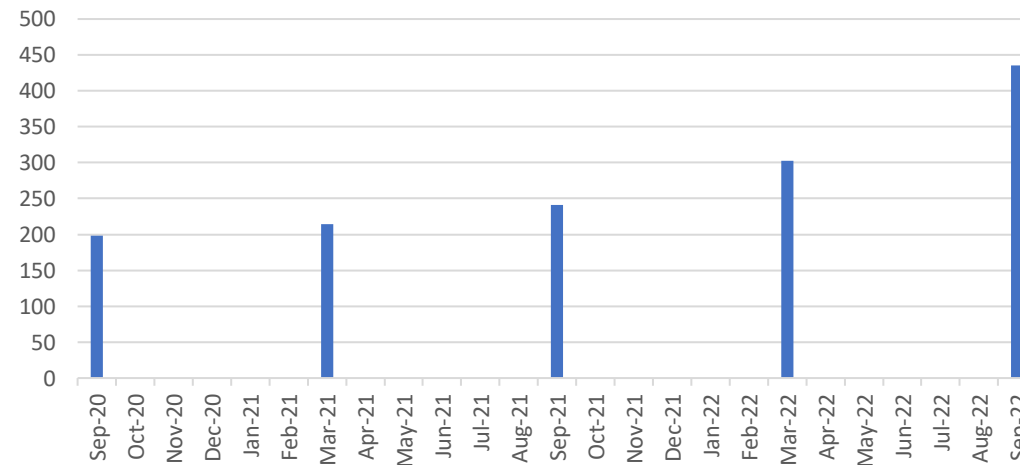
Significant Archaeological Objects Found Based on Their Period



Phase One GIS Data Transmitted to stakeholders

	Sep 2020	Mar 2021	Sep 2021	Mar 2022	Sep 2022
HERs	P01	P02	P03	P04	P05
ADS	-	P01 and P02	P03	P04	P05
Number of Project Plans	198	214	241	303	435

GIS Data Deposition to Stakeholders Based on the Number of Project Plans Delivered



- **Format of the GIS data sent to ADS and HERs:** Each data package includes three folders:
 - ✓ First, GIS data in **ESRI ArcGIS GDB** format;
 - ✓ Second, GIS data in **open format (Shapefile)**, just in case any HER might not be equipped with ESRI GIS products, and they might use other platforms of spatial data analysis such as QGIS or MapInfo, etc. ;
 - ✓ Third, **Guidance Documents**, including data licence (a Read Me text file), some documents and instruction about how different GIS layers are related together, and a bit of their domains and fields tables in html format;
 - **Location Coverage of the GIS data:** The GIS data have been extracted within Local Authorities' Boundaries (**County/District polygons**), **plus 1km buffer around them**;
 - **Frequency of receiving this GIS data package:** GIS data packages are prepared and sent out **every 6 months**, and ADS and HERs representatives may supersede the old version with the newly updated received version;
-

HS2

Burials Update

Burials removed, retained for analysis and reburied

St James Gardens 18,500 +	Park St Gardens 9,500 +	St Mary's Church 3,271 + disarticulated	Lower Radbourne C of E (25) and Freeman Street Baptists (c.2)	c.1000 other individuals prehistoric to medieval
5,300	4,000	3,271	(PXA only)	1000
15,200 +	5500+	disarticulated	c.27	0

