





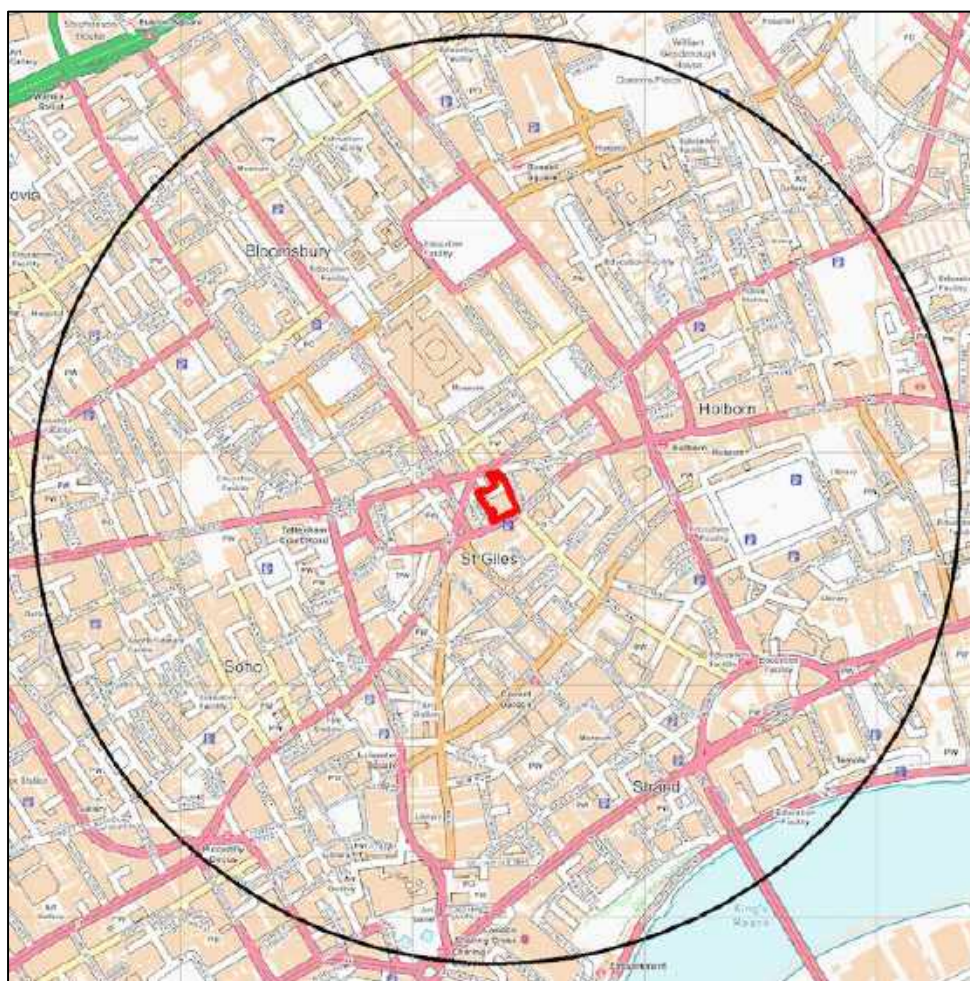






# PRELIMINARY UNEXPLODED ORDNANCE (UXO) THREAT ASSESSMENT

Meeting the requirements of *CIRIA C681* 'Unexploded Ordnance (UXO) – A guide for the Construction Industry' Risk Management Framework



<b>6 ALPHA PROJECT NUMBER</b>	P7366	<b>ORIGINATOR</b>	J. Webber
<b>LANDMARK ORDER NUMBER</b>	217730197_2	<b>REVIEWED BY</b>	S. Barratt (13 <sup>th</sup> September 2019)
<b>CLIENT REFERENCE</b>	1084	<b>RELEASED BY</b>	S. Barratt (13 <sup>th</sup> September 2019)
<b>STUDY SITE</b>	1 Museum Street & West Central Street, Holborn, London		
<b>RECOMMENDATION</b>	This Study Site requires a Detailed UXO Threat and Risk Assessment		



## STUDY SITE

The Study Site is described as “1 Museum Street & West Central Street, Holborn, London”, and it is centred on National Grid Reference 530180, 181400.

## THREAT POTENTIAL AND RECOMMENDATIONS

The potential for a UXO hazard to occur, and more specifically, the potential for unexploded WWI and WWII ordnance to exist at this site is assessed as being **LIKELY** (Figure 2).

In accordance with CIRIA C681 Chapter 5 on managing UXO risks, 6 Alpha recommends that the next stage in the risk management framework is:

### DETAILED UXO THREAT & RISK ASSESSMENT

We would be pleased to provide this service, please contact *Envirocheck* for further details:



## REPORT SUMMARY

During WWII, the Study Site was situated within *Holborn Metropolitan Borough*, which recorded 216 High Explosive (HE) bomb strikes per 100 hectares; a very high level of bombing.

*Luftwaffe* aerial reconnaissance photography associated with the Study Site identified a drainage system (on-site) and a command post (750m south-east) as a primary bombing target.

*Air Raid Precaution* (ARP) records identified one HE bomb strike on-site. Additionally, five HE's were identified within 60m; the closest being 15m south-east. Furthermore, a V1 rocket strike was identified 180m south-east and 44 Unexploded Bombs (UXBs) were recorded within 1,000m; the closest being 220m north of the Study Site boundary.

*London County Council* (LCC) bomb damage mapping recorded “serious damage; but repairable at cost” and “damage beyond repair” on-site. In addition, “serious damage; but repairable at cost” was identified 40m south-east and “clearance areas” 20m to the north and 30m to the north-east.

Given that both bombing and bomb damage were recorded on-site during WWII; it would suggest that further action is warranted to address the potential for UXO encounter.

## USING THIS REPORT

This Preliminary Assessment is designed to inform environmental and construction professionals of the potential threat of military related explosives and/or ordnance on, or in, the vicinity of the Study Site.

This assessment is designed to be employed as a site-screening tool to meet with the requirement of Phase One of the *CIRIA UXO Risk Management Framework*; there are two broad prospective outcomes; either the threat level requires a detailed threat & risk assessment; or no further action is required. In the former instance we can provide a report within 10 working days (or more quickly upon application).

Two figures accompany the report, the *Second World War* (WWII) High Explosive (HE) Bomb Density and the final Probability of UXO Encounter. The purpose of this approach is to demonstrate that whilst bomb density statistics give an indication for WWII bombing, they should not be relied upon exclusively to generate a holistic assessment.

For further information, please contact *Envirocheck*:









Telephone: +44 (0)844 844 9952

Website: <http://www.envirocheck.co.uk>

Email: [customerservice@envirocheck.co.uk](mailto:customerservice@envirocheck.co.uk)



## DATA FINDINGS

Threat Source (within 1,000m)	Detail	
	Identified	Comments
 Airfields/Military Facilities	✓	<i>St Georges Court</i> (80m north-east).
 Ordnance Manufacture/Storage	✗	None recorded within 1,000m.
 WWII Decoy Bombing Sites	✗	None recorded within 1,000m.
 WWII Defensive Features	✓	Seven pillboxes within 995m; closest being 555m south-east and two gun replacements located 700m south-east and 750m south-east.
 WWII <i>Luftwaffe</i> Designated Bombing Targets	✓	<i>Luftwaffe</i> aerial photography identified a drainage system (on-site) and a command post (750m south-east) as a primary bombing target.
 WWII Bomb Strikes Within Study Site Boundary	✓	ARP records identified one HE bomb strike on-site.
 WWII Bomb Strikes Near Study Site Boundary	✓	ARP records identified HE bomb strikes; 15m south-east, 15m south-east, 40m west, 45m west and 60m north-east.
 WWII Bomb Damage	✓	LCC bomb damage mapping recorded “ <i>serious damage; but repairable at cost</i> ” and “ <i>damage beyond repair</i> ” on-site.
 Abandoned Bomb Register	✗	The official abandoned bomb list did not identify any abandoned bombs located on-site or within 1,000m of the Study Site boundary.
 Potential Threat Sources	✓	The most probable UXO threat is posed by WWII <i>German</i> HE bombs, whilst IBs and <i>British</i> AAA projectiles pose a residual threat.
 WWII Bombing Density Per 100 Hectares	✓	The Study Site was located within <i>Holborn Metropolitan Borough</i> , which recorded 216 HE bomb strikes per 100 hectares.

## IMPORTANT NOTES

1. The term ‘Preliminary UXO Threat Assessment’ has been used to describe this report, to fall in line with the *CIRIA* C681 guidelines. Whilst the term ‘Risk’ can be justifiably used at this stage, the reader should note that the ‘Consequence’ function of ‘Risk’ is not considered. Should it be required, this would be addressed in the ‘Detailed UXO Threat & Risk Assessment’ (Stages 2 and 3).
2. This report is accurate and up to date at the time of writing.
3. The assessment levels have been generated from historical data and third party sources. Where possible *6 Alpha* have sought to verify the accuracy of such data, but cannot be held accountable for inherent errors that may be in third party data sets (e.g. *National Archives* or library sources).
4. *6 Alpha* have exercised all reasonable care, skill and due diligence in producing this service.
5. Whilst every effort has been used to identify all potential UXO/explosive threats, there were a number of private facilities, which may not have released privately recorded information concerning UXO/explosive threats into the public domain. It is therefore possible that some of the aforementioned sites may not be included within the database.



