

COCHRANE
CONSTRUCTION
CONSULTANTS

Project No:

S-2930

Calc By:

BC

Project:

161 ARLINGTON ROAD,
LONDON NW1 7ET

Date:

1 Nov 24

Rev:

Rev 01

Title:

Structural Calculations for Proposed Refurbishment of 161 Arlington Road

Section 7

Superstructure elements

Wind loading from above

		start	end	length	Md
	p	0.000	0.225	0.225	0.3003
Zone A	0.763	0.225	1.500	1.275	0.1855
Zone B	0.471	1.500	3.000	1.500	0.1501
Zone C	0.381	3.000	3.700	0.700	0.106
Zone D	0.269	m	m	m	kNm

kPa

Ym =

3.1

Moment of Resistance Mr

	Tk	Z	fkx	Mr
brick	102.5	1751041.7	0.4	0.226
block	100	1666666.7	0.25	0.134

0.360

kNm

Panel okay for all zones

UF = 0.8332 (zone A)

Support to leading edge

Double exposure of parapet and cyclic nature of loading on leading edge - add windpost on leading edge fixed to steels

Design loading

Wind Loading

(0.225)*zone A + (1-0.225)*zone B

= 0.5366 kPa

1.6

l = 1000 mm

Wk = 0.8585

M = wl2/2 = 0.2683

Zreqd = M/σ

σ = 275 N/mm2

Zreqd = 975.62052 mm3

δ =wk l4/8EI

δlimit = span / 500 mm

I reqd = w l^4/8Eδ

###

mm4

60x60x5 SHS

Z 18100 mm3

I 544000 mm4

δ = 0.96 mm

Deflection of beam will give deflection on windpost

152x89UB

(Initial B4 section)