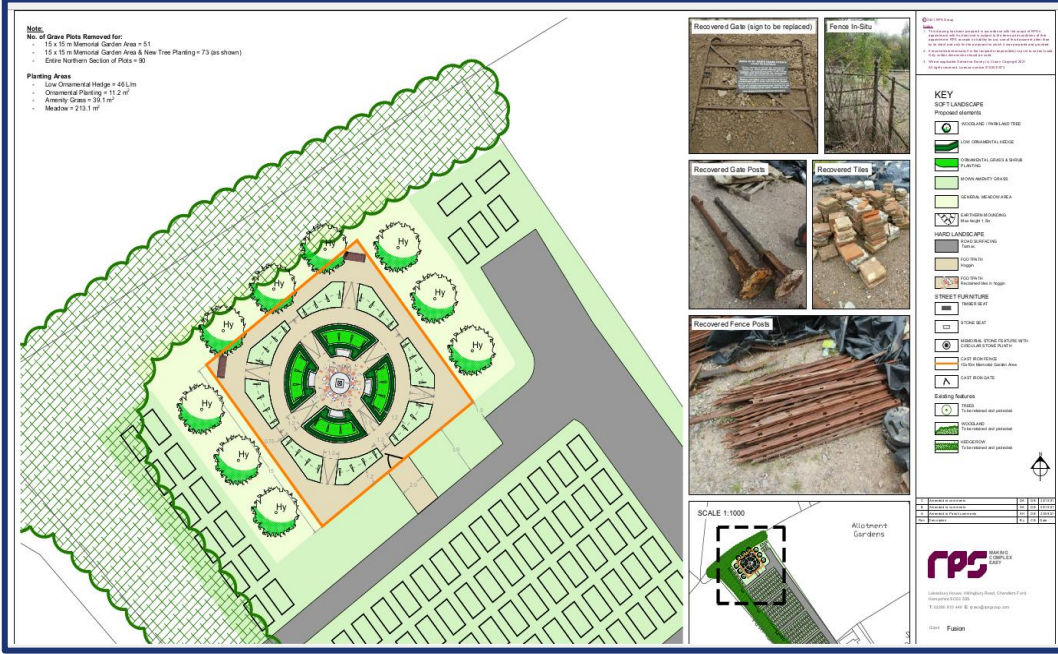


Witton Baptist Ground

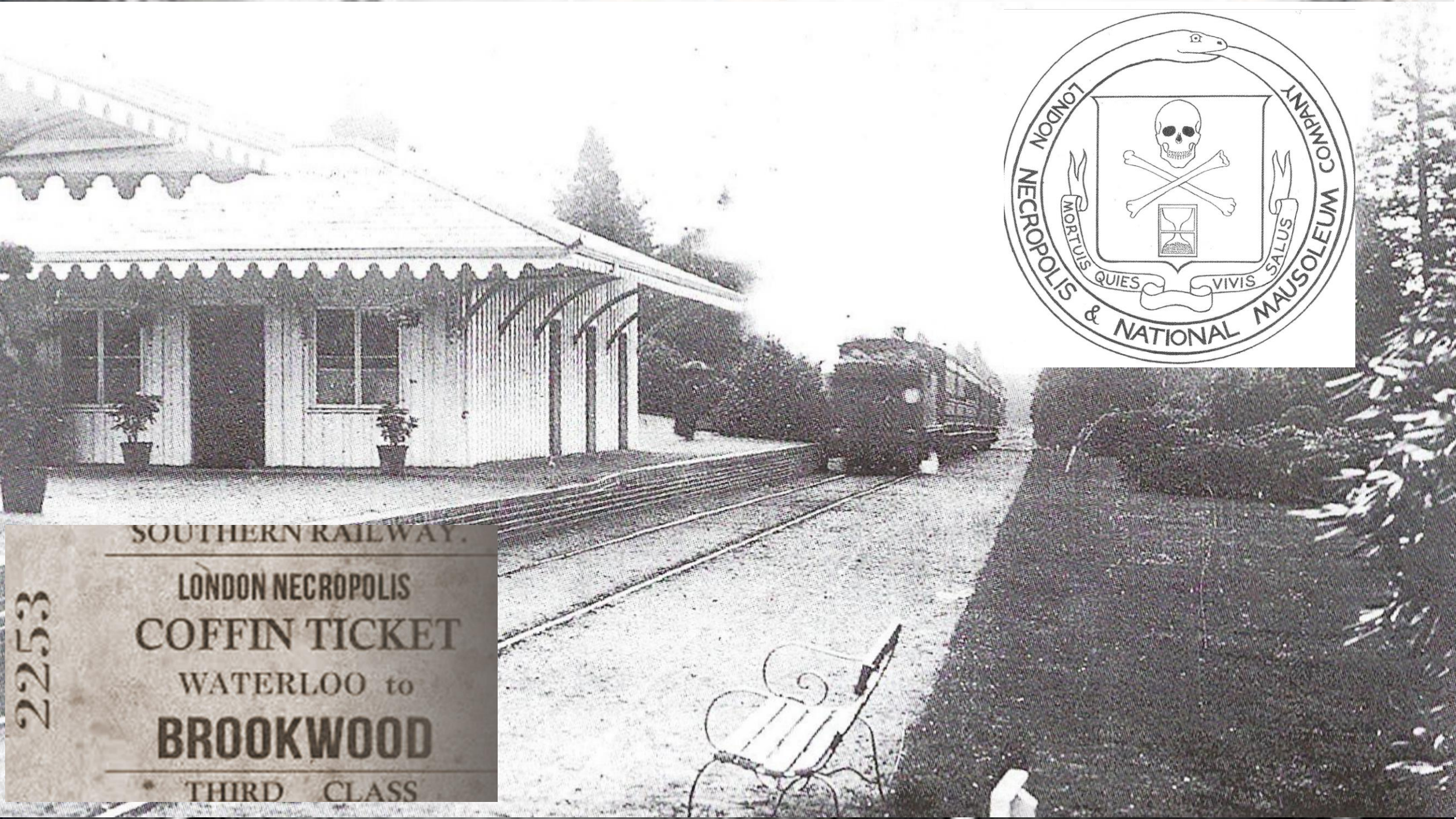


Witton Anglican Ground

Priors Hardwick Church



Stoke Mandeville Village



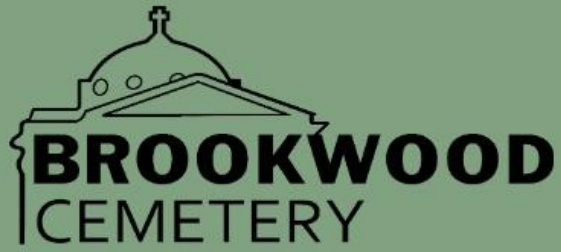
SOUTHERN RAILWAY.

LONDON NECROPOLIS
COFFIN TICKET
WATERLOO to
BROOKWOOD

* THIRD CLASS

22.53





Plot Locations





Approximate extent of Package 054C works area

Glades House (Brookwood Cemetery Head Office)

Site access route off Cemetery Pales Road

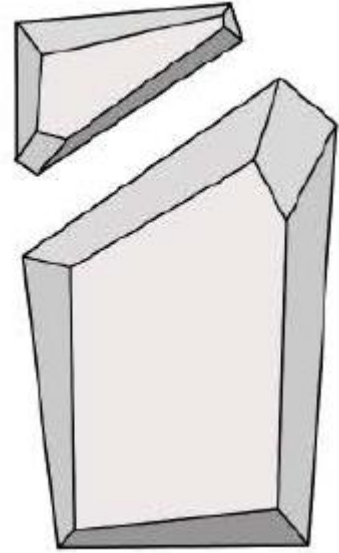
Temporary culvert installed over















HS2

Area South update

Platform 17/18 Exhumation Trial Holes



St James's Garden grave ledgers

- Further consideration of research potential (i.e. funerary ritual and use of stonework in London)

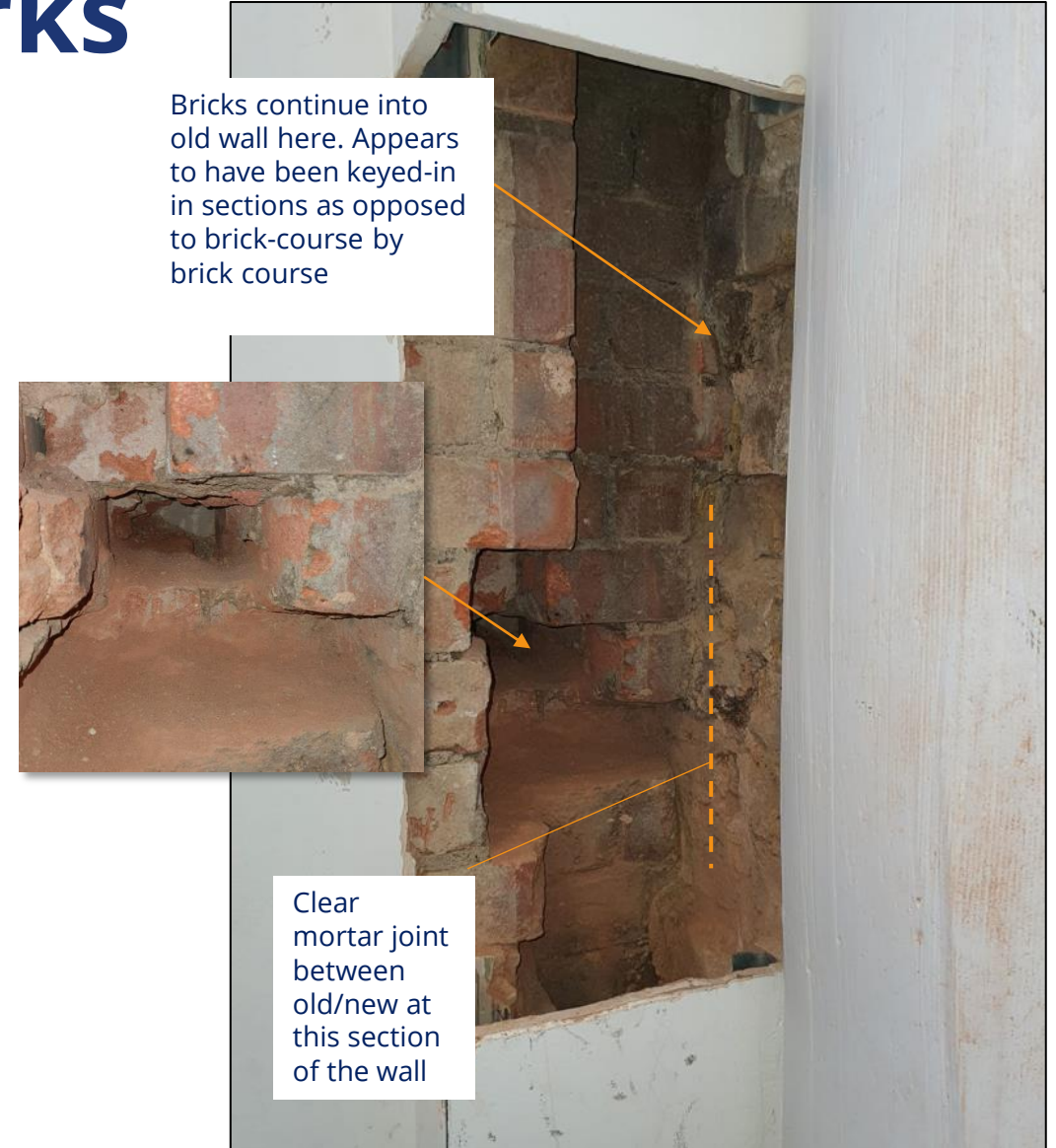
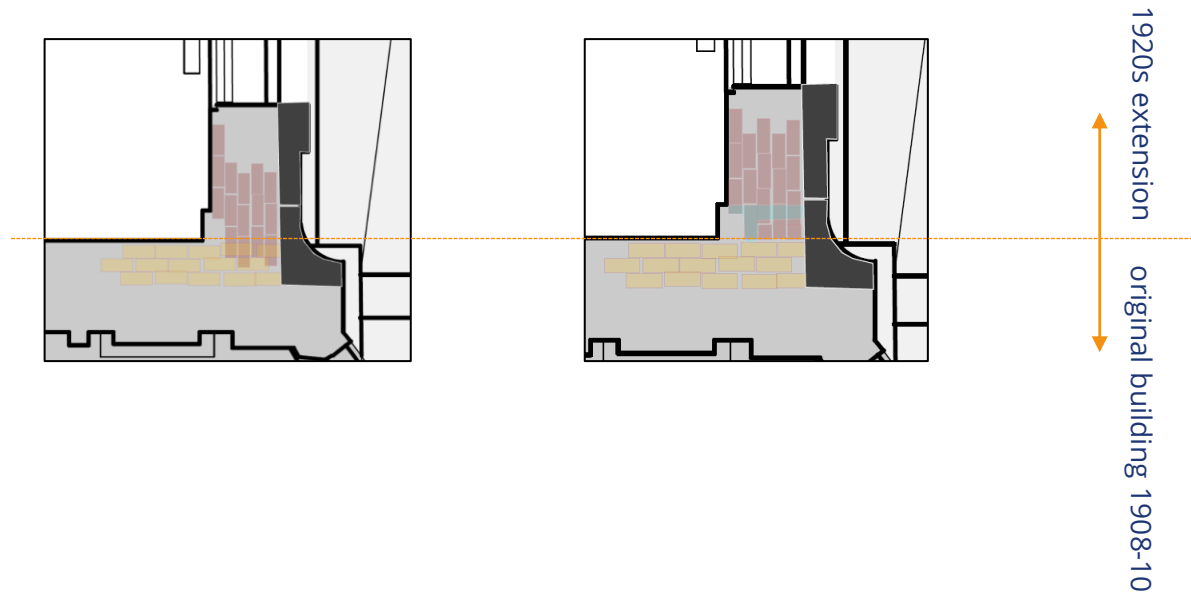