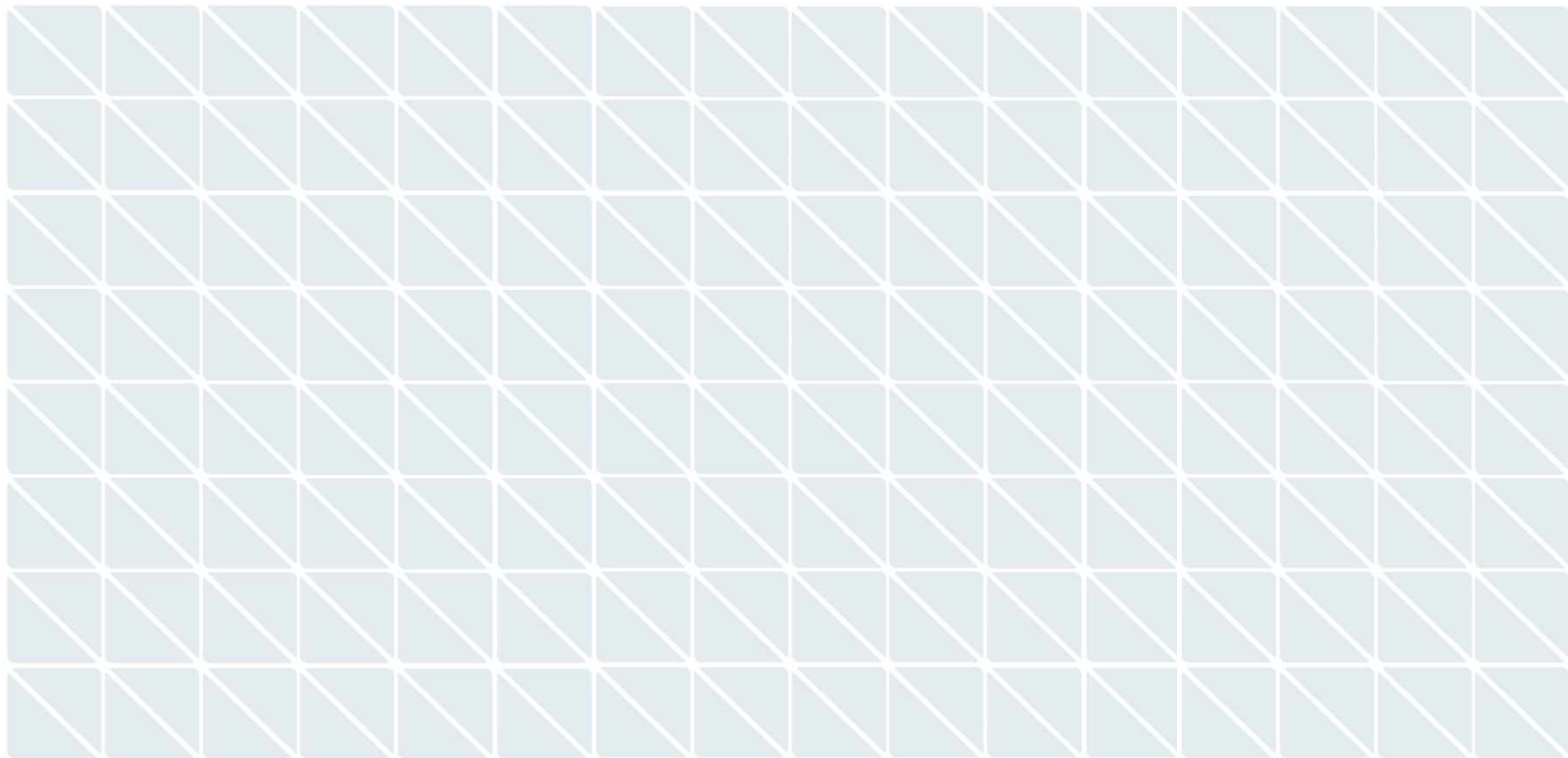




## Probability of UXO Encounter





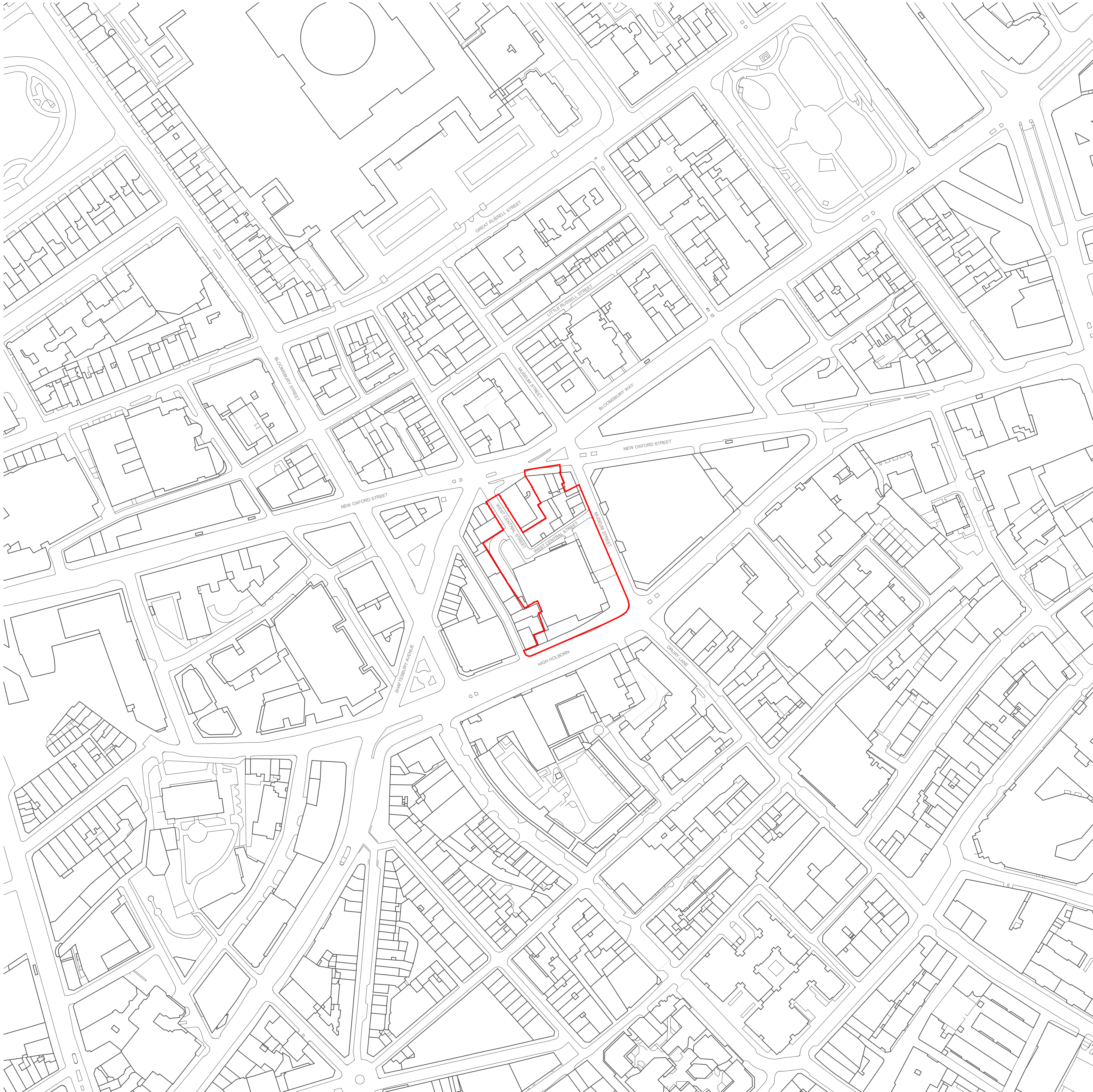






Appendix B: Existing and Proposed Development Drawings





**GENERAL NOTES:**  
Existing drawings are for reference only - not for approval.  
Planning Boundary shown is intended to align with proposed West End Project kerb extents along High Holborn, and is based on available information as submitted. Post-submission amendment to as-built kerb line may be required.

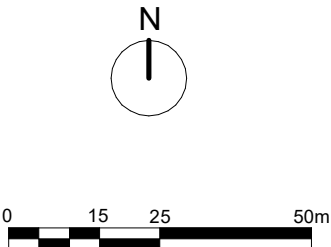
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— Planning Boundary