w 1.55 kN/m

I 838 cm4 8380000 mm4

e 205000

L 4100

Slope

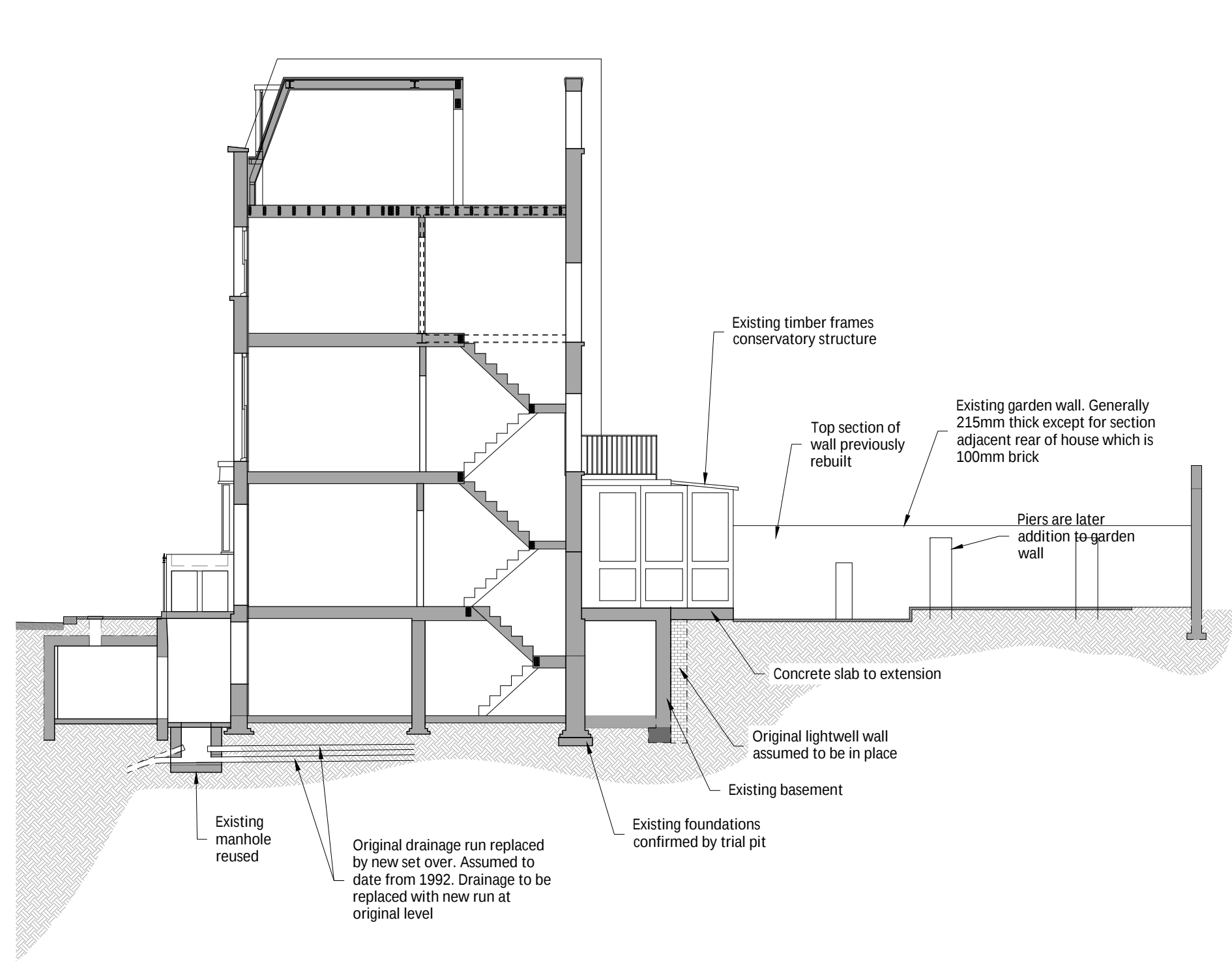
wl^3 / 24 EI = 0.00259104 radians

= 148.46 degrees

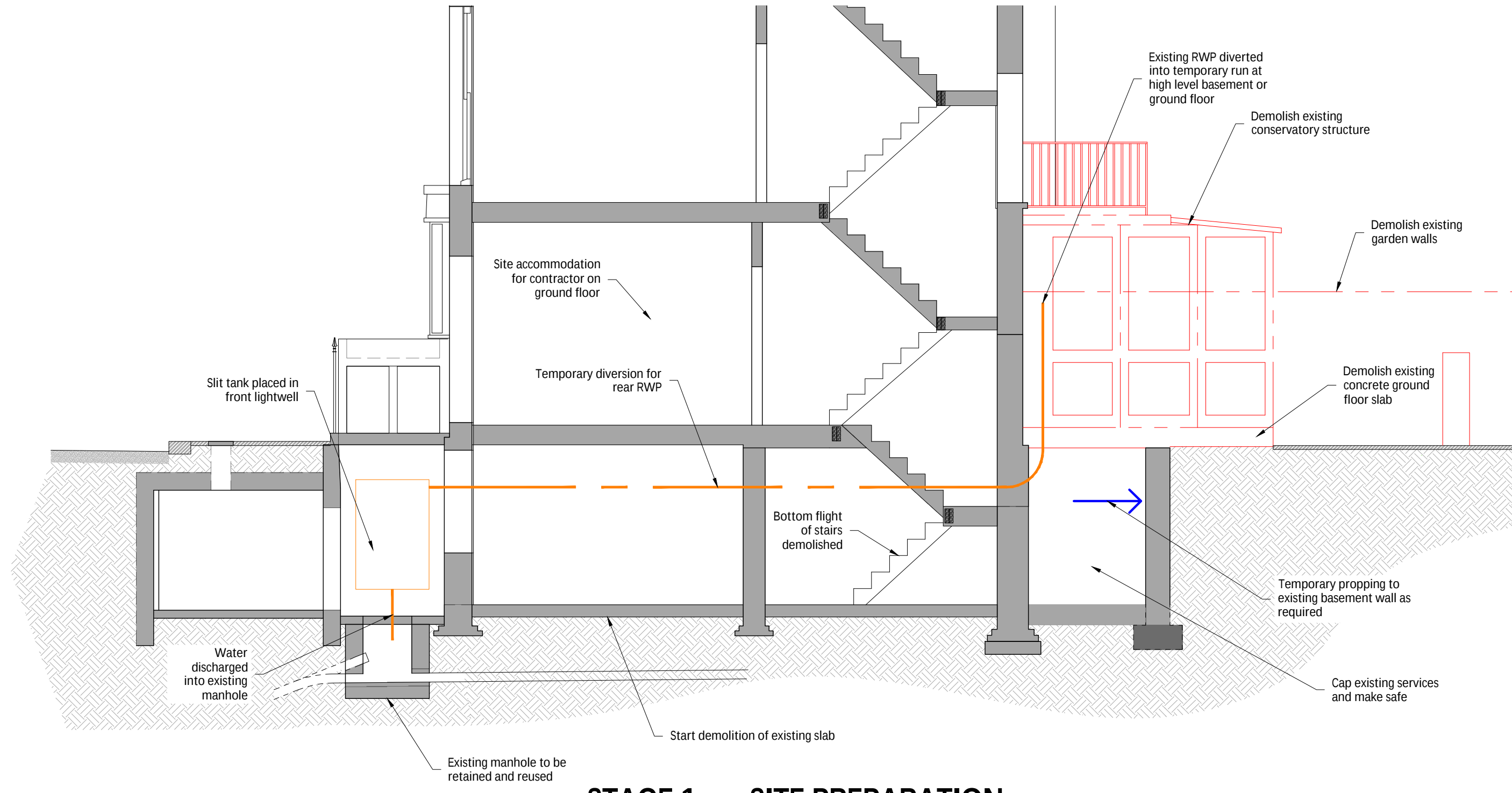
	Project No:		Calc By:	
	S-2930		BC	
	Project:			
	161 ARLINGTON ROAD, LONDON NW1 7ET			
Date:		Rev:		
1 Nov 24		Rev 01		

Title: Structural Calculations for Proposed Refurbishment of 161 Arlington Road				
Section 7 Superstructure elements				
3.139 = 31.54 deg from horz				
Wind post 1000 mm long				
beam deflection = 2.59				
post deflection = 0.96				
total deflction = 3.55 mm Deflection = span / ###				
Try 152UC23				
w 1.55 kN/m				
I 1250 cm4 12500000 mm4				
e 205000				
L 4100				
Slope $wl^3 / 24 EI = 0.00173703$ radians = 0.0995 degrees				
3.140 = 179.9 deg from horz				
beam deflection = 1.74				
post deflection = 0.96				
total deflection = 2.70 mm Deflection = span / 370.46				
Change B4 to 152UC23				