'No. 30 Euston Square and attached railings (formerly 1-9 Melton Street)' - RCGP

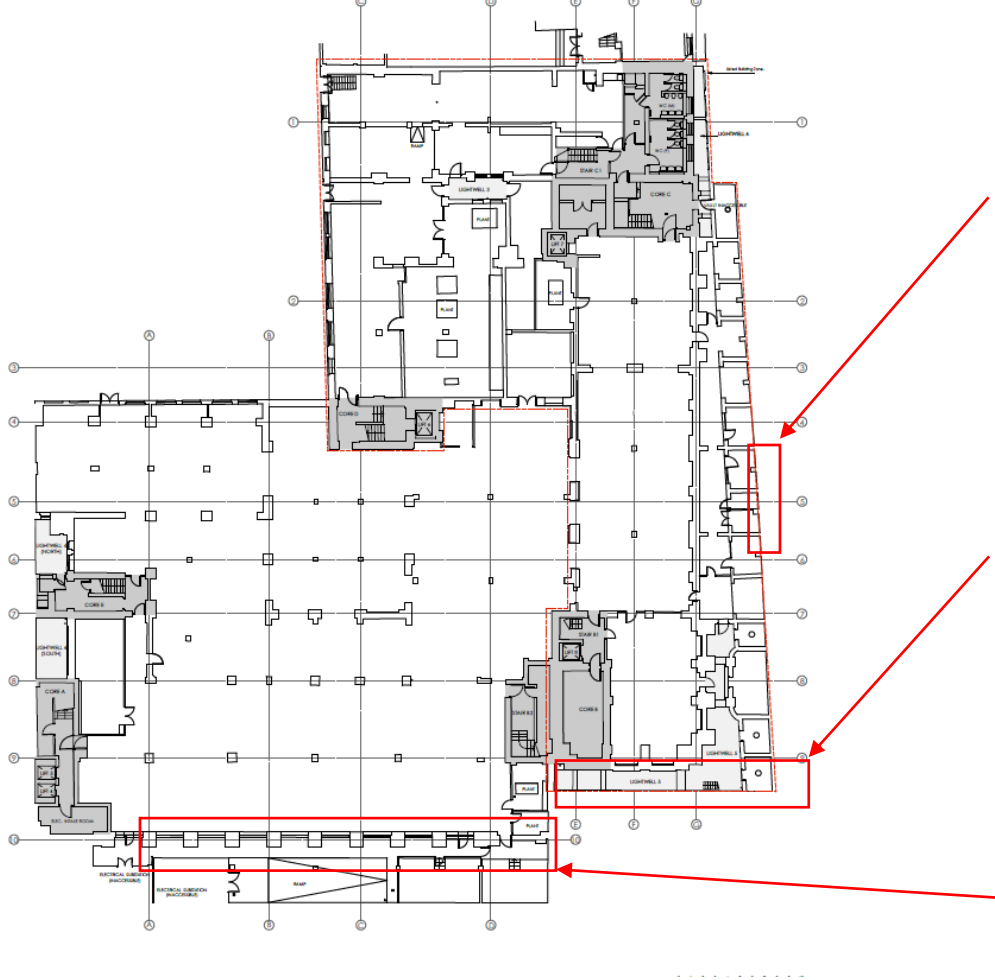


RCGP - brick removal works

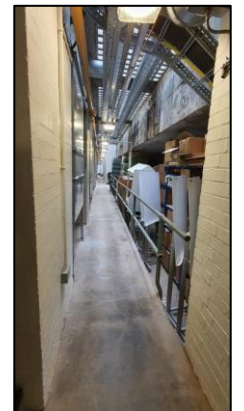
- Survey in September found no asbestos
- Brick removal carried out
- Two phases of construction are intermittently 'keyed-in'
- Removed brick disintegrated: to be sympathetically replaced



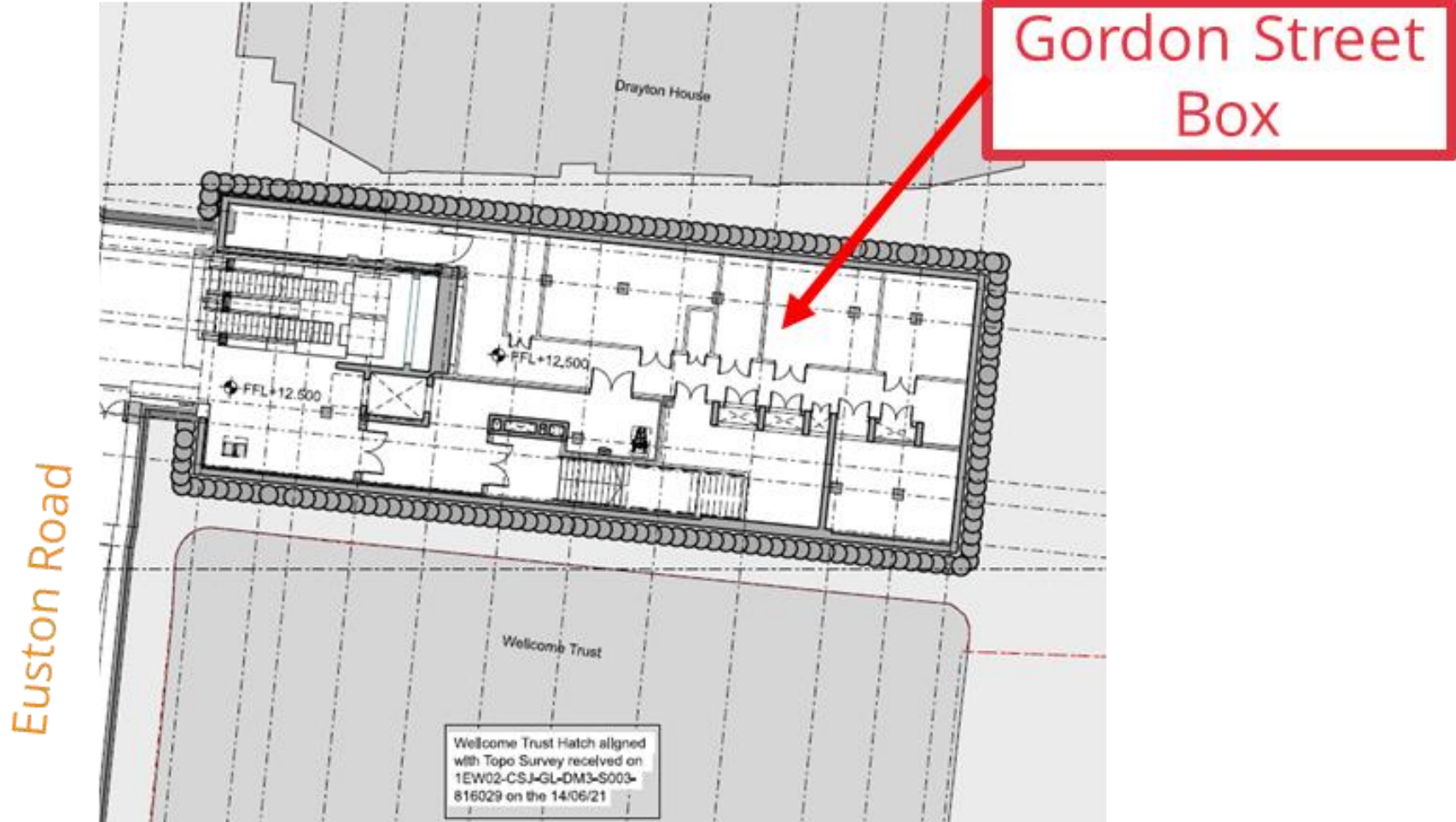
RCGP - basement coring investigations



- Location 1 – 4 horizontal & 6 angled cores investigating wall & footing thickness of the basement vaults along Melton St near the proposed location of a manhole
- Location 2 – Coring to inform design of micro-pile protection barrier: 5 horizontal cores through lightwell wall & 6 vertical cores through slab to investigate footings
- Location 3 – Coring to inform design of micro-pile protection barrier: 9 vertical cores through slab to investigate footings