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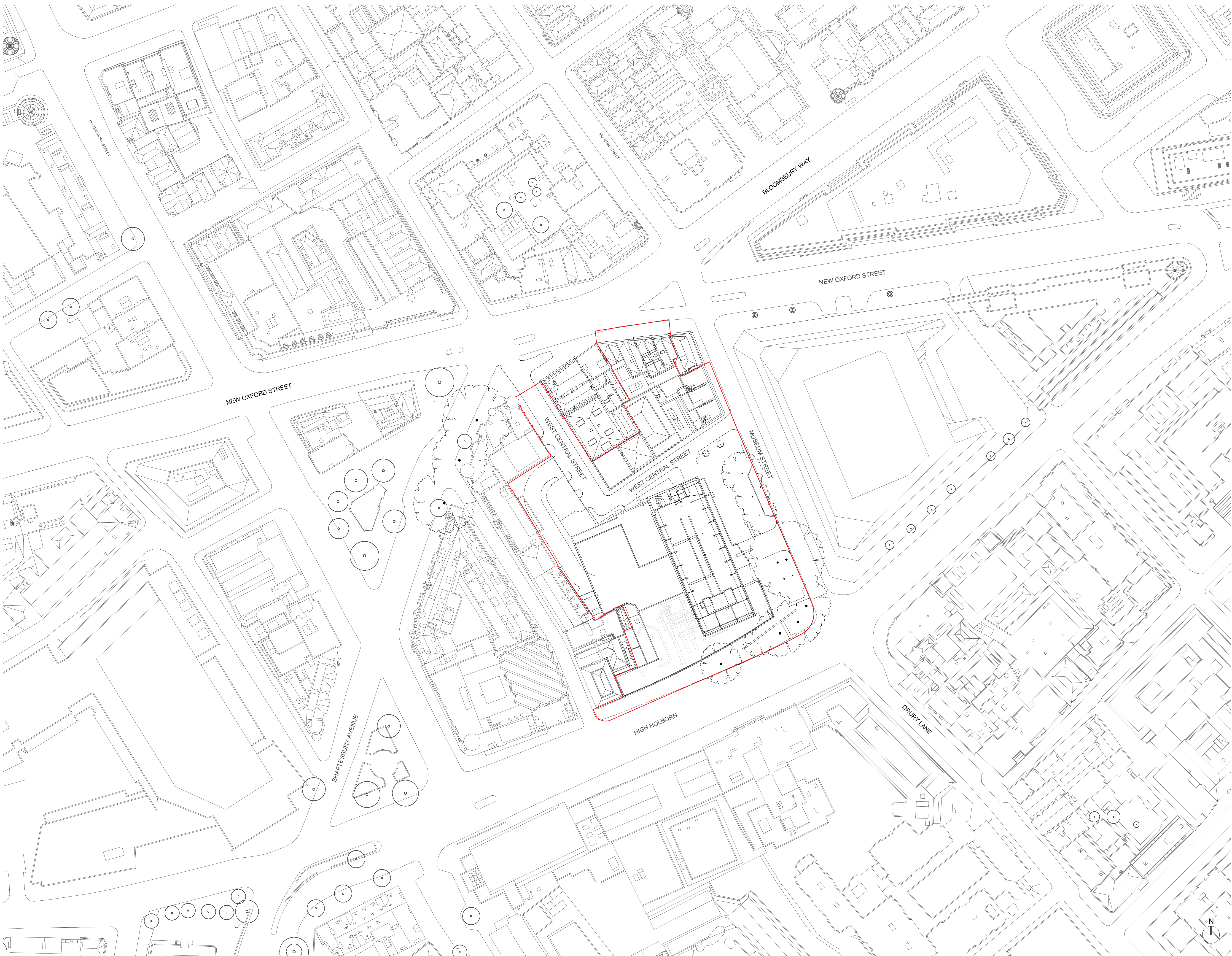
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<b>Museum Street and West Central Street</b>			
London, WC1A 1JR			
drawing title			
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drawn	size	date	scale
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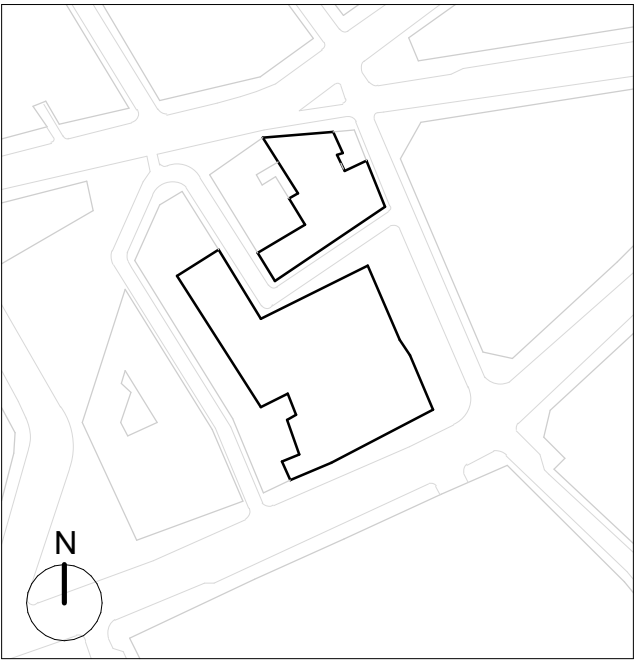
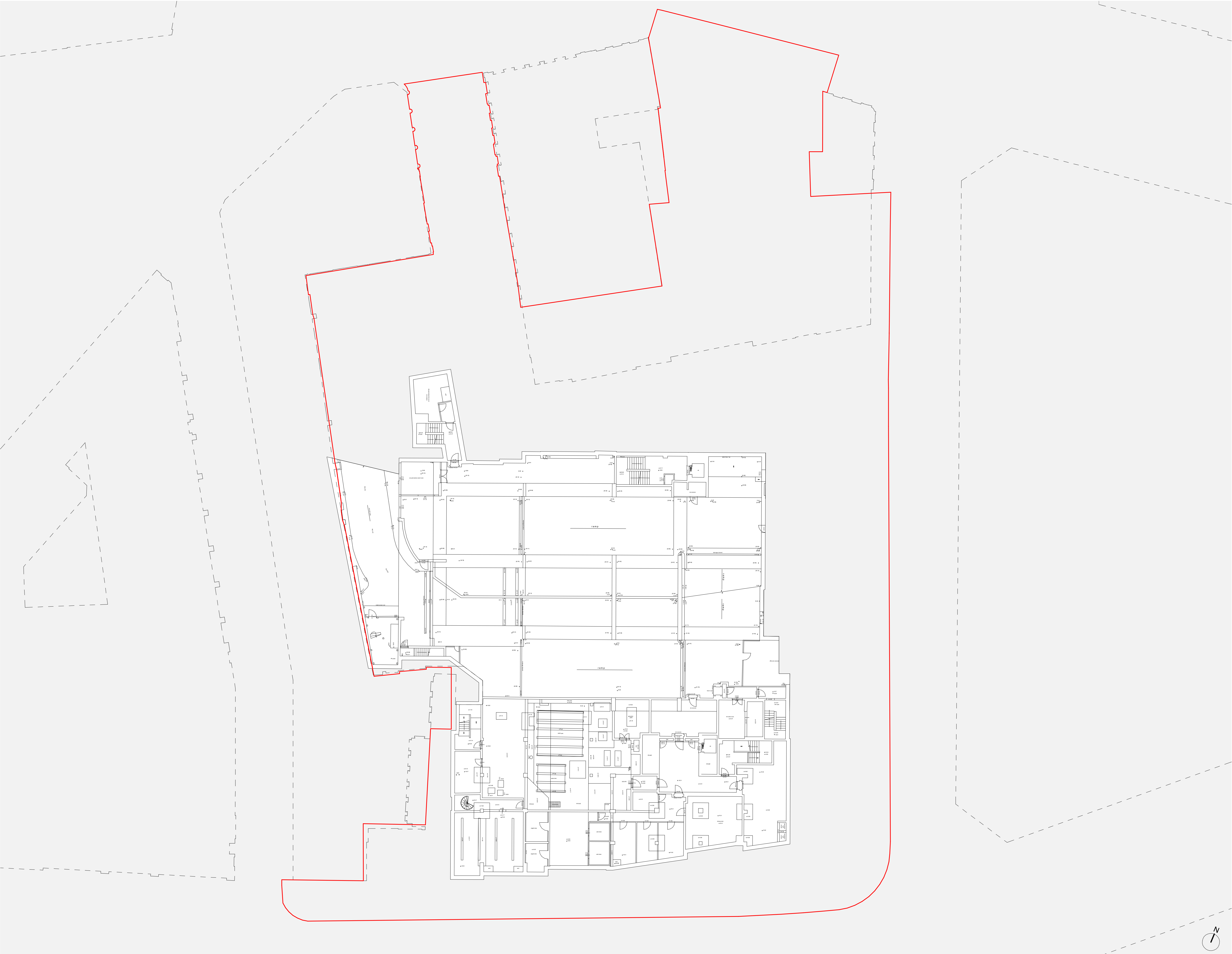
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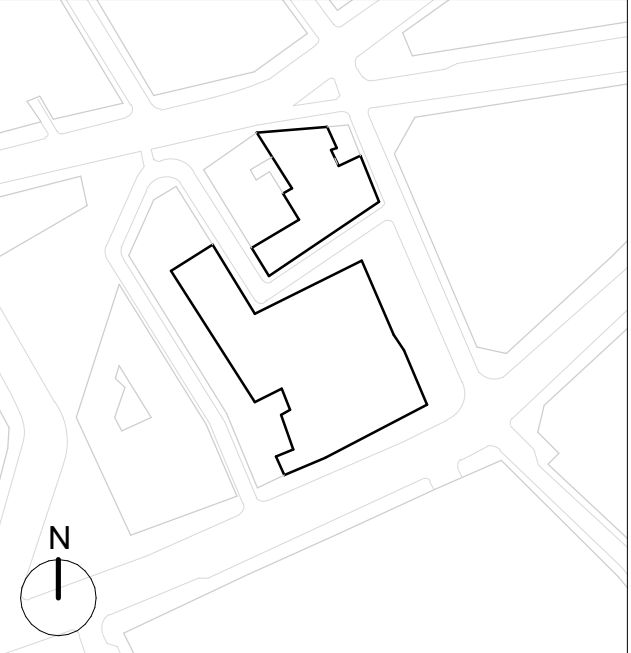
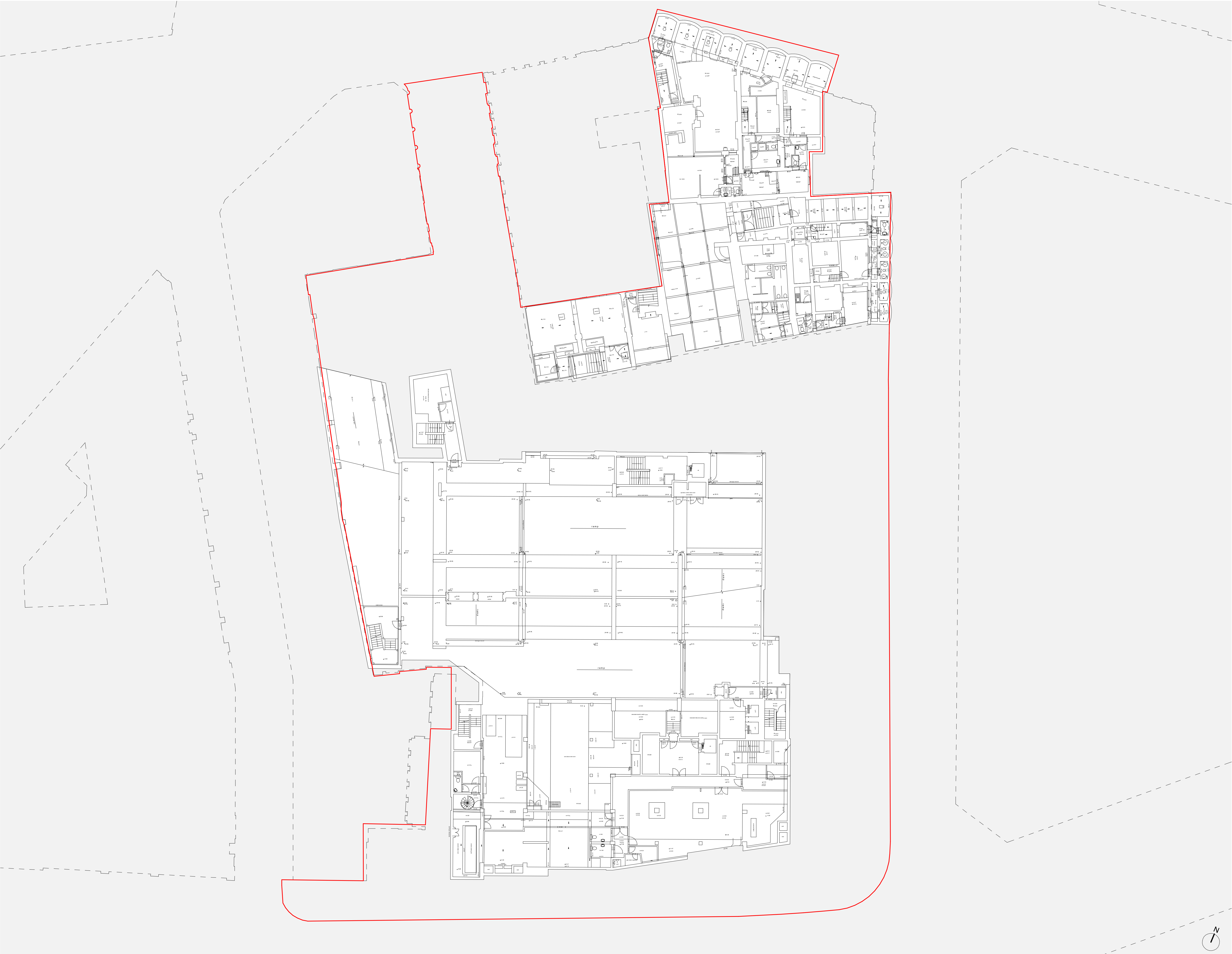
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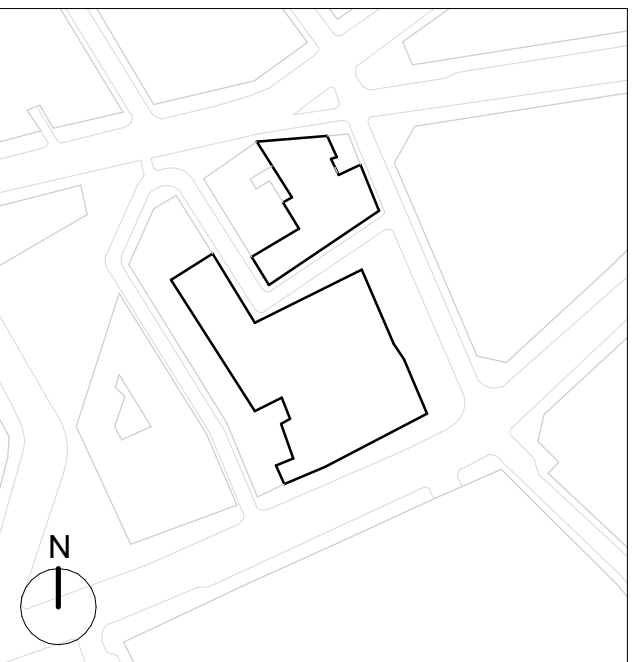
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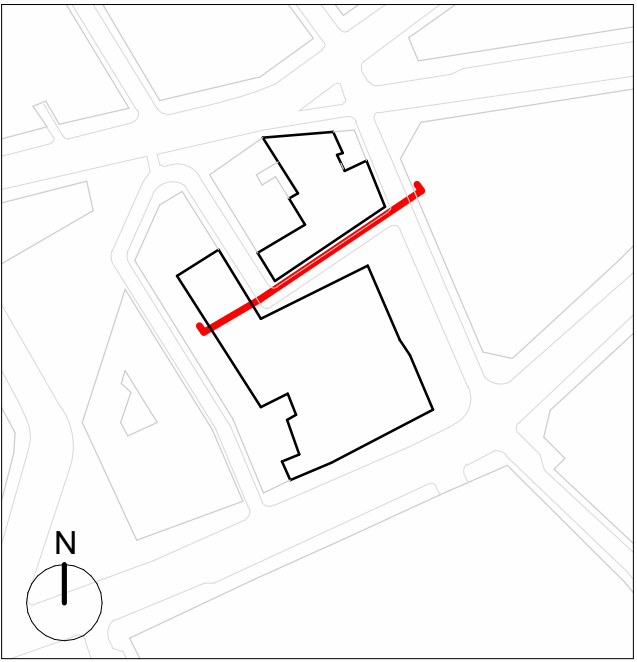
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1 Existing West Central Street Elevation North  
1 : 200