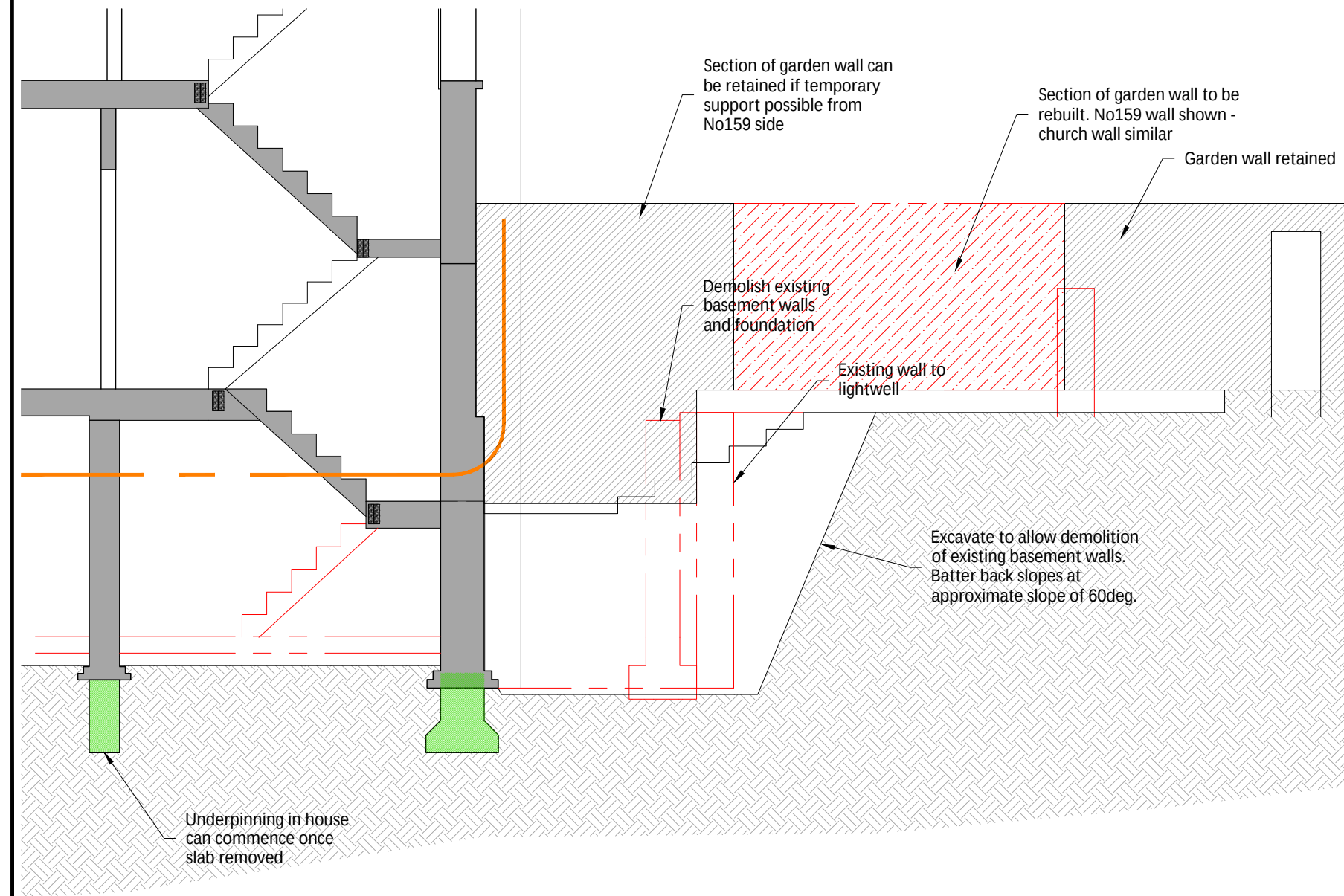
APPENDIX D: CONSTRUCTION SEQUENCE



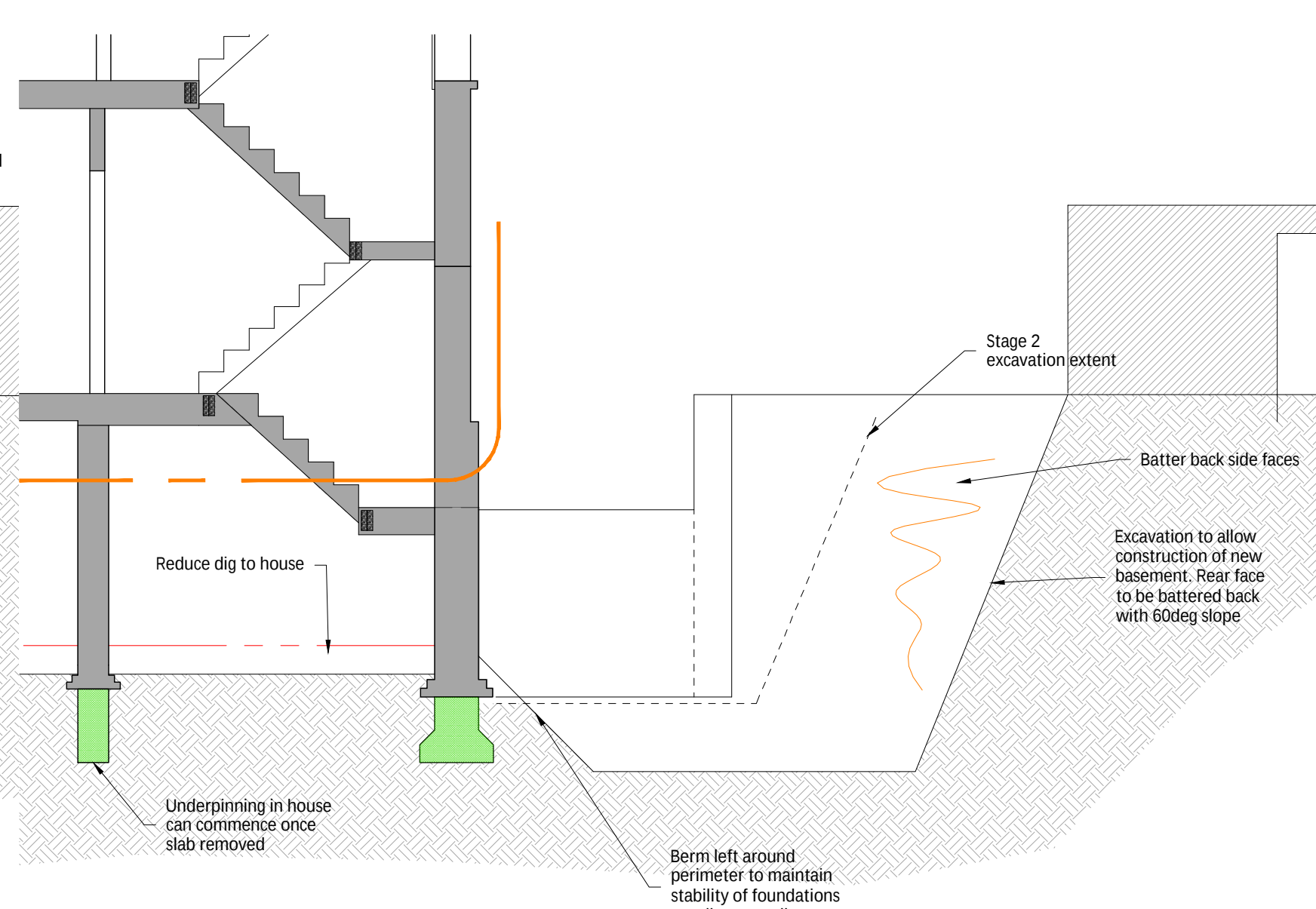