Gordon Street Box

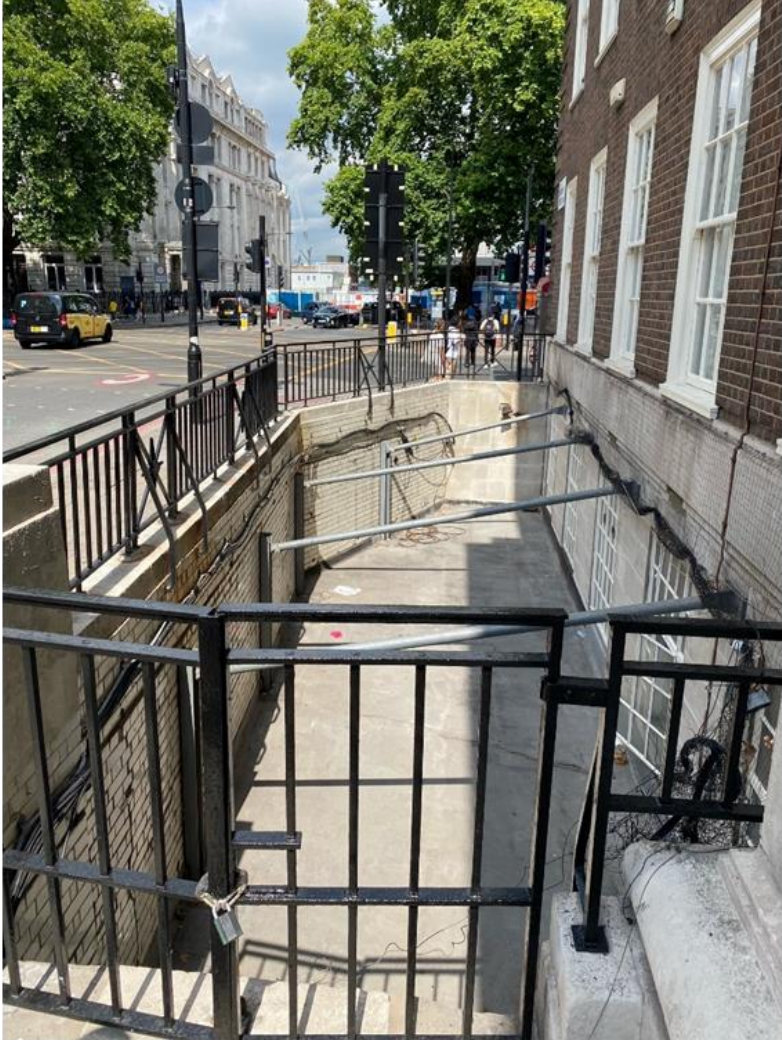


Gordon Street - Drayton House entrance



View looking East at Front entrance to Drayton House

Gordon Street - Drayton House lightwells



Euston Lodges

- I&M and structural assessment ongoing
- Anti-HS2 protest graffiti to be removed
- Pilot study complete: awaiting results before choosing best method



Euston Interim Bus Station



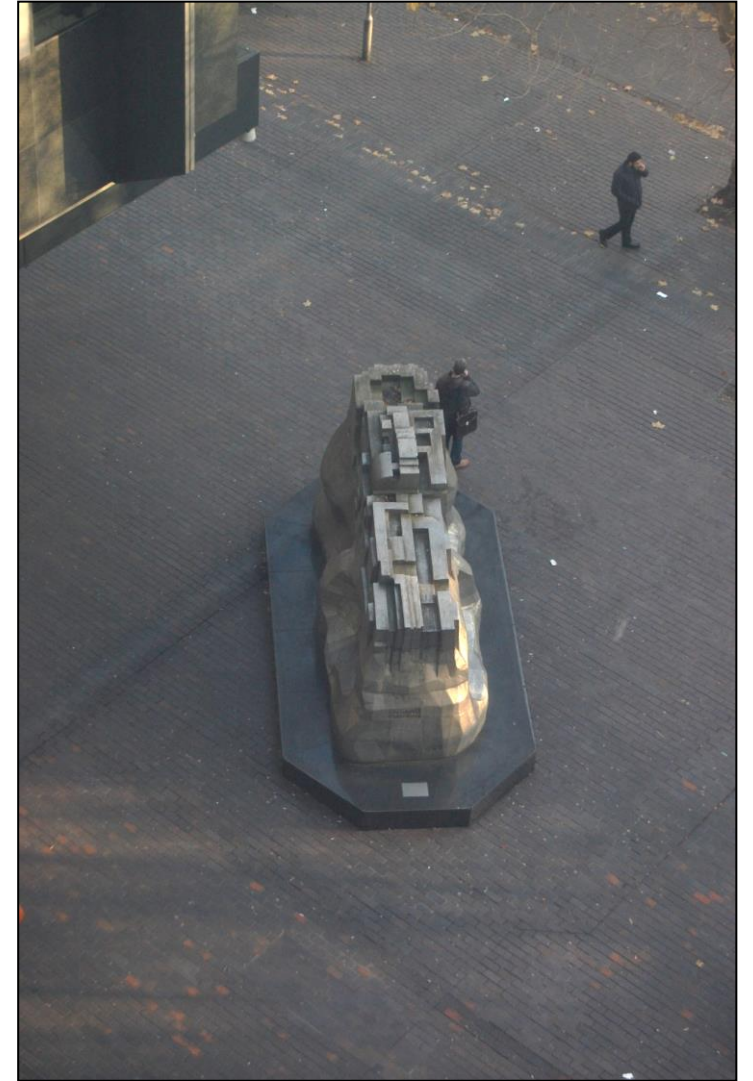
Stephenson Statue – loan to Shildon Museum

- Statue has been dismantled and stored
- Network Rail (owner) to loan it to the Science Museum Group for temporary display
- HS2 are facilitating
- Schedule 18 application required



Paolozzi's Piscatore sculpture

- Currently held in storage by Arts Council England
- Permanent location in HS2 still being considered

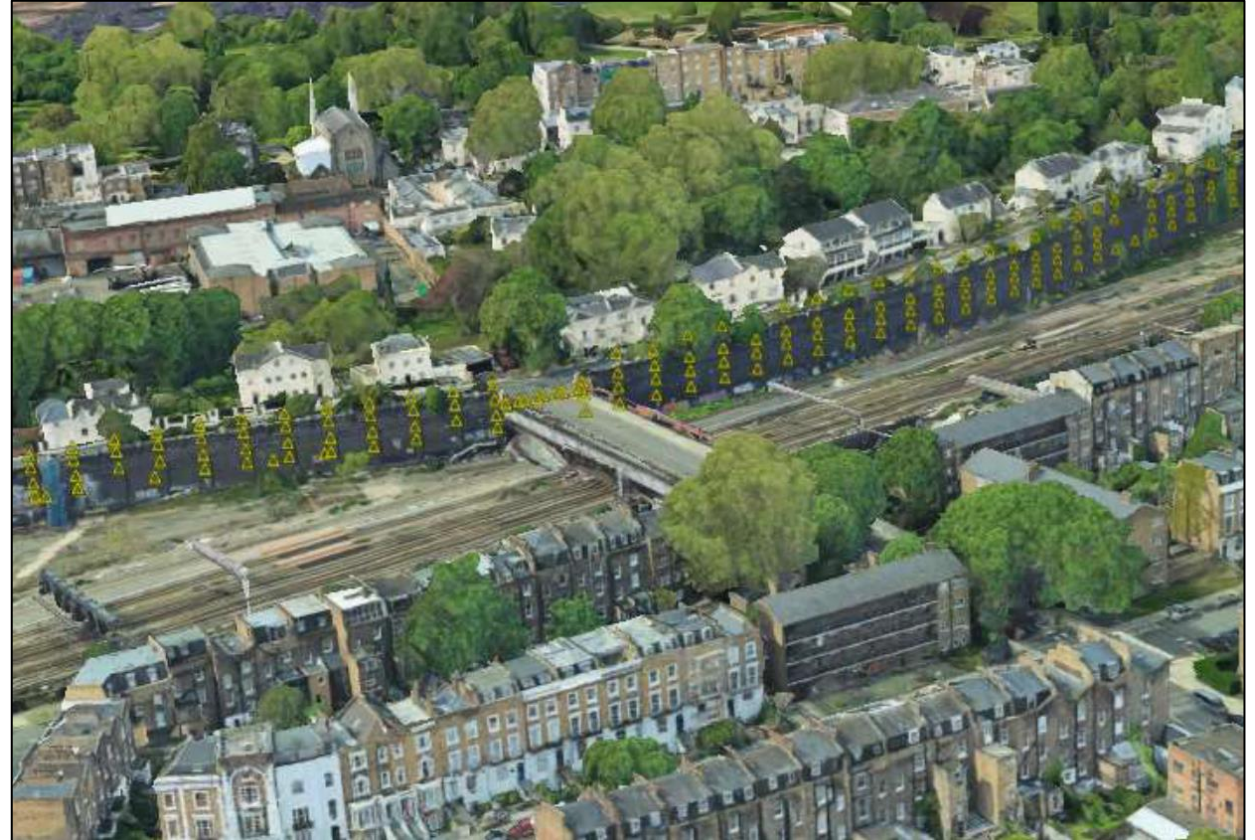


West Ruislip Golf Course soil treatment area



Schedule 18 Table 2 structural mitigation preparations

- 22 Park Village East
 - 1 Park Village East
 - York & Albany Hotel
 - Edinboro Castle PH & 58 Mornington Terrace
 - 119-125 Parkway
 - Regent's Park Barracks
 - Camden Winding Engine
-
- Also, Mornington Street Bridge (locally listed)