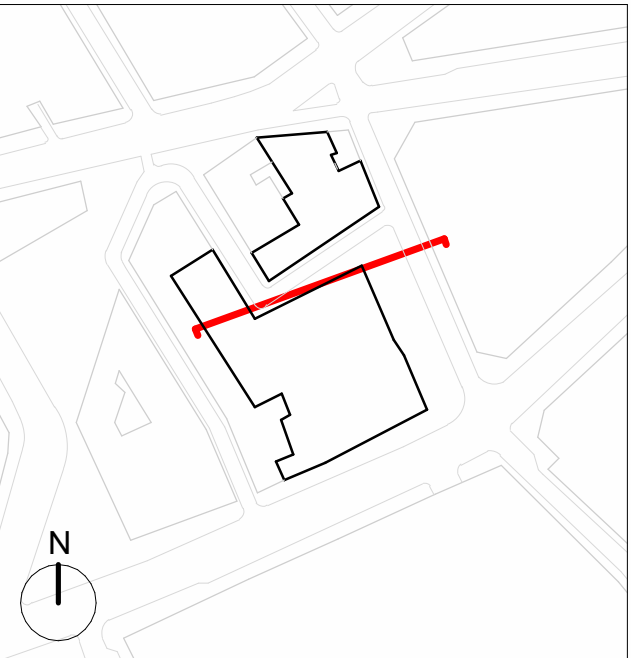
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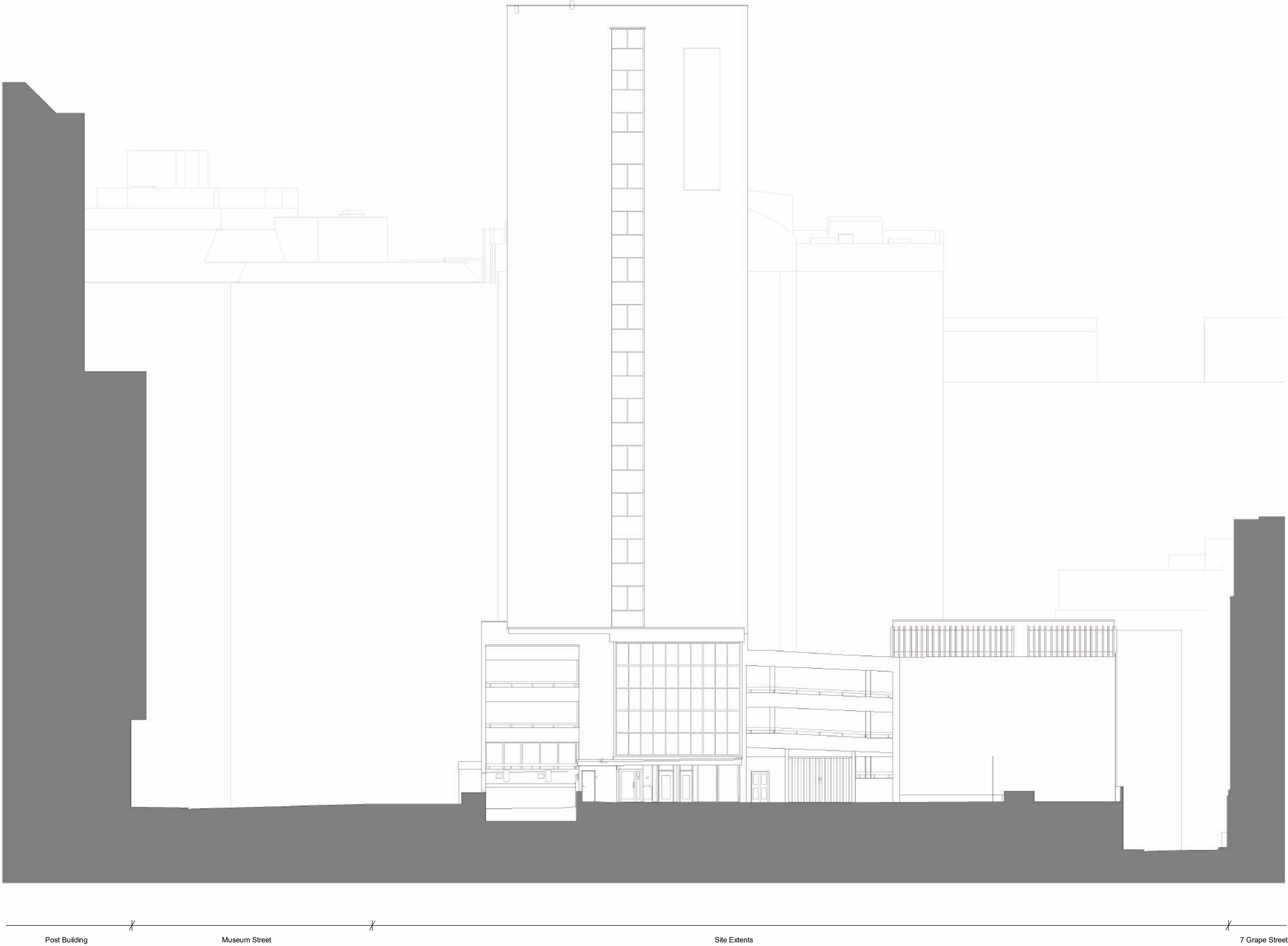
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London, WC1A 1JR			
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1 Existing West Central Street Elevation South  
1 : 200



