

British Museum, Archaeological Research Centre, Second Access

Transport Report

1.0 Introduction

The British Museum's Archaeological Research Centre (BM ARC) is located in Shinfield, south of Reading, in the Borough of Wokingham. A planning application is now being made for a second vehicular access to the site. This would be located at the north of the site, and link to the Natural History Museum (NHM) Access Road, which is being separately constructed by the University of Reading (UoR).

This Transport Report has been prepared by Alan Baxter Limited (ABA) to support the planning application. It provides an overview of the existing conditions, the transport elements of proposals, and provides swept path analysis and other information.

2.0 Site History

The BM ARC site is immediately to the east of the University of Reading's Thames Valley Science Park, and Shinfield Studios. The site is located ~250m south of the M4, although access to it is almost 3km to the west via local roads. The BM ARC facility was given hybrid planning permission in 2019 (ref: 182059), and the first phase opened in 2024. The first phase consists of a ~15,500sqm research and storage facility, along with surface parking, landscaping, and drainage features. Members of the public can visit only by appointment.



Figure 2-1 Site Location

The site currently has one vehicular access. This is a priority junction with Cutbrush Lane East, and it is located at the northwest corner of the BM ARC site. This is gated, and vehicles that enter continue to the site's internal road network and surface parking areas. A number of drawings regarding the existing conditions, including planning drawings, a construction drawing of the pavements and kerbs, and a topographical survey, are contained in **Appendix A**.

The BM ARC has outline planning permission for a second phase, for a further ~15,000sqm of storage space. This would be an extension to the south of the Phase 1 buildings, and be accessed via the site's internal road network.

In 2022, a planning application was made for a second vehicular access, to be located ~30m to the north of the first access. The need for the second access would be due to the increase in vehicular trips following the completion of the second phase of development. As set out in the Transport Assessment in the original planning application, the completion of Phase 2 would result in a 26% increase in vehicular movements. However, this second access was not delivered.