STAGE 0 - EXISTING BUILDING



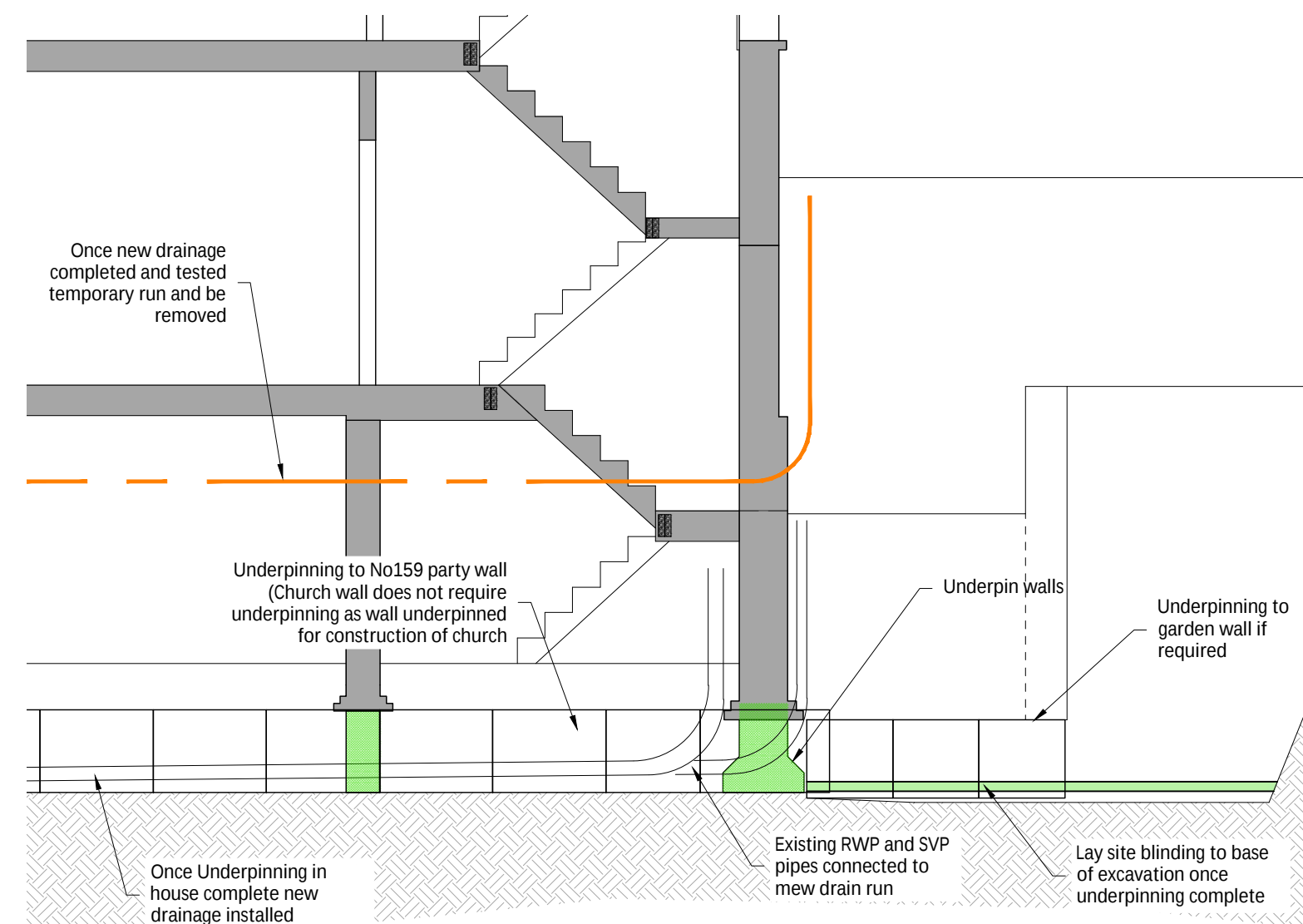
STAGE 1 - SITE PREPARATION & INITIAL DEMOLITION