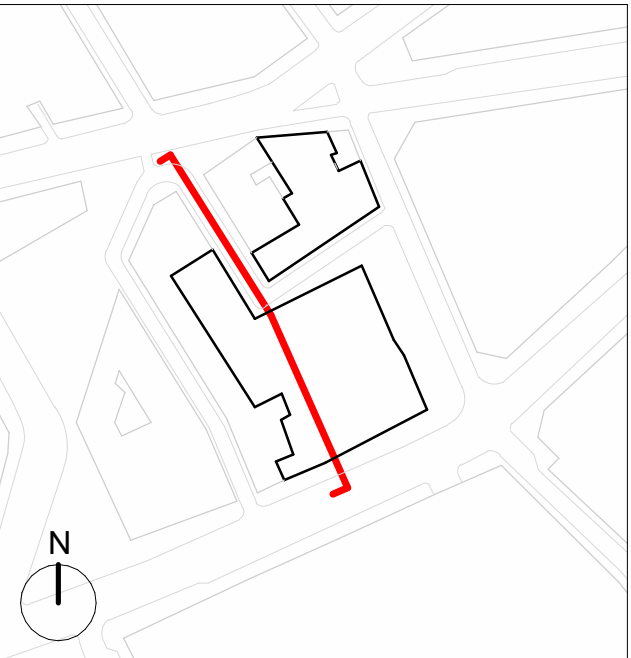
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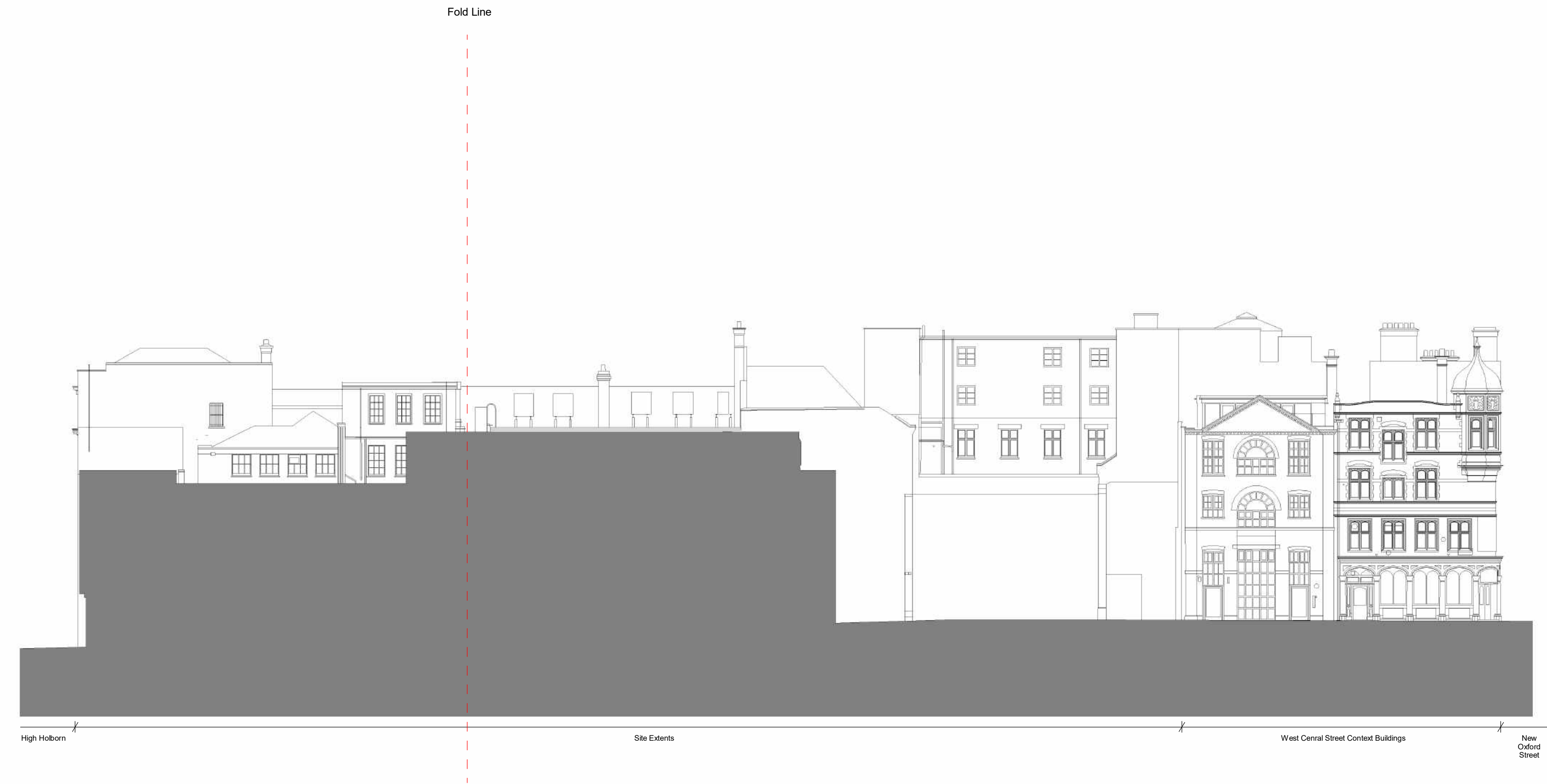
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2 Existing West Central Street Elevation West  
1 : 200



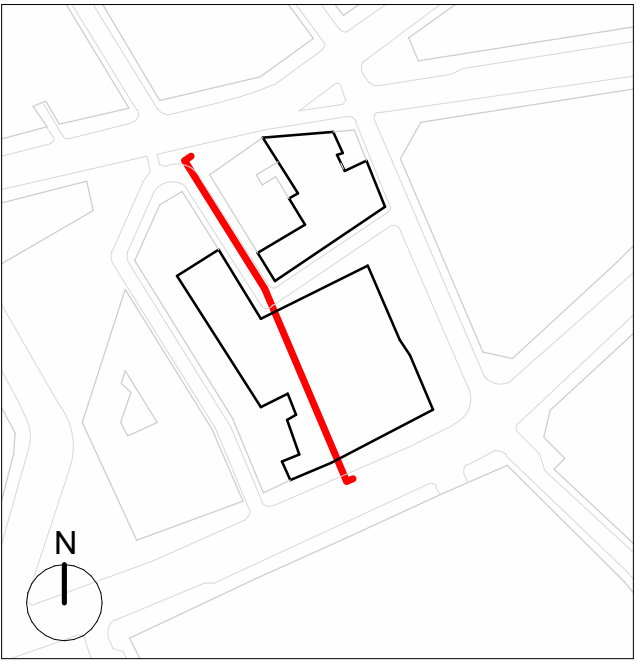
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drawing title			
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drawing number			revision
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1 Existing West Central Street Elevation East  
1 : 200