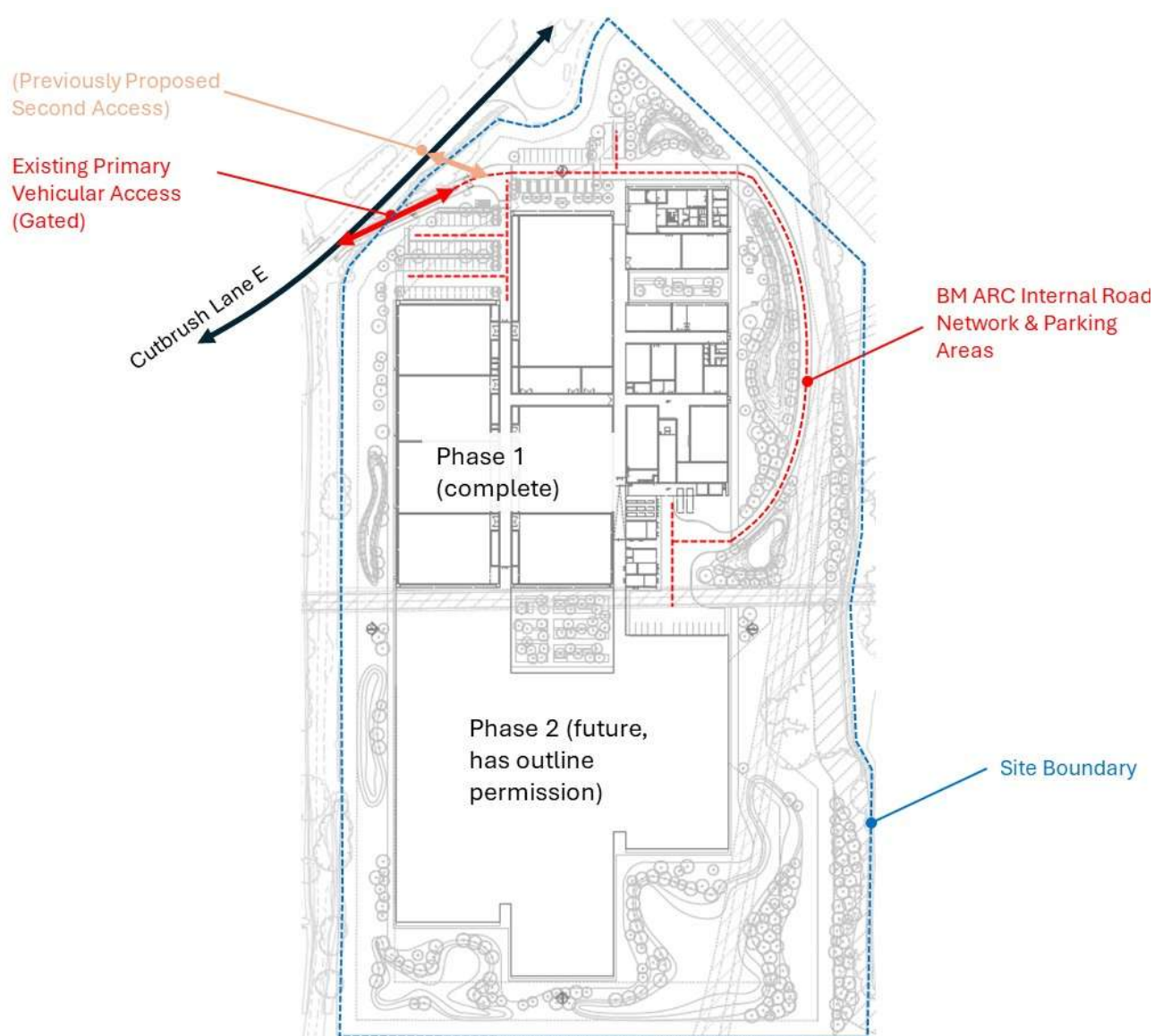


Figure 2-2 Existing Vehicular Access

Subsequent to this, proposals have come forward for a new highway link in the area. This is known as the NHM Access Road, and it is being delivered separately by the UoR to link Cutbrush Lane East to a new building proposed by the Natural History Museum (Planning ref: 232995). As this new highway will pass by the north of the BM ARC site, there is the opportunity to use this for the BM ARC's second access instead of the 2022 proposal.

The NHM Access Road is being designed to include a priority junction, located to the north of the BM ARC site, to accommodate a second access for BM ARC. The intention is that the NHM Access Road will be constructed during 2025, and will subsequently be adopted as public highway. A summary is shown below, with further drawings in **Appendix B**.

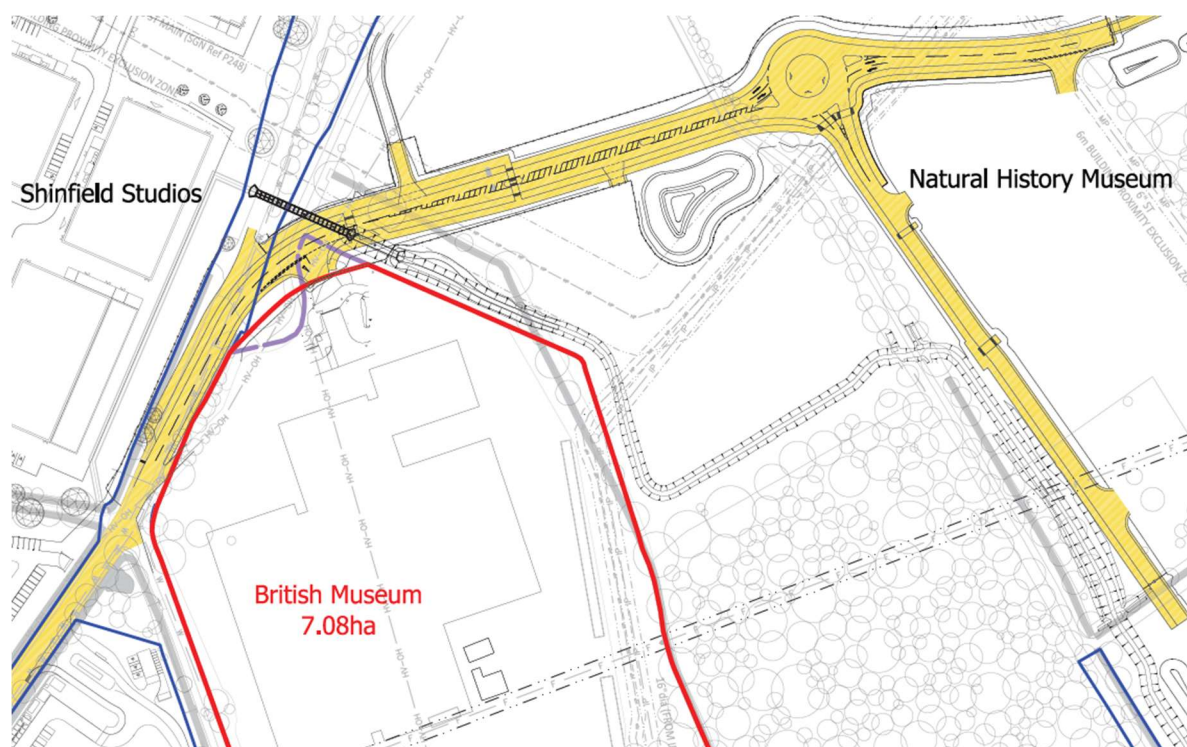


Figure 2-3 NHM Access Road

3.0 Proposals

3.1 Summary

As part of the NHM Access Road proposals, the priority junction located to the north of the BM ARC site has been oriented in plan so that it will be immediately to the north of two coach parking spaces. The proposals for the second access to the BM ARC site are to retrofit the coach parking as carriageway, and then link this with the priority junction to form a vehicular access. This access would be entirely within private land, and so the interface with the future adopted highway would be at the interface with the NHM Access Road. A gate will be provided in the second access, within the BM ARC site. The location of the gate would provide room for one HGV to wait, before entering the site.

As set out in the original Transport Assessment for BM ARC, vehicle numbers are projected to be low. When Phase 2 is completed there are expected to be a daily total of 77 staff trips, 80 visitor trips, and 22 servicing trips. Furthermore, the majority of this is from Phase 1, with the addition of Phase 2 being a 26% increase in the number of total vehicles. With a maximum of two HGVs arriving or departing the site in a peak hour period, this is expected to be easily managed via both vehicle accesses and associated gates.