York & Albany Hotel – investigation & design

- Ground Movement Assessment and Structural Appraisal
- Internal investigations (opening up)
- Drainage survey
- GMA refinement/mitigation design



119-125 Parkway - investigation & design

- Ground Movement Assessment
- Work to inform design:
 - Laser measurement & topographical surveys carried out
 - GMA is being refined
 - CCTV survey of drains planned



Mornington Street Bridge

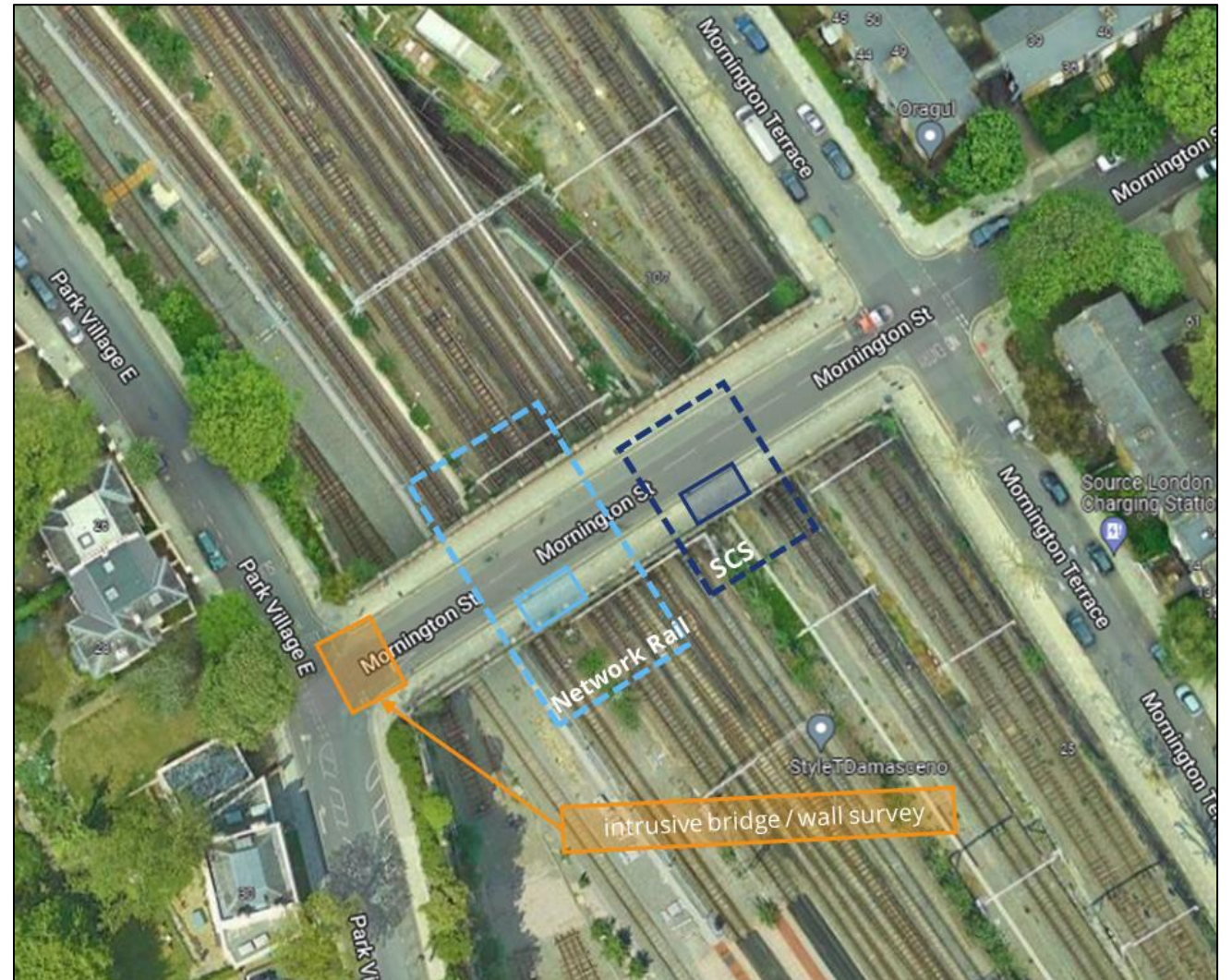
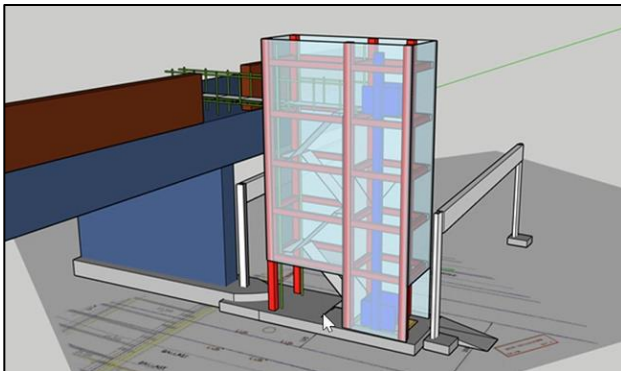


Mornington Street Bridge

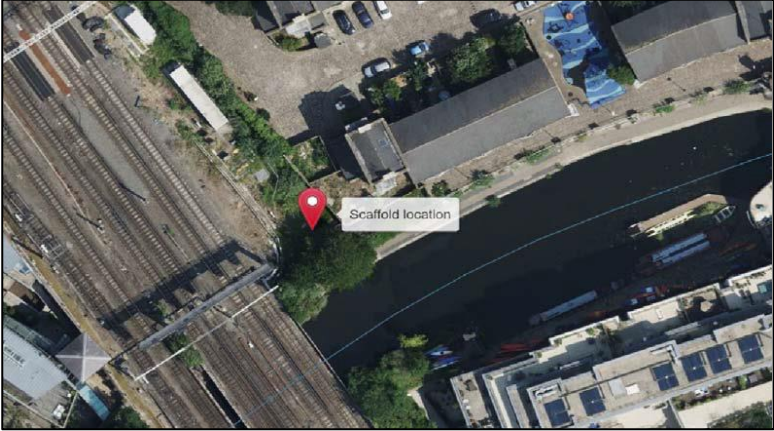
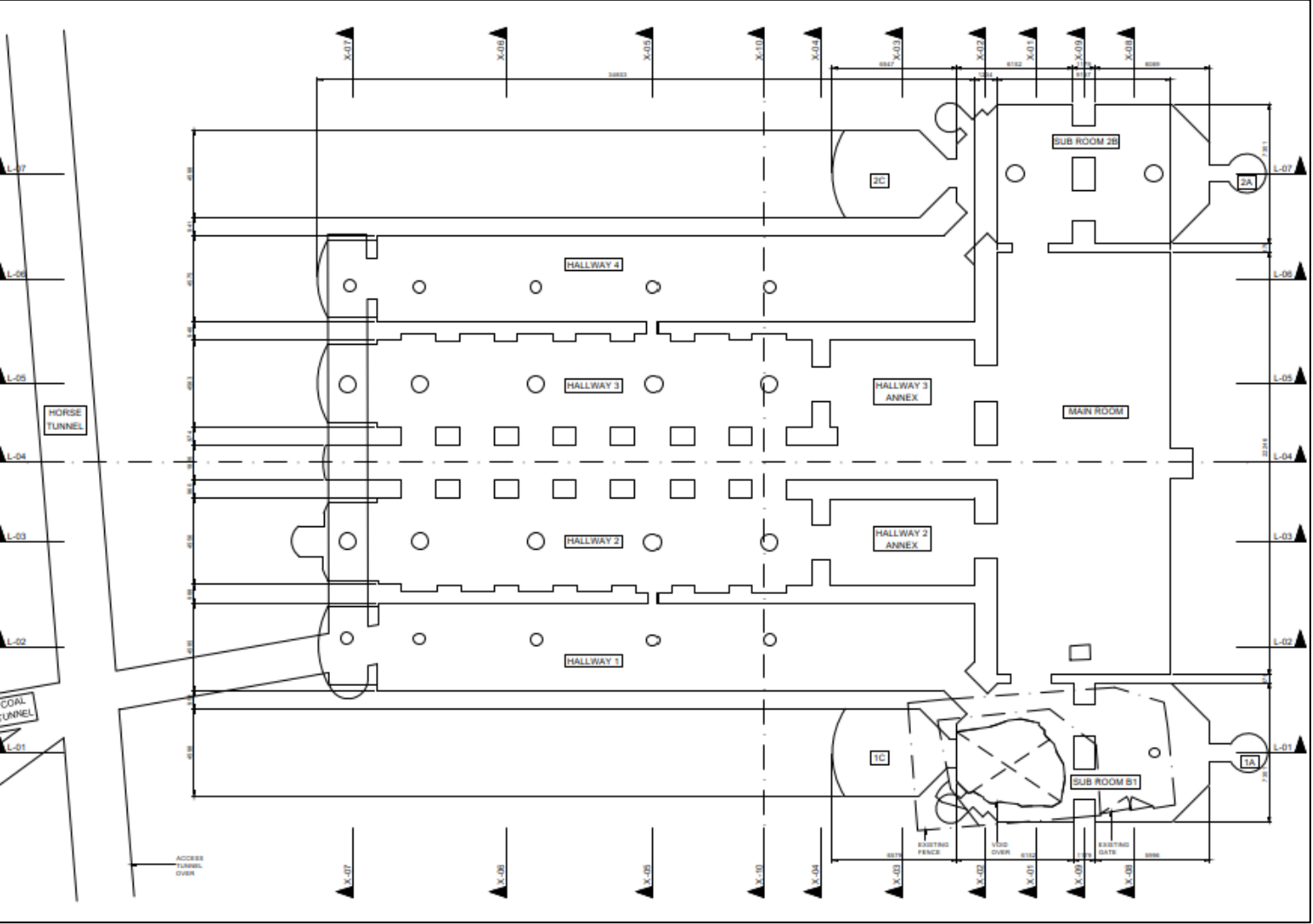
- Intrusive bridge / wall survey