STAGE 2 - COMPLETION OF DEMOLITION



STAGE 3 - EXCAVATION



STAGE 4 - UNDERPINNING

General Notes

NOTES
Sequence shown is that assumed in the design for the rebuilding of the rear extension to 161 Arlington Road and referenced in the Basement Impact Assessment submitted as part of the planning application to Camden.
Existing foundations shown are based on site investigation carried out by Fastrak.
Extent of works to garden walls to be agreed with neighbouring properties under Party Wall process

No.	Revision/Issue	Date

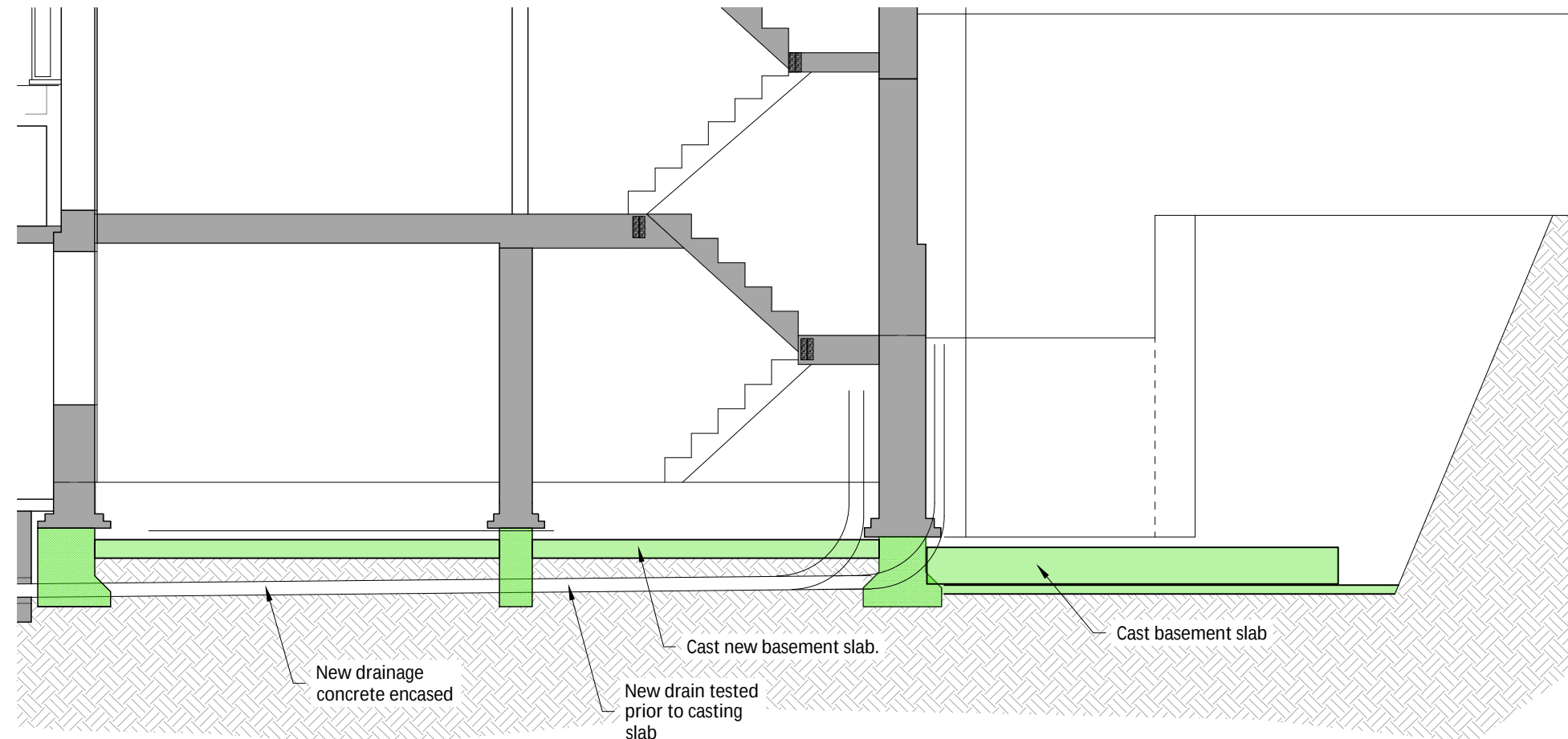


Mob: 07793200529
Email: cccconsultv4@gmail.com

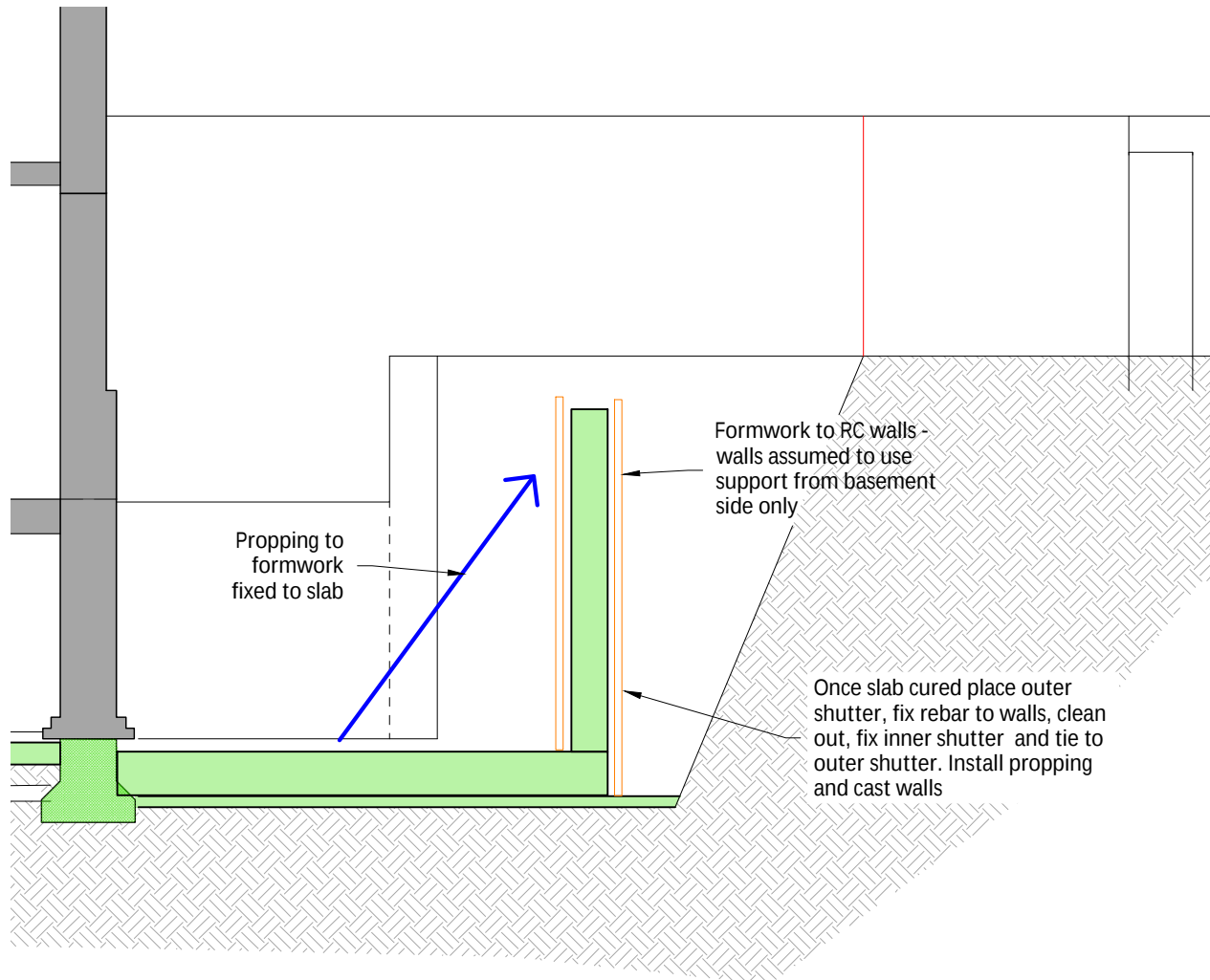
Client

Project Name and Address
**161 ARLINGTON ROAD
LONDON NW1 7ET**
Proposed Structure
Sequence of Construction
1 of 2

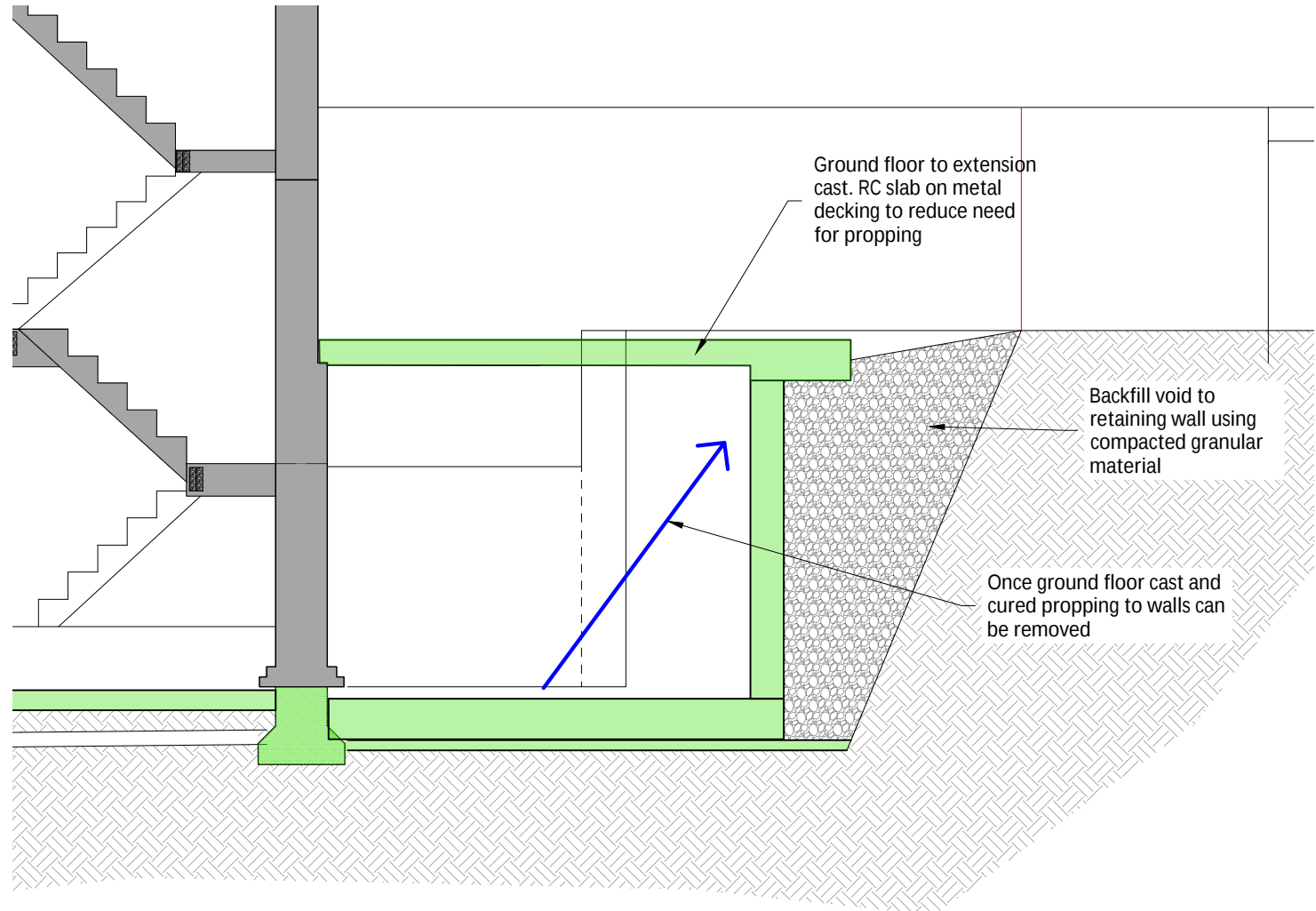
Drawn BC	Project S 2930
Date 20.01.2024	Sheet TW 001
Scale 1:50 @ A1 1:100 @ A3	Rev --