As the second access would not be particularly well used, it is not deemed that a footway would be necessary. This is consistent with the previous 2022 planning application for a second access.

The proposals would involve rebuilding the existing coach parking area in terms of vertical alignment, and forming a new short length of sloped road in order to meet the priority junction of the NHM Access Road (see following section).

Various proposal drawings are available in **Appendix C**, and the proposals are summarised in the figure below:

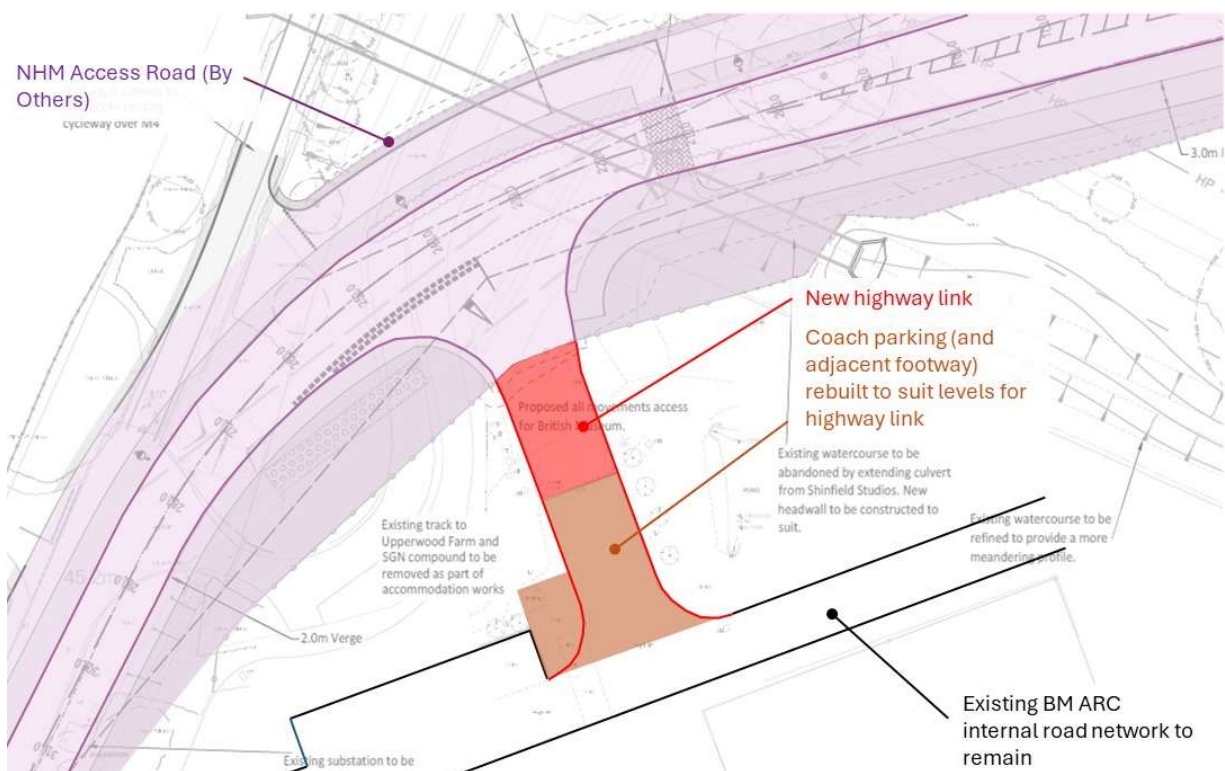


Figure 3-1 Second Access Summary

3.2 Horizontal Alignment

Swept path analysis for the second access has been provided for a 16.5m articulated vehicle, a 12m rigid truck, and a 11.4m refuse vehicle. On the NHM Access Road (i.e. public highway), swept path analysis was provided as part of the road's planning application. This is shown on drawings A392-IV1-004 through to 006 in **Appendix D**. Once within the BM ARC site, there is a priority junction of the second access with the rest of the internal road network. Swept path analysis has been provided for vehicles making 90 degree turns at this junction, and this is shown on drawings 1910/911/100-102 in **Appendix D**. Here there is some sweep into opposing lanes as vehicles make turns, but this is deemed acceptable given the infrequent occurrence and can be managed. Swept paths for vehicles continuing to manoeuvre within the BM ARC's internal road network had been set out in the site's original Transport Assessment.

In terms of visibility splays, on the NHM Access Road, a junction visibility splay of 2.4m x 70m was provided as part of the road's planning application. This visibility splay is based on a 30mph speed limit on the access road, and DMRB guidance. This is shown on the NHM Access General Arrangement drawing HD065-101 in **Appendix B**, and drawing 1910/911/110 in **Appendix E**. Within the BM ARC site, the second access would have a priority junction with the internal road network. The BM ARC's internal roads are traffic calmed in nature, and with a 10mph speed assumed, a junction visibility splay of 2.4m x 11m is provided (based on the DfT's Manual for Streets). This is shown on drawing 1910/911/110 in **Appendix E**.

3.3 Vertical Alignment

As current constructed, the levels of the coach parking spaces fall towards the north. The priority junction that will be delivered as part of the NHM Access Road has levels which will fall towards the south. When linking these highways to create the second access to the BM ARC site, the vertical alignment would be rationalised, in keeping with typical highway crossfalls and longfalls and DMRB standards on vertical alignment transitions. It is proposed that the area of former coach parking would be reconstructed to suit this new vertical alignment. This also requires an area of adjacent footway to be reconstructed to new levels.