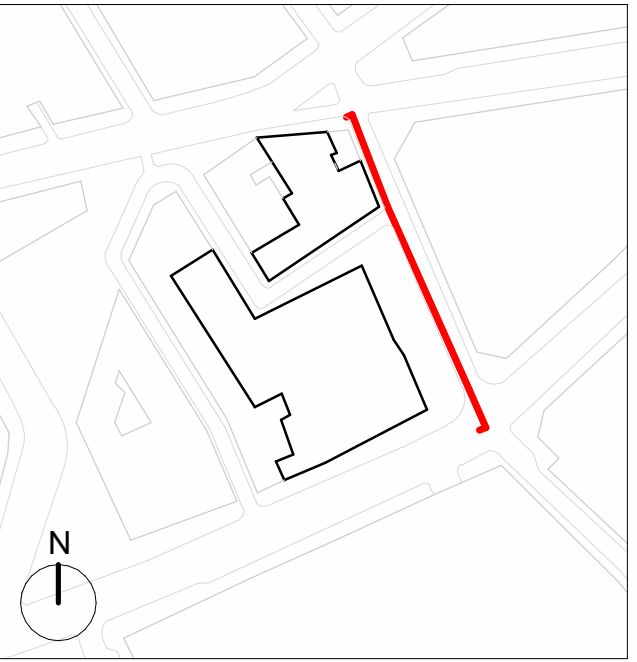
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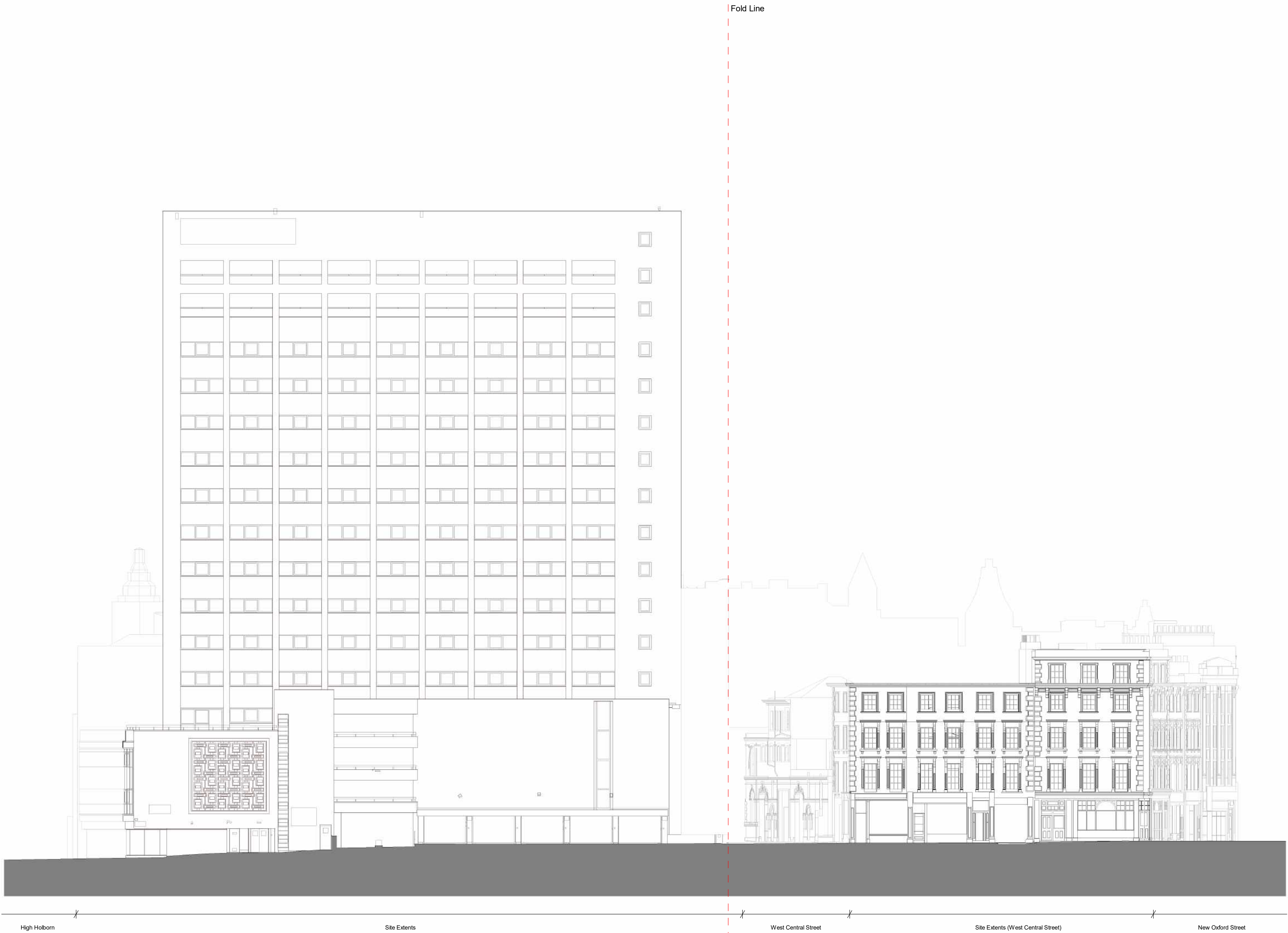
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1

Existing Museum Street Elevation - West

1 : 200

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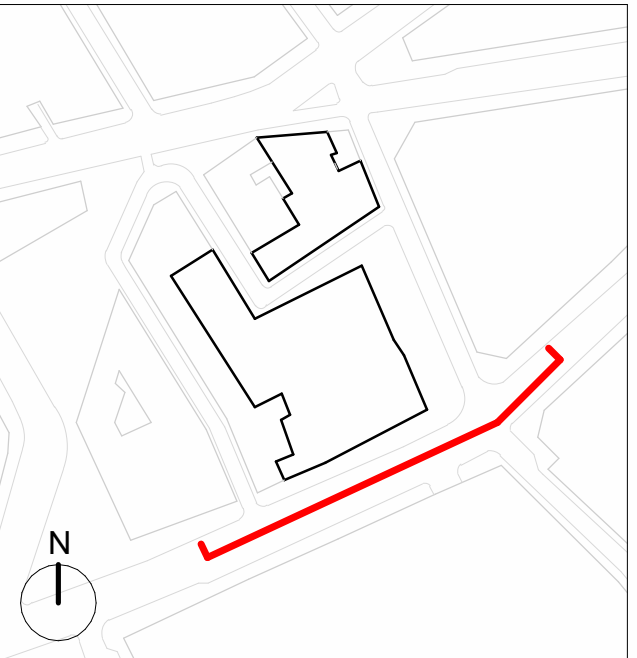
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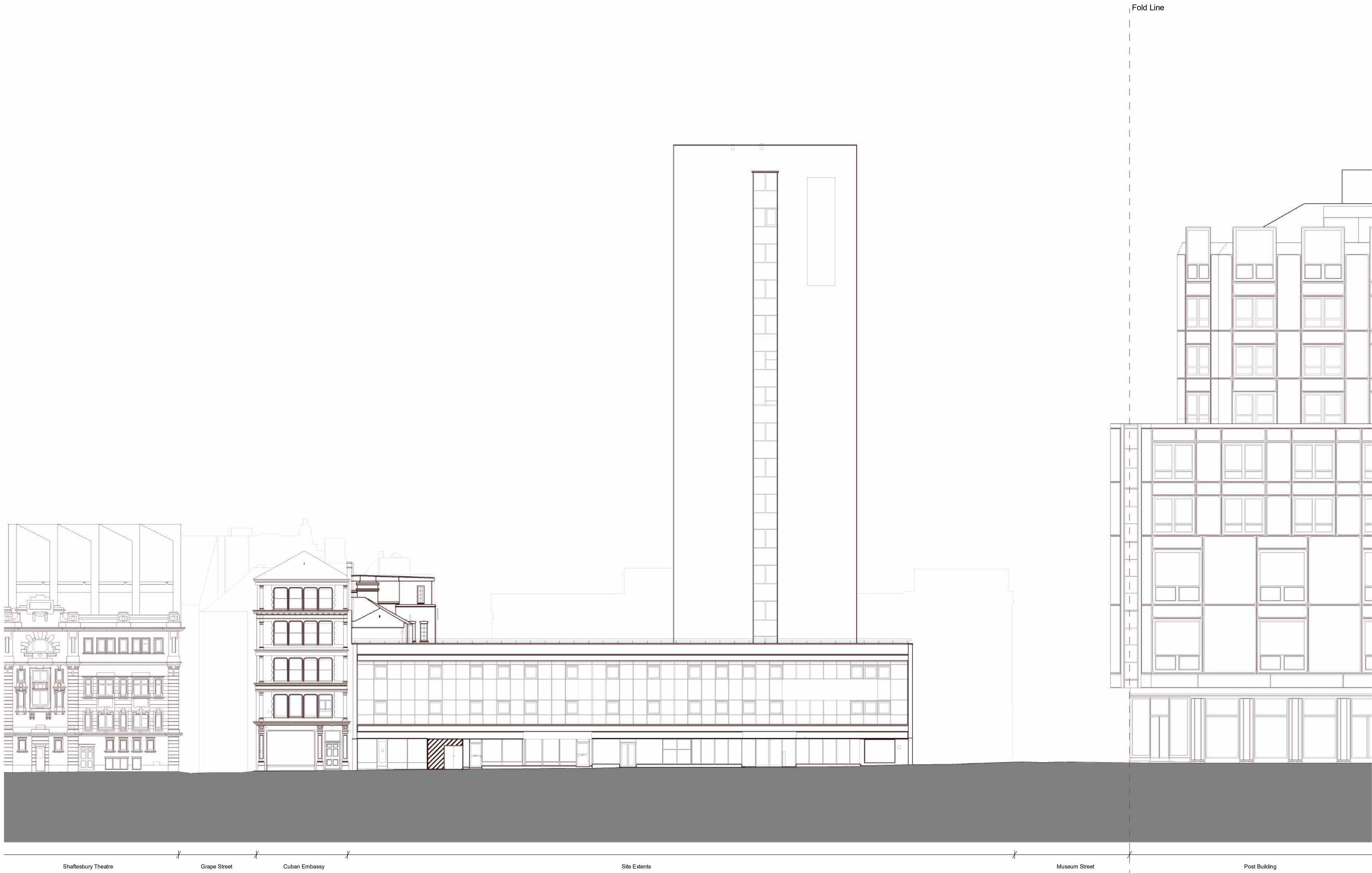
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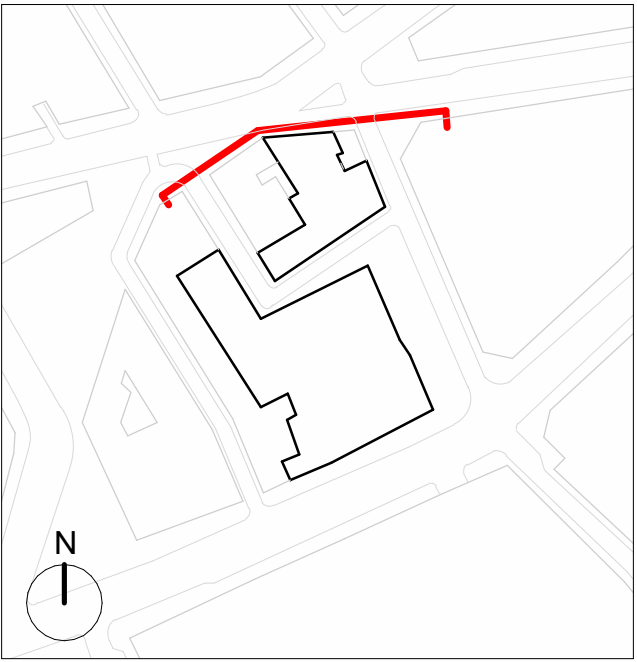
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London, WC1A 1JR			
drawing title			
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drawing number			revision
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REPORT DISCREPANCIES DO NOT SCALE FROM THIS DRAWING COPYRIGHT DSDHA		USE LATEST REVISION CHECK DIMENSIONS ON SITE	