- Access design



Camden Incline Winding Engine Vaults



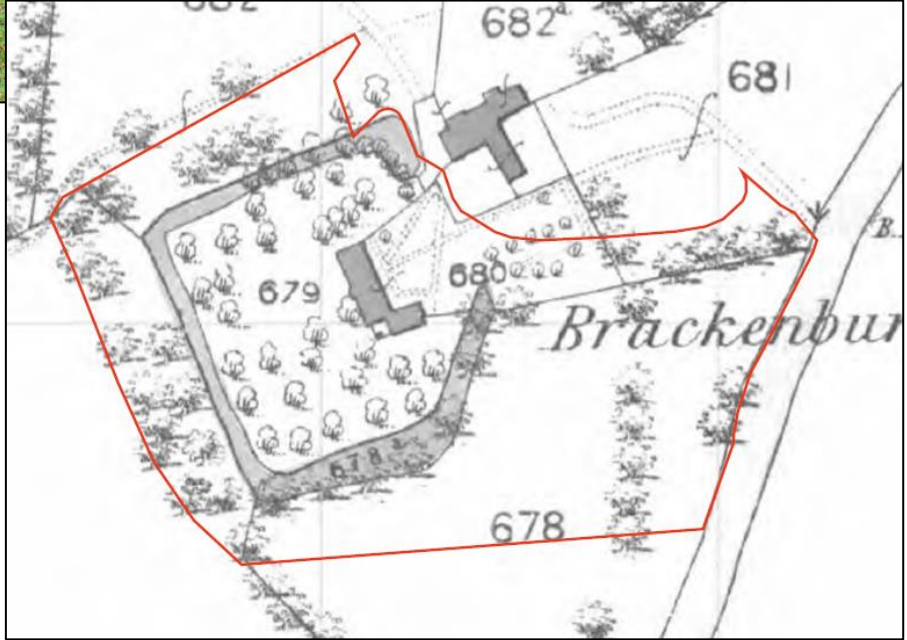
Kensal Green cemetery



- Asset protection implementation delivery plan in preparation
- Monuments considered as types rather than individually



Brackenbury House, Ickenham



HS2

Area North Update

Enabling Works – LM-JV



LM-JV: Coleshill Farmhouse





Coleshill



LM-JV: Coleshill moated site



LM-JV: South of Birmingham Road



view of Romano-British kiln 396216, view from north-west,



Detail view of hobnail impressions on tiles used in construction of Romano-British kiln 396216, view from north-east, 0.2 m scale



View of flue wall 396210 construction, view from north-west 0.5



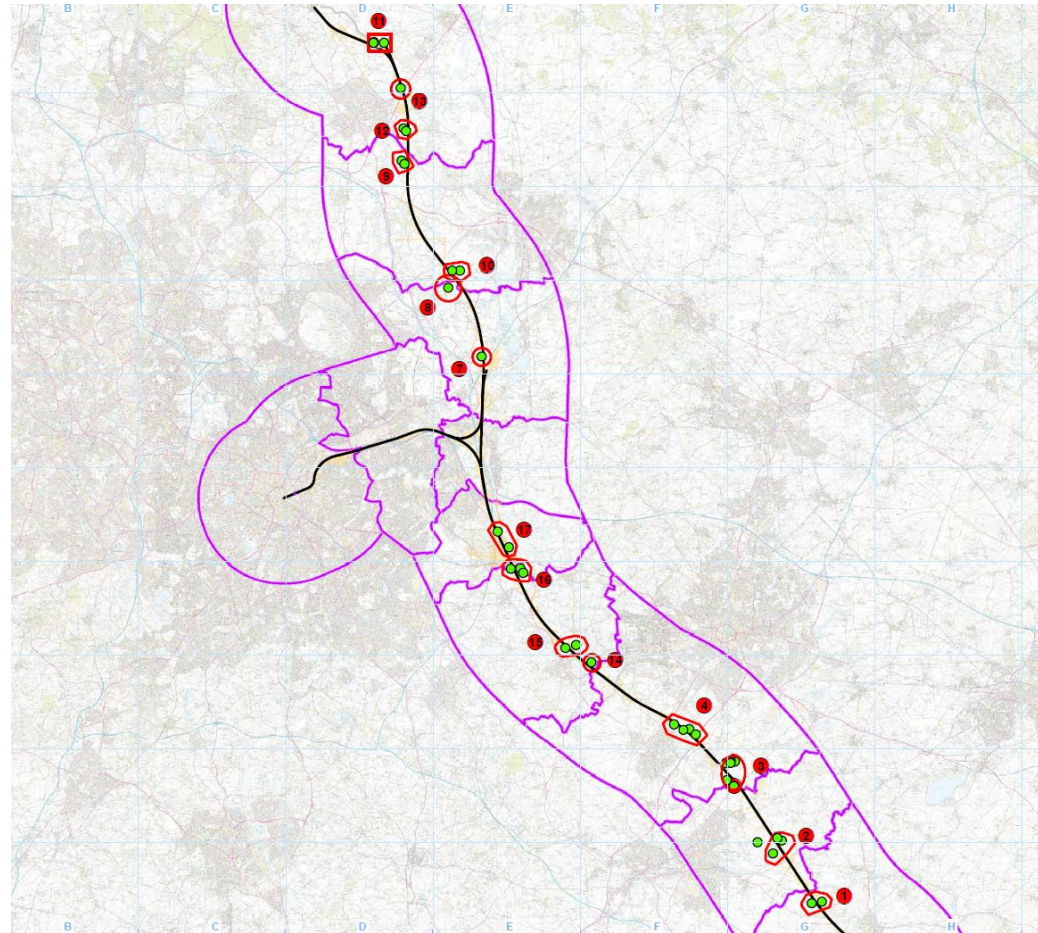
LM-JV: South of Birmingham Road

Plate 13: Stone building 2279 and ditch 2713, view from south, 2 x 1 m scales

Drayton Bassett



Setting Recording Project: Curzon Street and Rural landscapes



Main Works – BBV



Demolition Integrated Recording



Packington Moor Farm



Fields Cottage



2023 BBV look ahead

Geoarchaeology
Scope

Works outside of
Act Limits

Built Heritage
and Demolition
Integrated
recording

Design and
construction
considerations



HS2

Area Central update

A time of transition

From enabling works to construction

From fieldwork to post-excavation assessment

From pre-construction archaeological recording to construction-integrated-recording