The proposed levels are shown on drawing 1910/911/010 in **Appendix C**, with sections further illustrating this on drawings 1910/911/050 & 051.

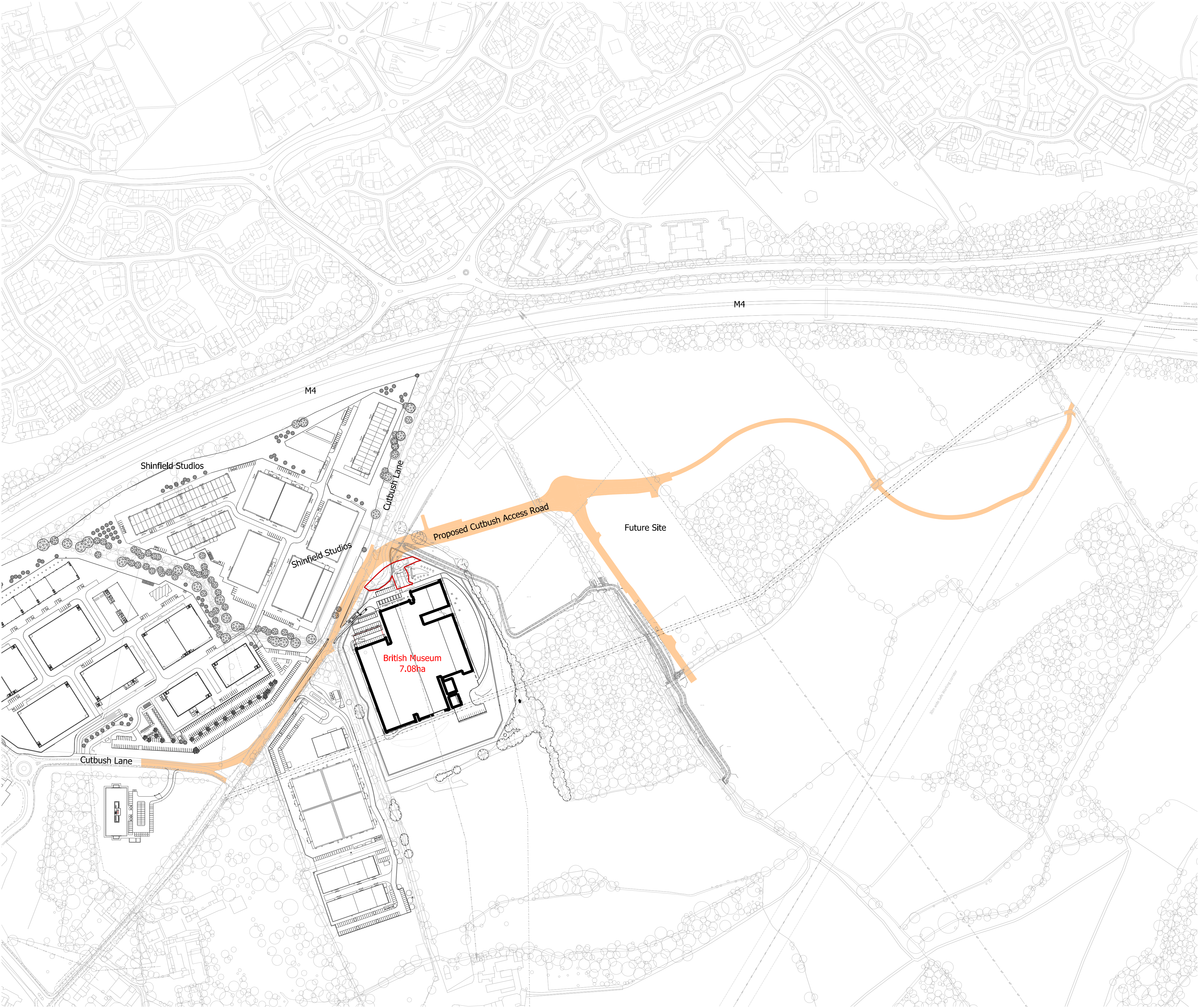
4.0 Conclusion

The proposed second access for the BM ARC would provide additional options for accessing the site and support increased vehicle movements resulting from a future Phase 2 development. Although vehicle numbers will be low, even with the delivery of Phase 2 of the site, it would provide alternatives if the primary access were to be blocked.

This Transport Report has summarised the existing conditions, the proposals for the NHM Access Road, and the proposals for the BM ARC second access. Details have been provided on vehicle usage, swept path analysis, visibility splays, and vertical alignment.

Appendix A

Existing Site Information



Project Logo

Notes
Do not scale from this drawing.
All dimensions are to be checked on site and any discrepancies noted in writing to the Project Manager.
All dimensions are in millimeters unless noted otherwise.