1 Existing High Holborn Elevation North  
1 : 200







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Post Building Museum Street Site Extents (West Central Street) West Central Street Shaftesbury Avenue

1 Existing New Oxford Street Elevation South  
1 : 200

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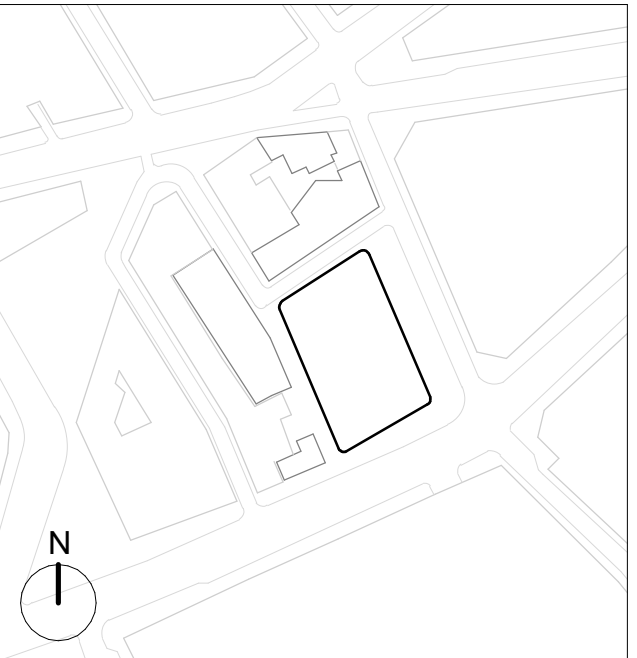
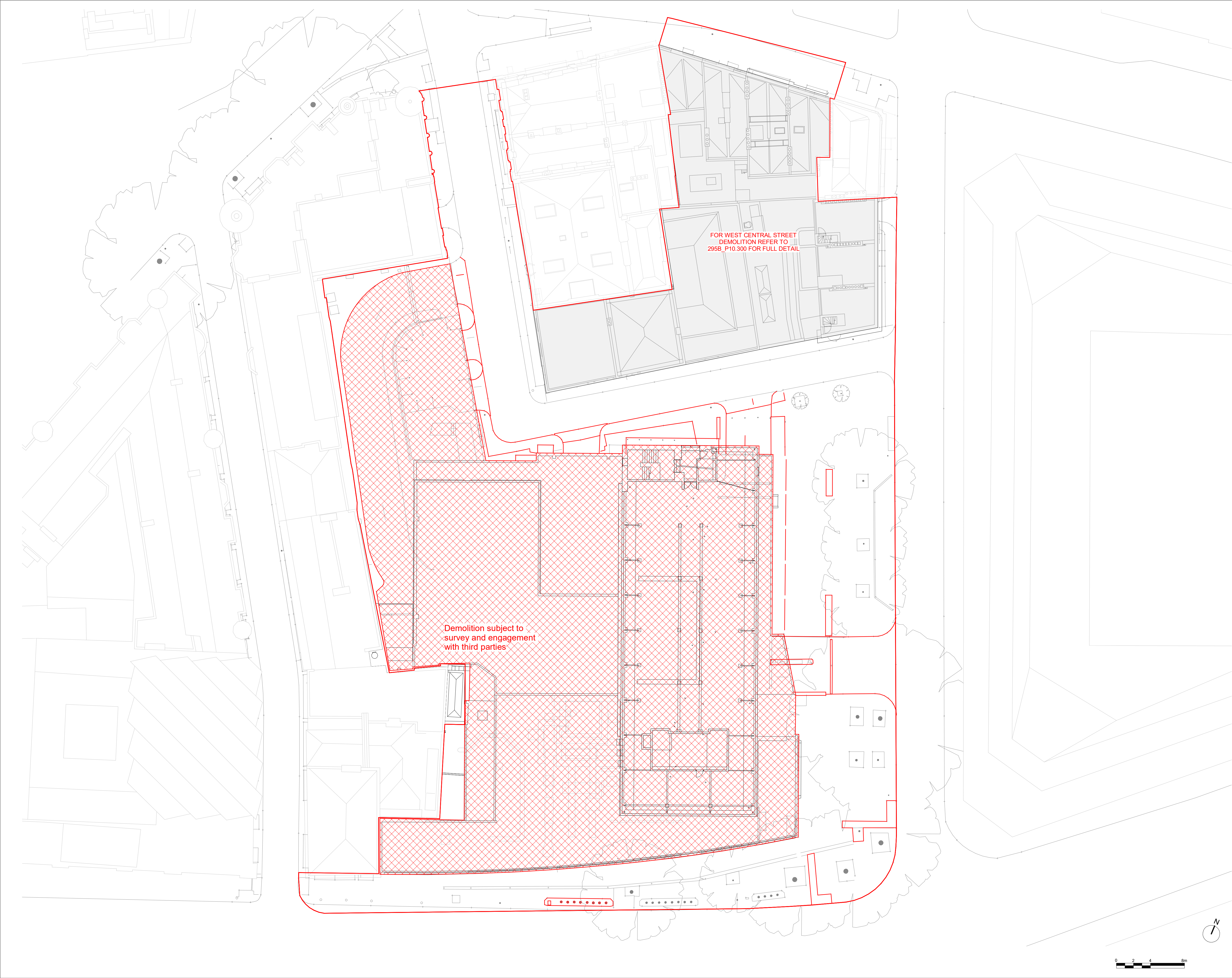
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- Planning Boundary
- ▨ Elements to be demolished
- - - WCS Demolition zone - For Internals and roof elements to be demolished refer to drawing 295B\_P10.300 series

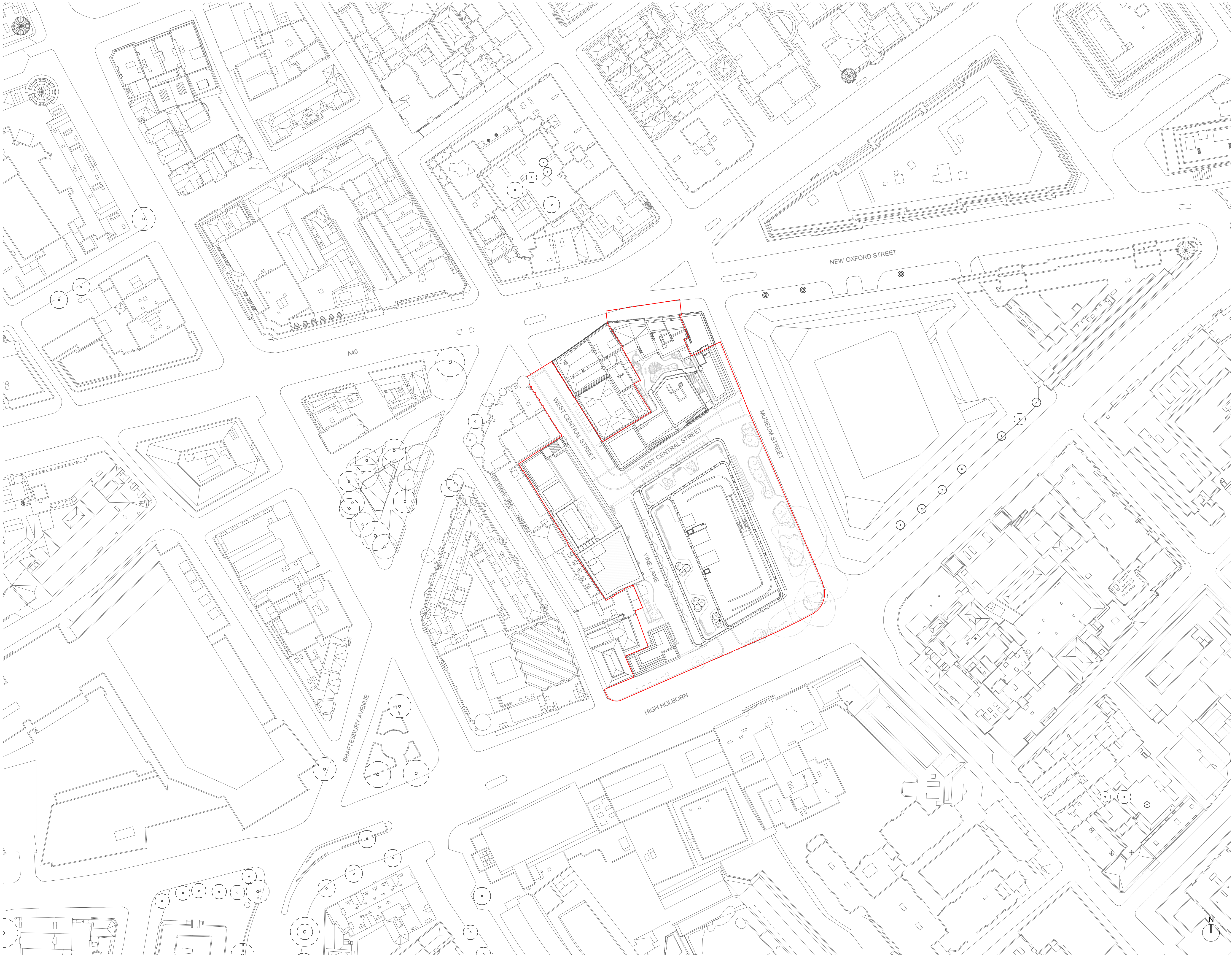
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The internal layouts within office floor space, residential apartments and ancillary areas of buildings are indicative and will be subject to design development.