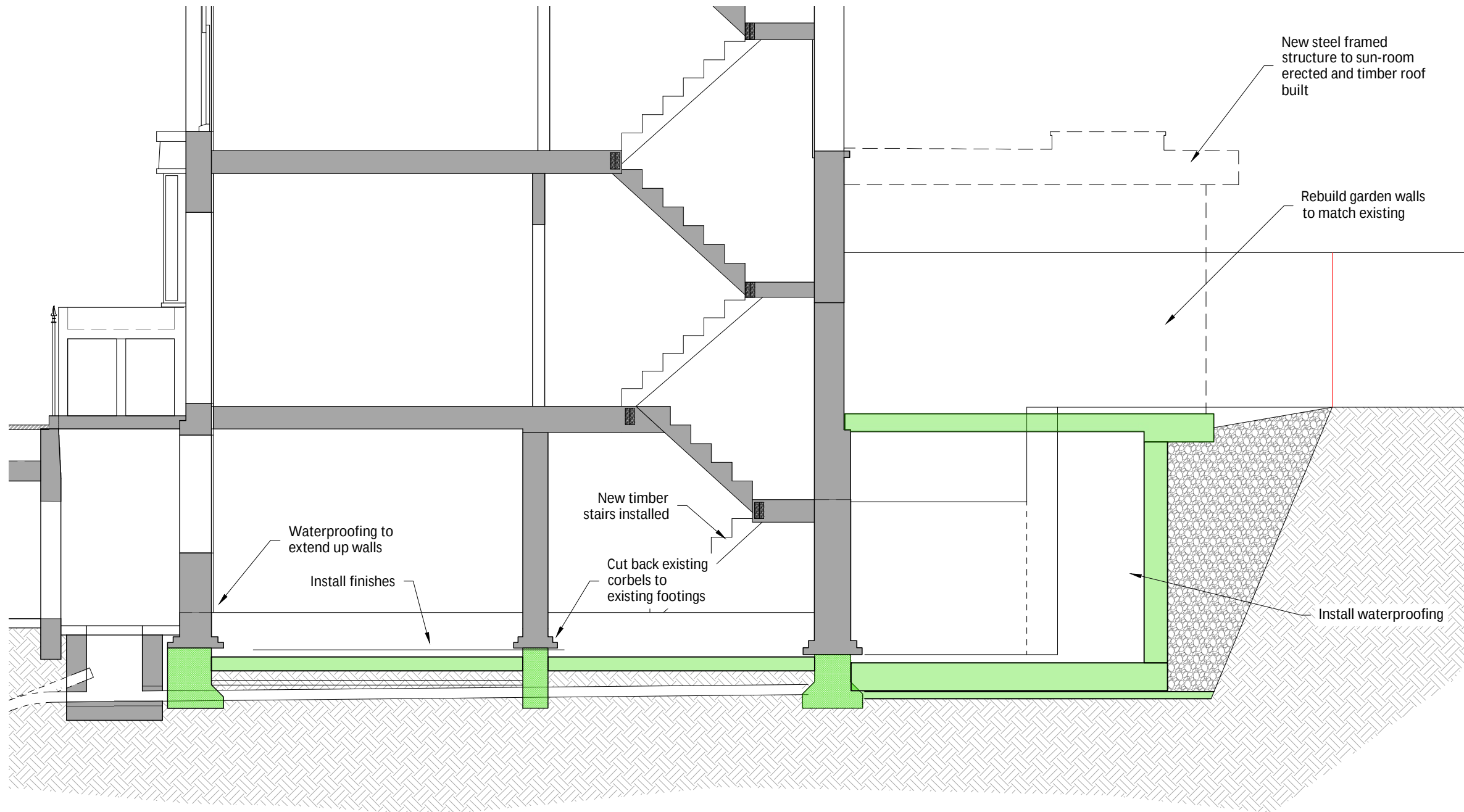
STAGE 5 - CAST BASEMENT SLAB



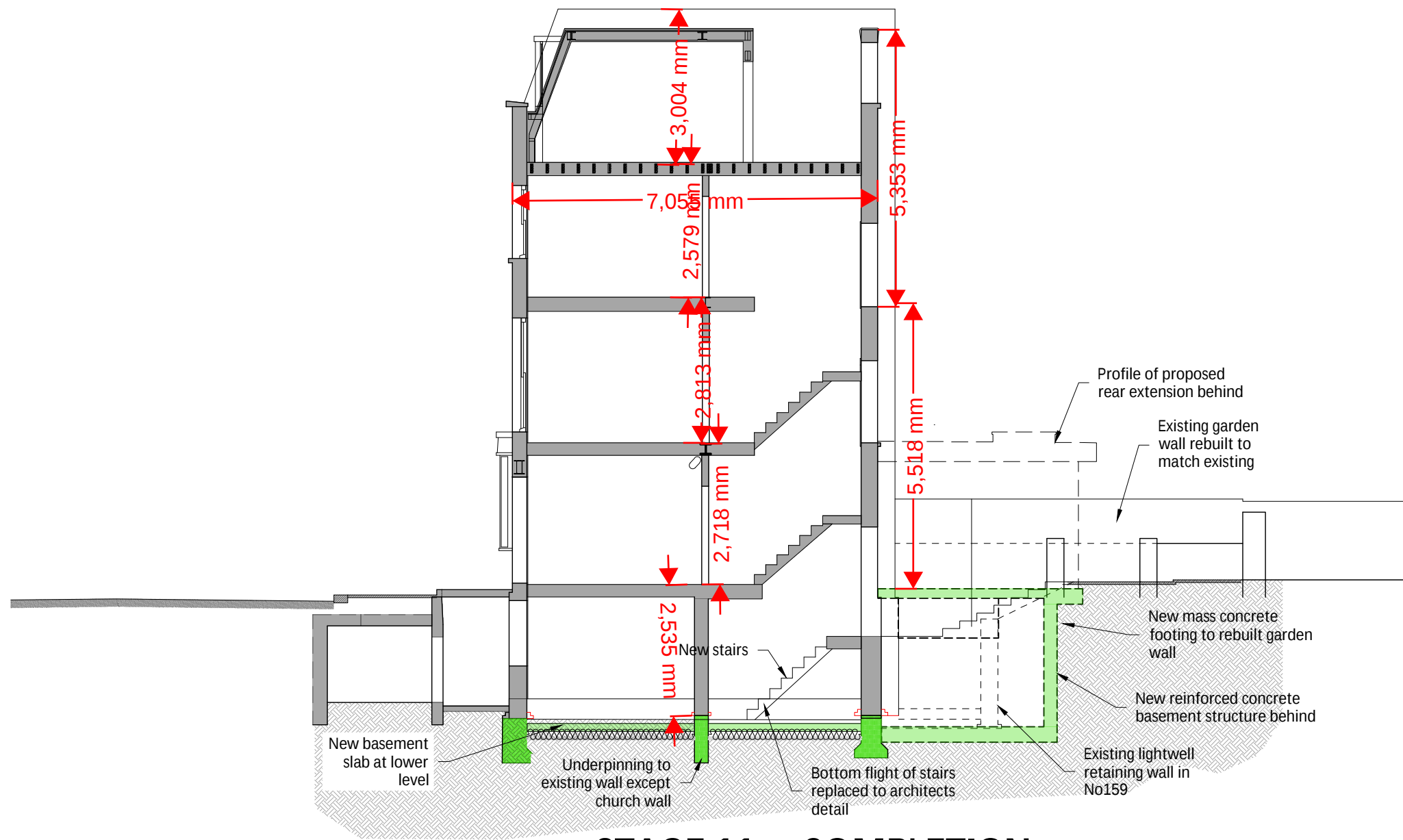
STAGE 6 - CAST BASEMENT WALLS



STAGE 7&8 - CONSTRUCT GROUND FLOOR SLAB & BACKFILL



STAGES 9&10 - CONSTRUCT SUPERSTRUCTURE



STAGE 11 - COMPLETION

General Notes

No.	Revision/Issue	Date



Mob: 07793200529
Email: ccconsultw4@gmail.com

Client

Project Name and Address
161 ARLINGTON ROAD
LONDON NW1 7ET

Proposed Structure
Sequence of Construction
2 of 2

Drawn BC	Project S 2930
Date 20.01.2024	Sheet TW 002
Scale 1:50 @ A1 1:100 @ A3	Rev --

APPENDIX E: SITE INVESTIGATION REPORT



Geotechnical Survey Report

FSI Ref: 27798
Issue Date: January 2024

Risk Address: 161 Arlington Road,
Camden,
London,
NW1 7ET

Managing Director:	Martin Rush MSc FGS
Finance Director:	Louise Banks BSc (Hons)
Laboratory Manager:	Jade McLellan
Senior Geologist:	Thomas Lee BSc (Hons)
Assistant Geologist:	Sarah Brand
Geotechnical Assistant:	Bradley Webb