KEY

PATTERN / SYMBOL	DESCRIPTION
	PLANNING APPLICATION BOUNDARY
	APPROVED CUTBUSH ACCESS ROAD (Part of separate application reference 210295)

0	10/01/25	XX	AH	JMP
ISSUE	DATE	BY	CHKD	APPD

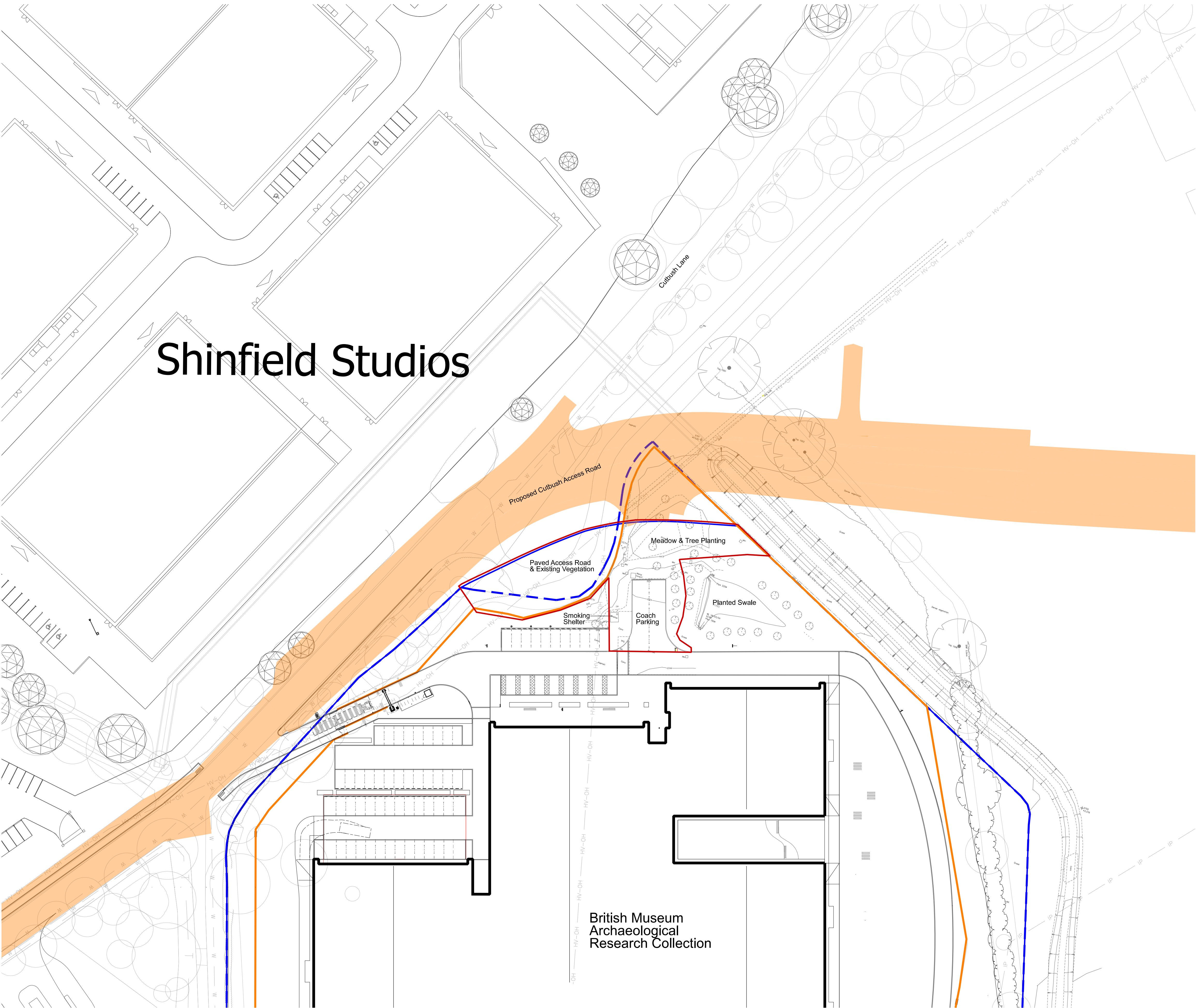
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- Landscape

Scale (m)

British Museum Archaeological Research Collection Second Entrance Location Plan - With Proposed Cutbush Access Road			
Scale At A1:	1:2500	Job Number:	2006.01
Date:	13/12/24	Drawing:	XX
Drawing Status:	FOR PLANNING	Checked:	AH
Drawing Number:	393293-JMP-XX-00-DR-L-P-5001	Revision:	0



Shinfield Studios

Proposed Cutbush Access Road

Paved Access Road & Existing Vegetation

Meadow & Tree Planting

Planted Swale

Smoking Shelter

Coach Parking

British Museum
Archaeological
Research Collection

Project Logo

Notes
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All dimensions are in millimeters unless noted otherwise.