The precise location of walls, internal doors, columns, risers and the detailed layout of office, bathroom and kitchen areas will be the subject of non-material changes and may vary from the internal layouts set out in these plans.

These minor alterations will not affect the position and arrangements of external doors and windows nor will they affect the relative relationship between habitable rooms and windows.

Landscape proposals are indicative only, refer to Landscape drawings for details.

Plant layouts are indicative only.

All materials shown or highlighted are indicative only and may be subject to changes made during detailed design development.

Museum Street landscape proposals are indicative.

**KEY**

— Planning Boundary

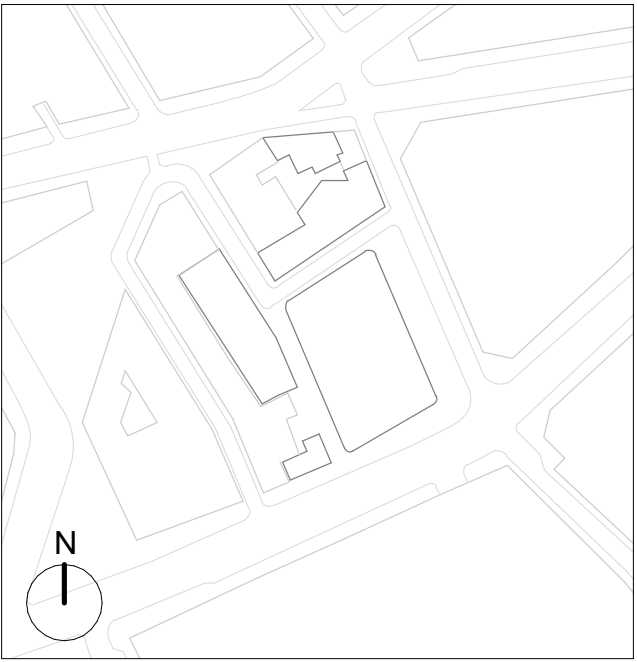
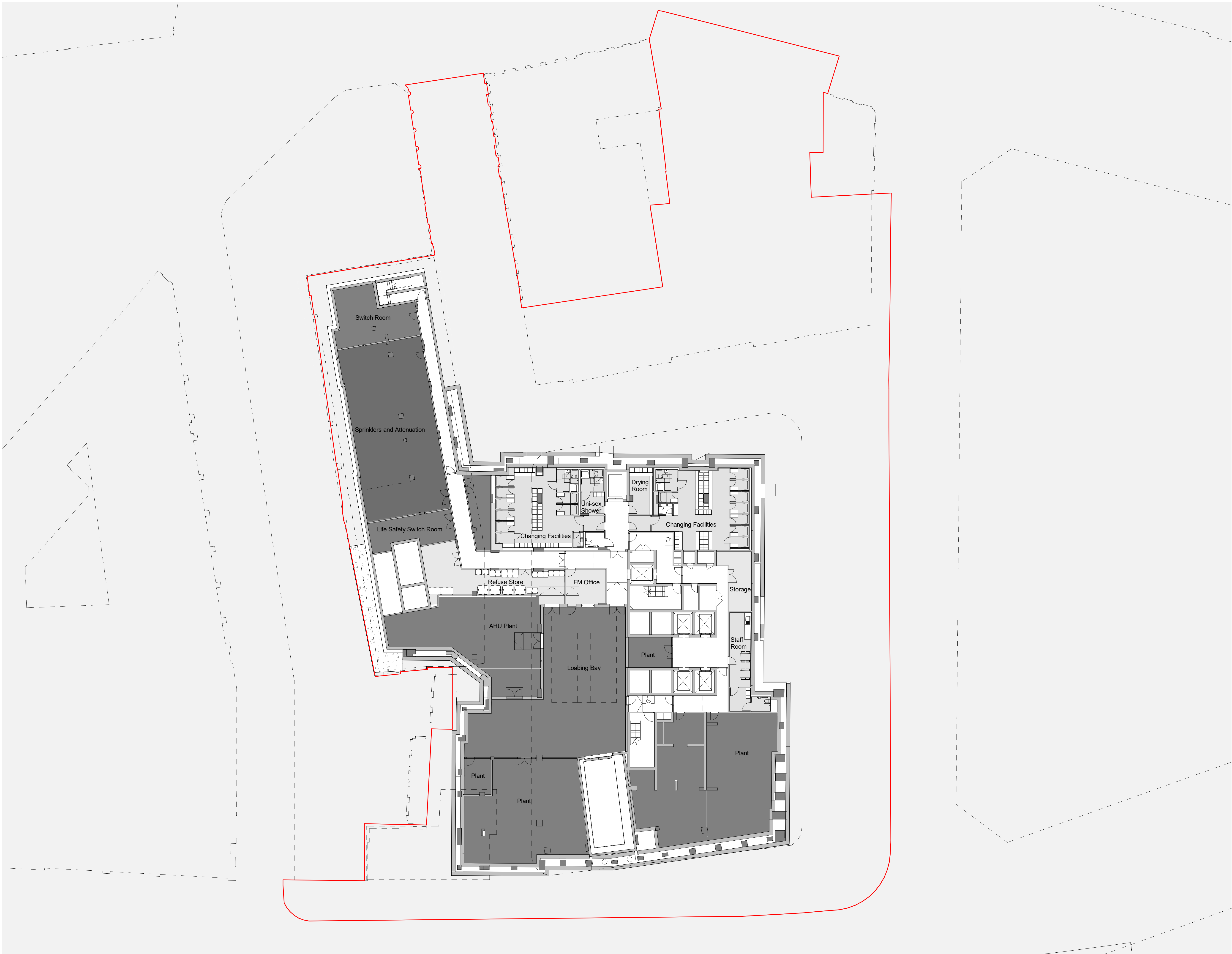
**DRAFT**

22.03.21 IM Issued for Planning

# PLANNING

rev	date	author / check	comments
<b>DSDHA</b> 357 Kennington Lane London SE11 5QY T 020 7703 3555 F 020 7703 3890 E info@dsdha.co.uk W www.dsdha.co.uk			
project			
<b>Museum Street and West Central Street</b>			
London, WC1A 1JR			
drawing title			
Proposed Site Plan			
drawn	size	date	scale
DSDHA	A1	28/08/20	1 : 500
drawing number			revision
295 _P20.003			-
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**GENERAL NOTES:**

Planning Boundary shown is intended to align with proposed West End Project kerb extents along High Holborn. Post-submission amendment to as-built kerb line may be required.

The internal layouts within office floor space, residential apartments and ancillary areas of buildings are indicative and will be subject to design development.

The precise location of walls, internal doors, columns, risers and the detailed layout of office, bathroom and kitchen areas will be the subject of non-material changes and may vary from the internal layouts set out in these plans.

These minor alterations will not affect the position and arrangements of external doors and windows nor will they affect the relative relationship between habitable rooms and windows.

Landscape proposals are indicative only, refer to Landscape drawings for details.

Plant layouts are indicative only.

All materials shown or highlighted are indicative only and may be subject to changes made during detailed design development.

Museum Street landscape proposals are indicative.

**KEY**

- Planning Boundary
- - Building Line Above
- Office Class E(g)
- Flexible Use Class E
- Flexible Class E except E(g)
- Social Rent Residential (C3)
- Intermediate Residential (C3)
- Market Residential (C3)
- Plant
- Office BOH
- Affordable Residential BOH
- Market Residential BOH
- Hatch denotes structural infill to existing vaults

# DRAFT

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<b>DSDHA</b> 357 Kennington Lane London SE11 5QY T 020 7703 3555 F 020 7703 3890 E info@dsdha.co.uk W www.dsdha.co.uk			
project			
<b>Museum Street and West Central Street</b>			
London, WC1A 1JR			
drawing title			
Proposed Second Basement Floor			
drawn	size	date	scale
SM	A1	28/08/20	1 : 200
drawing number			revision
295 _P20.098			-
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