From Fusion to EKFB

Final Fusion archaeological recording

Completed May 2022

128 mitigation areas

120 hectares

Wormleighton

Blackgrounds

Greatworth

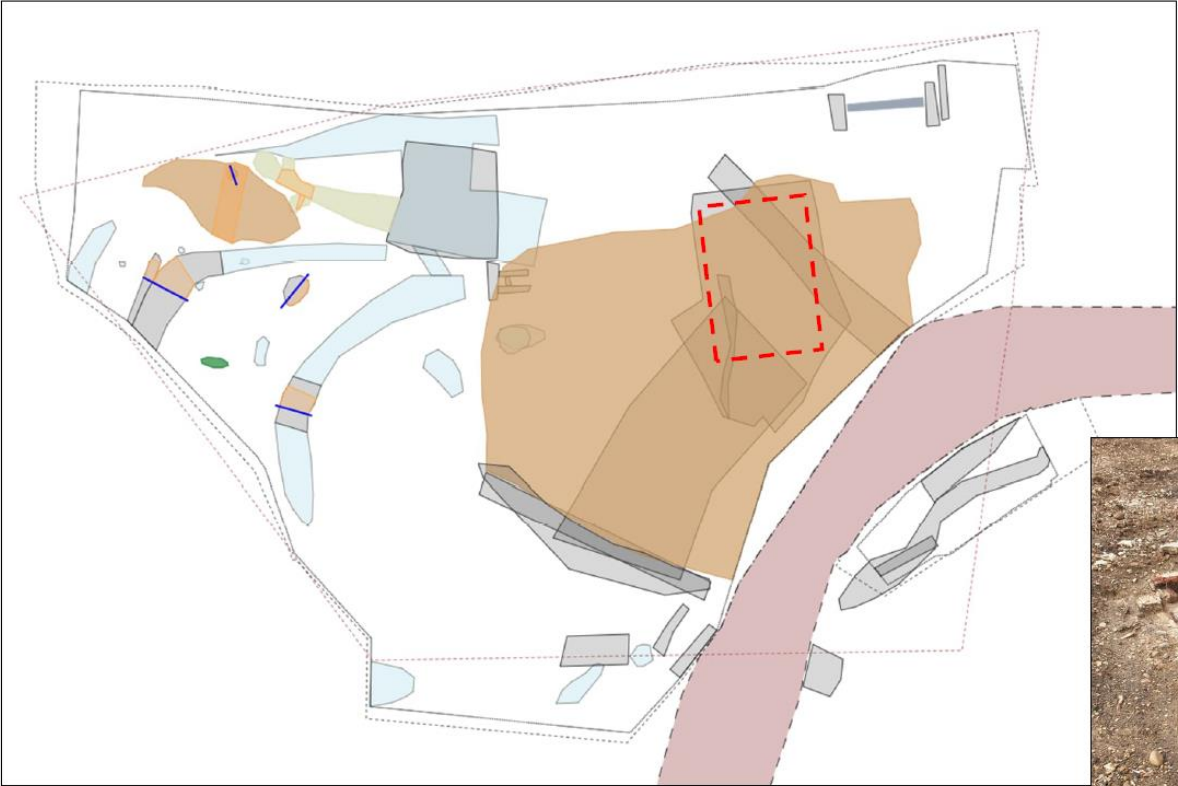
Sedrup Farm

New Years Green Bourne



Fusion CIR -completed July 2022

C25147 Chetwode Mill



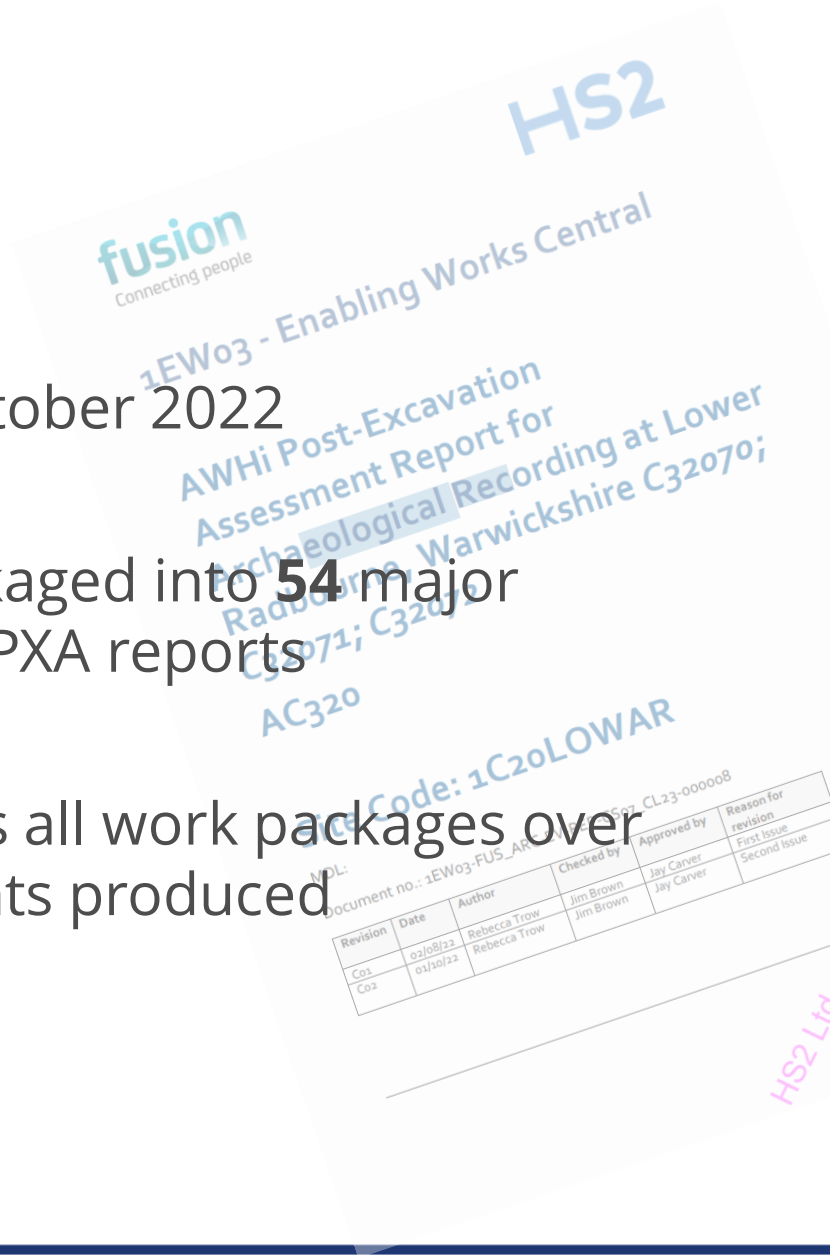
PXA

FUSION

Completed October 2022

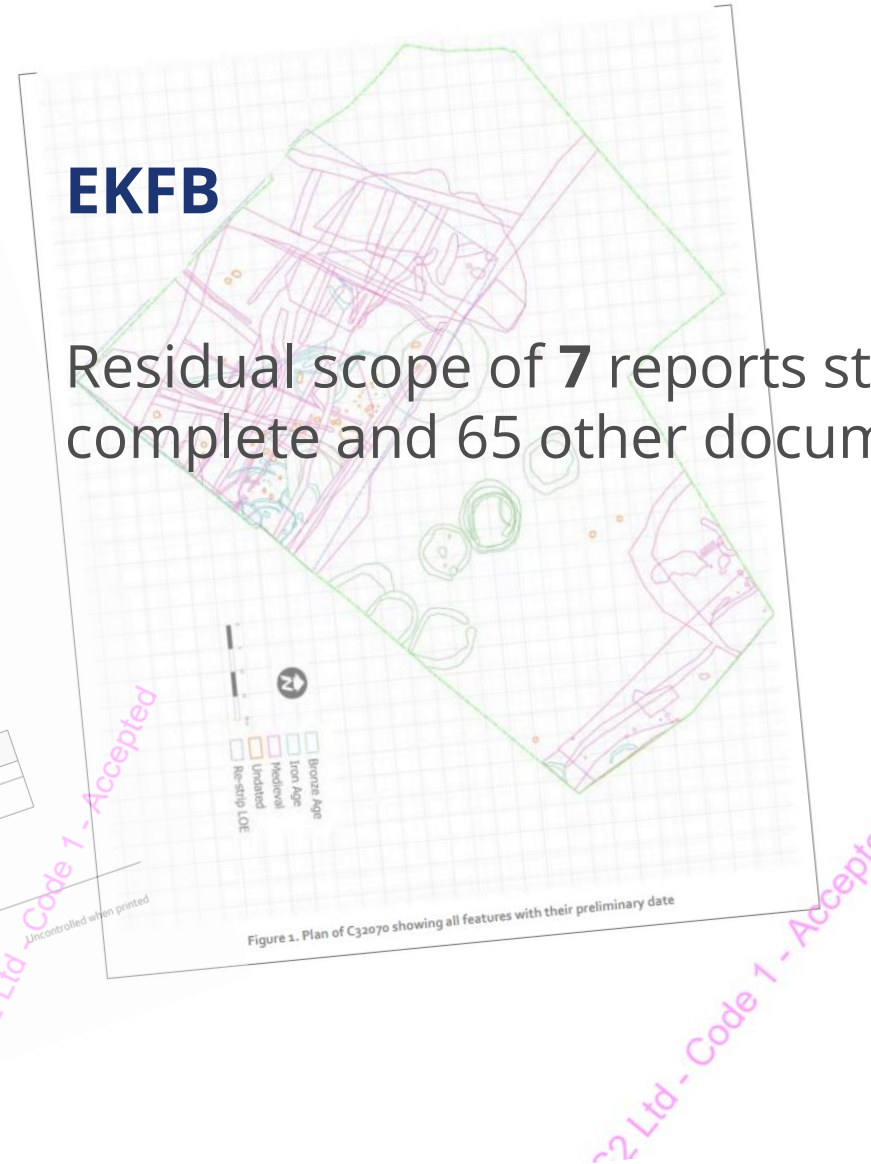
128 areas packaged into **54** major fieldwork and PXA reports