KEY

PATTERN / SYMBOL	DESCRIPTION
	BM ARC SITE BOUNDARY
	PREVIOUS BM ARC SITE BOUNDARY (Prior to land swap)
	PLANNING APPLICATION BOUNDARY
	EXISTING SECURITY FENCE
	APPROVED CUTBUSH ACCESS ROAD (Part of separate application reference 232995)

0	10/01/25	XX	AH	JMP
ISSUE	DATE	BY	CHKD	APPD

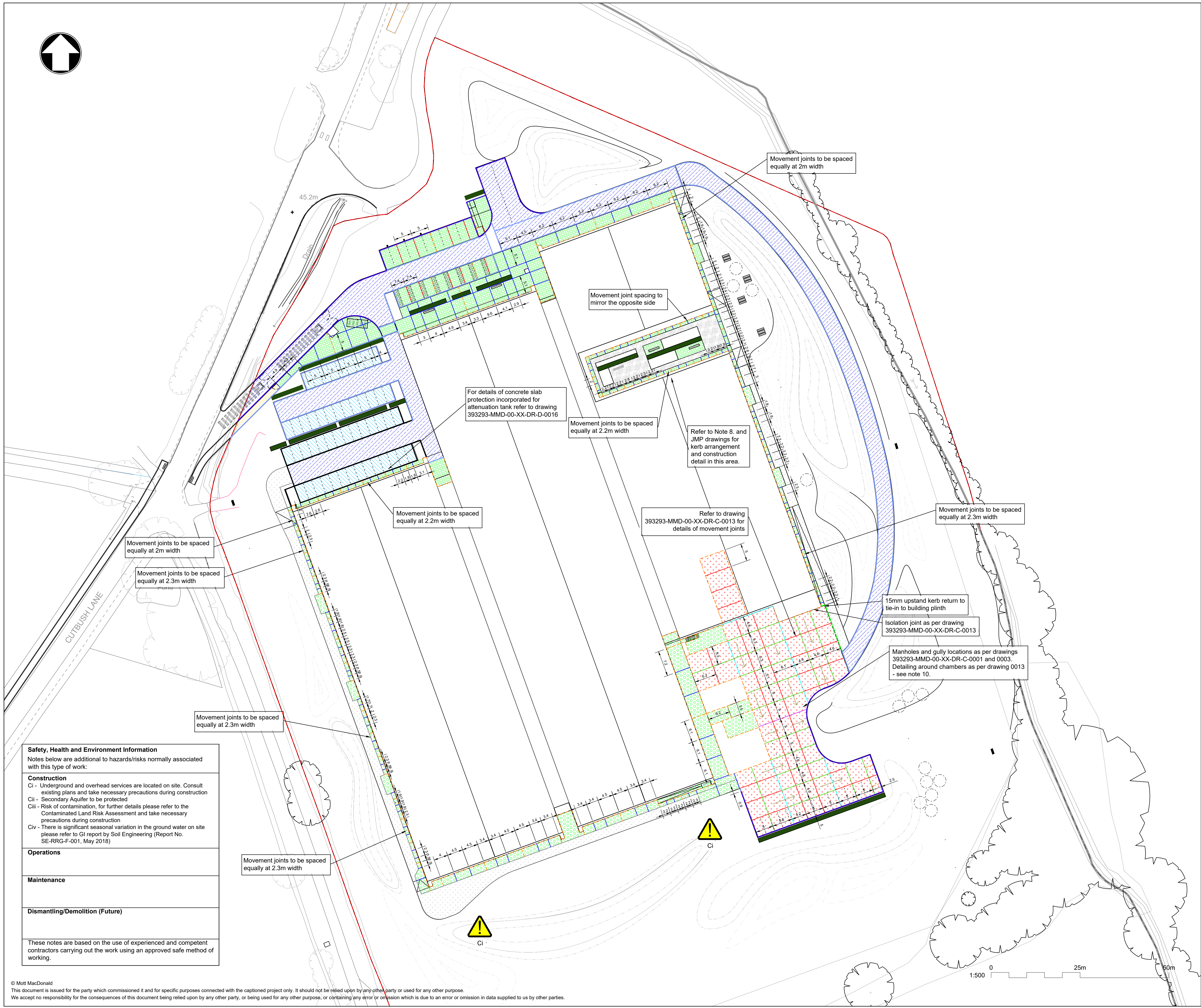
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☒ Architect
☒ Landscape

Scale (m)

British Museum Archaeological Research Collection
Second Entrance
Existing Site Plan

Scale At A1:	1:500	Job Number:	2006.01
Date:	13/12/24	Drawing:	XX
Drawing Status:	FOR PLANNING	Checked:	AH
Drawing Number:	393293-JMP-XX-00-DR-L-P-5002	Revision:	0



Notes below are additional to hazards/risks normally associated with this type of work:

Construction

Ci - Underground and overhead services are located on site. Consult existing plans and take necessary precautions during construction.

Civ - There is significant seasonal variation in the ground water on site. Please refer to GI report by Soil Engineering (Report No. SE-RFG-F-001, May 2018)

These notes are based on the use of experienced and competent contractors carrying out the work using an approved safe method of working.

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1. All dimensions are in metres unless specified otherwise
2. Do not scale from this drawing
3. Drawing to be read in conjunction with all Mott MacDonald scheme drawings
4. Road stud layout and spacing for car parking bays as per architects plans
5. All material within 450mm of the road surface should be non-frost susceptible.
6. CBR test to be undertaken at formation level at 20m spacing in works area
7. Sub grade to be prepared in accordance with the Specification for Highways Works.
8. For steel kerb edging extent and construction detail refer to JMP landscaping plans.
9. Layout based on Landscape drawing provided by John McAslan + Partners Architects. WIP drawings received 04/06/2020.
10. Manhole covers and gullies are to be isolated from surrounding concrete pavement with an isolation joint. Where manhole covers of gullies are not intersected by a movement joint, additional reinforcement is required to prevent localised cracking - refer to detail on drawing 393293-MMD-00-XX-DR-C-0013.
11. For further details of concrete surface finishing refer to John McAslan + Partners Architects drawing 323293-JMP-XX-00-DR-L-P-006 - Concrete Surface Layout

	Site Boundary	
	PT1 - Bituminous Full Depth Carriageway Construction	
	PT2 - Bituminous Construction	
	PT3 - Bituminous Footway Construction	
	PT5 - Netlon for Fire Tender Access	
	PT6 - Vehicular Concrete Pavement	
	PT7 - Pedestrian Concrete Pavement (for occasional fire tender overrun) Refer to Note 10.	
	PT8 - Decorative Loose Gravel as per Architects Specification	
	K2 Type Kerb	
	K3 Type Kerb	
	K5 Type Kerb	
	Road Studs	
	Isolation joint	
	Isolation joint with edge thickening	
	Formed Longitudinal Movement joint	
	Expansion Joint	
	Induced Contraction Joint (dowelled)	
	Induced Contraction Joint (not dowelled)	
	Bullnose kerb with 15mm upstand (to be installed within Netlon boundary adjacent to concrete surfacing)	
	Brushed direction of concrete finish	

- 393293-MMD-00-XX-DR-C-0012 - Pavement Detail Sheet 1
- 393293-MMD-00-XX-DR-C-0013 - Pavement Detail Sheet 2
- Landscape drawing provided by John McAslan + Partners Architects. WIP drawings 04/06/2020
- 323293-JMP-XX--00-DR-L-P-006 - Concrete Surface Layout
- 393293-MMD-00-XX-DR-C-0001 - Surface Water Layout
- 393293-MMD-00-XX-DR-C-0003 - Foul Water Layout

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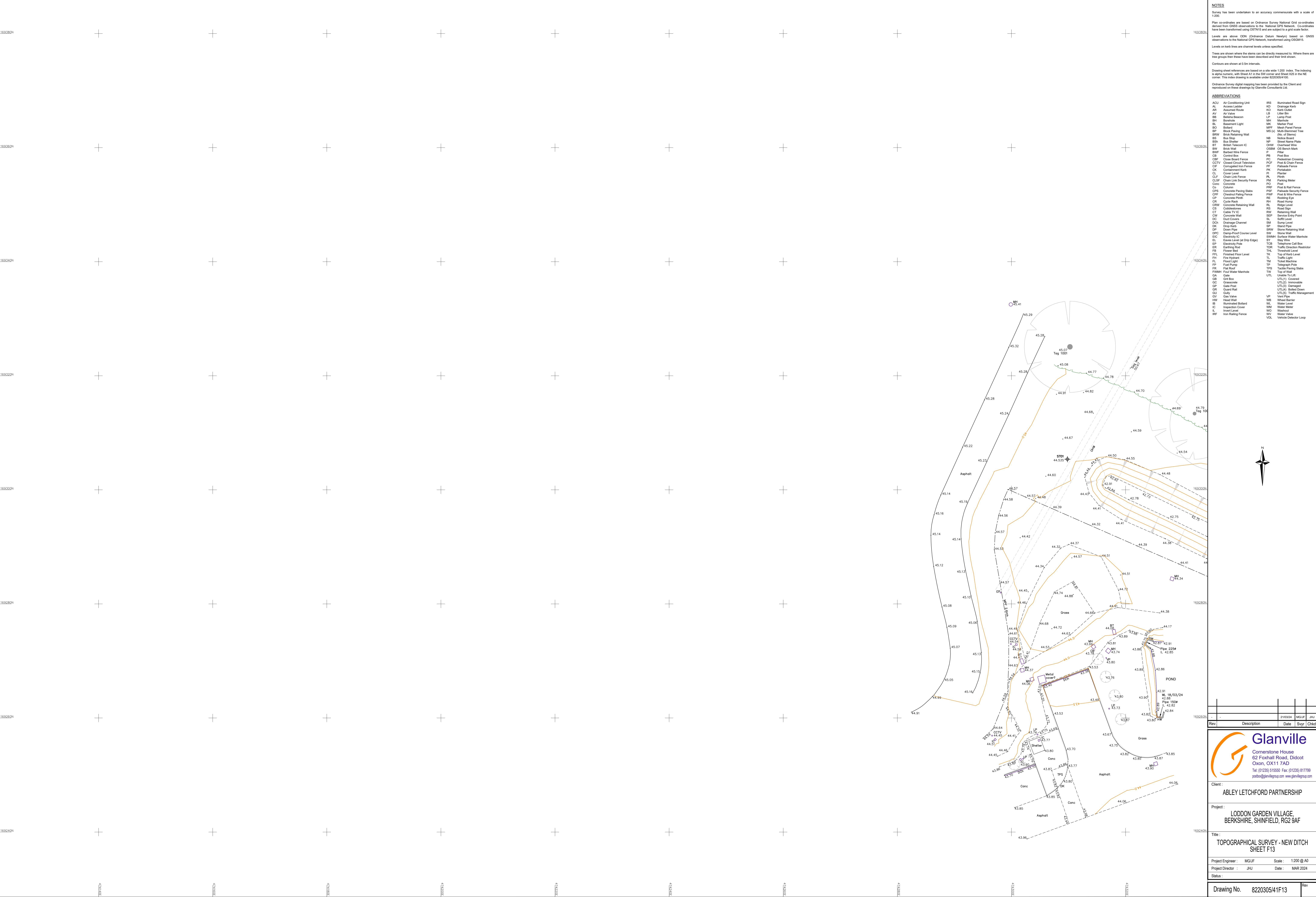
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British Museum

Title	British Museum ARC
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Pavement & Kerbs Layout

Drawing Number
393293-MMD-00-XX-DR-C-0005



NOTES

Survey has been undertaken to an accuracy commensurate with a scale of 1:200.