Overall –across all work packages over 6000 documents produced



EKFB

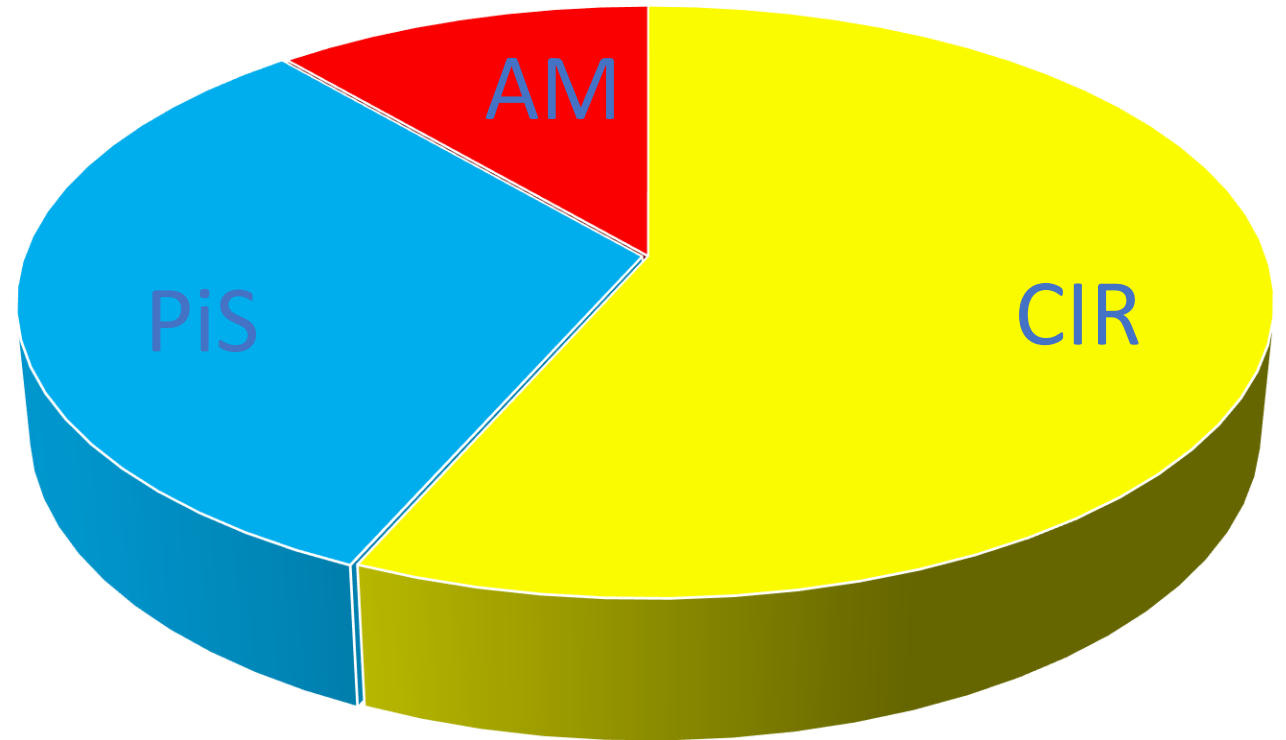
Residual scope of **7** reports still to complete and 65 other documents



Main works (EKFB) fieldwork

	53 Sites
CIR (construction integrated Recording)	30
PIS (Preservation -in-situ)	17
AM (archaeological Monitoring)	6

HERDS Archaeology Scope Breakdown

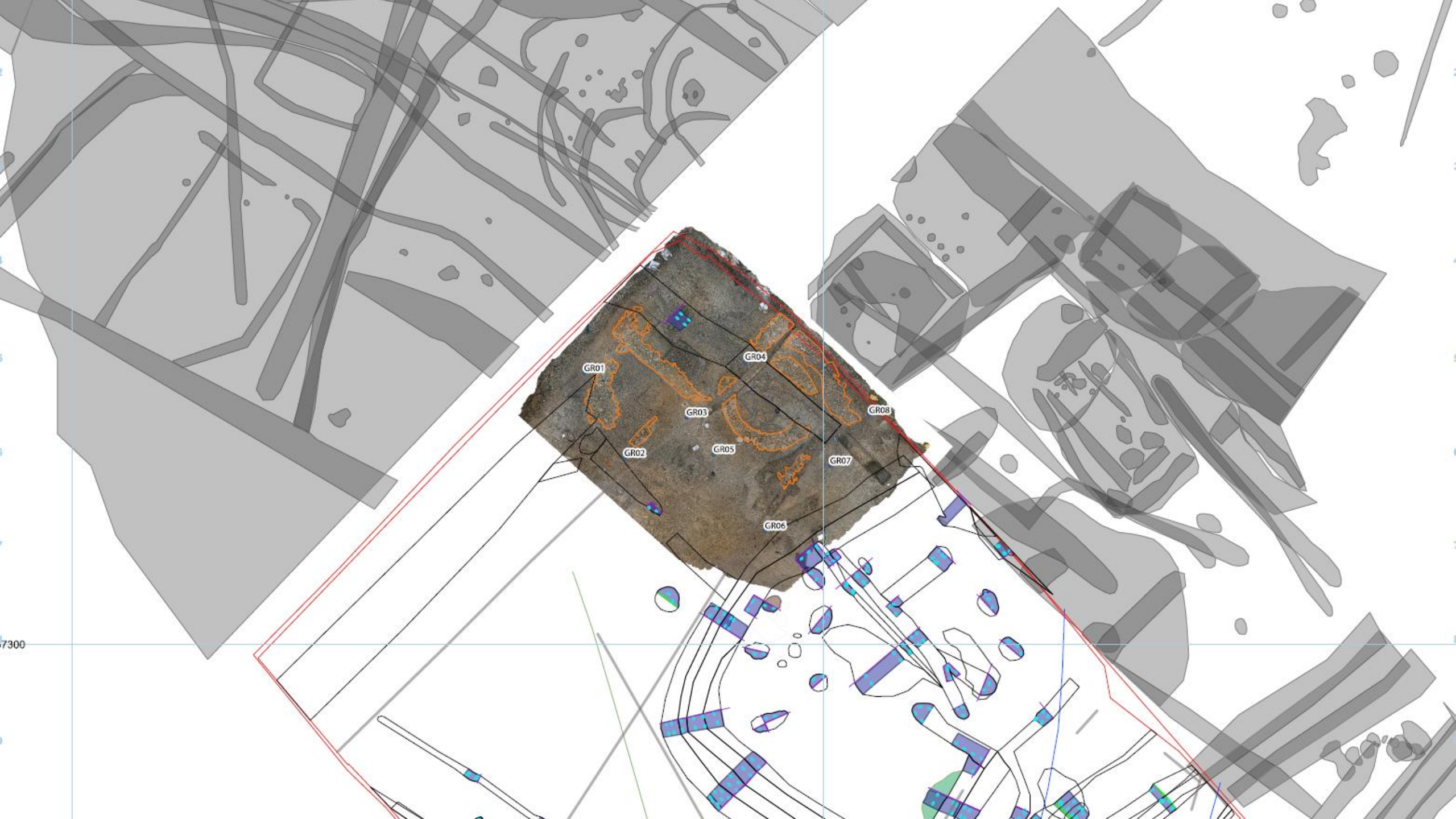




Red and white safety sign with a warning symbol and text in a non-English language.

Logo for HILAND PRODUCTS, featuring a stylized 'H' and the company name.

White rectangular marker or sign with handwritten numbers '30' and '31' and some illegible text.





22.2 m



Things to look out for in 2023

The completion of the main PXA reports –June?

The completion of EKFB construction integrated recording –August?

Start of reporting

Final agreement of the scope and scale of preservation and recording works at Grims Ditch (for 2024)

Clarity on longer term preservation at Wormleighton, Blackgrounds/Edgecot, Radbourne, etc