Plan co-ordinates are based on Ordnance Survey National Grid co-ordinates derived from GNSS observations to the National GPS Network. Co-ordinates have been transformed using OSTN15 and are subject to a grid scale factor.

Levels are above ODN (Ordnance Datum Mean) based on GNSS observations to the National GPS Network, transformed using OSGB15.

Levels on both lines are channel levels unless specified.

Trees are shown where the stems can be directly measured to. Where there are tree groups then these have been described and their limit shown.

Contours are shown at 0.2m intervals.

Drawing sheet references are based on a site wide 1:200 index. The indexing is alpha numeric, with Sheet A1 in the SW corner and Sheet X25 in the NE corner. This index drawing is available under E22030541F10.

Ordnance Survey digital mapping has been provided by the Client and reproduced on these drawings by Glanville Consultants Ltd.

ABBREVIATIONS

ACU	Air Conditioning Unit	IRS	Irrigated Road Sign
AL	Access Ladder	KD	Drainage Kiosk
AR	Assumed Route	KO	Kerb Outlet
AV	Air Valve	LS	Liter Box
BB	Balloon Beacon	LP	Lamp Post
BS	Bench	M	Manhole
BL	Basement Light	MP	Marker Post
BO	Bolt	MPF	Manhole Panel Fence
BP	Block Paving	MS (X)	Multi-Stemmed Tree (No. of Stems)
BSW	Brick Retaining Wall	NB	Notice Board
BS	Bus Stop	NF	Street Name Plate
BSB	Bus Shelter	OW	Overhead Wire
BT	British Telecom IC	OSM	OS Street Mark
BW	Brick Wall	P	Pillar
CB	Control Box	PS	Post Box
CBF	Close Board Fence	PC	Pedestrian Crossing
CCTV	Close Circuit Television	PCT	Post & Chain Fence
CF	Corrugated Iron Fence	PF	Palisade Fence
CL	Chain Link Fence	PK	Post
CLF	Chain Link Fence	PL	Plaster
CLSF	Chain Link Security Fence	PM	Post & Rail Fence
CL	Column	PO	Post
CPS	Concrete Parking Slabs	PSF	Palisade Security Fence
CPS	Concrete Parking Slabs	PWF	Post & Wire Fence
CP	Concrete Plinth	RE	Rodding Eye
CR	Crack	RH	Road Ramp
CRW	Concrete Retaining Wall	RL	Ridge Level
CS	Cable TV IC	RS	Road Sign
CT	Cable TV IC	RW	Retaining Wall
CW	Concrete Wall	SEP	Service Entry Point
DC	Dust Covers	SL	Soft Level
DCH	Drainage Channel	SM	Stump Level
DK	Drop Kerb	SP	Stand Pipe
DP	Down Pipe	SRW	Stone Retaining Wall
DPC	Damp-Proof Course Level	SW	Stone Wall
EC	Electricity C	SWM	Surface Water Manhole
EL	Eaves Level (at Drip Edge)	SY	Stay Wire
EP	Electricity Pole	TDB	Telephone Call Box
ER	Earthing Rod	TDR	Traffic Direction Restrictor
FB	Flower Bed	TL	Threshold Level
FFL	Finished Floor Level	TK	Top of Kerb Level
FL	Free Hydrant	TL	Traffic Light
FL	Flood Light	TM	Ticket Machine
FP	Fuel Pump	TP	Traffic Pole
FR	Flat Roof	TPS	Traffic Paving Slabs
FWM	Four Water Manhole	TW	Top of Wall
GA	Gale	UTL	Unleash To Lift
GB	Gill Box	UTL/C	Unleash To Lift / Covered
GC	Grazeable	UTL/D	Unleash To Lift / Damaged
GP	Gate Post	UTL/D	Unleash To Lift / Damaged
GR	Guard Rail	UTL/D	Unleash To Lift / Damaged
GV	Gas Valve	UTL/D	Unleash To Lift / Damaged
HW	Head Wall	UTL/D	Unleash To Lift / Damaged
IC	Inspection Cover	UTL/D	Unleash To Lift / Damaged
IRF	Iron Retaining Fence	UTL/D	Unleash To Lift / Damaged

Rev	Description	Date	Sgt	Chd
1		21/03/24	MGJ/F	JHU

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Project :
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Title:
**TOPOGRAPHICAL SURVEY - NEW DITCH
SHEET F13**

Project Engineer : MGJ/F Scale : 1:200 @ A0
Project Director : JHU Date : MAR 2024
Status :
Drawing No. 8220305/41F13 Rev

Appendix B

NHM Access Road Drawings