

No. 59
Cassidy Trade
Sales Office

Brill Place

Brill Place

Brill Place

Cassidy Street

Cassidy Street

BUS STOP

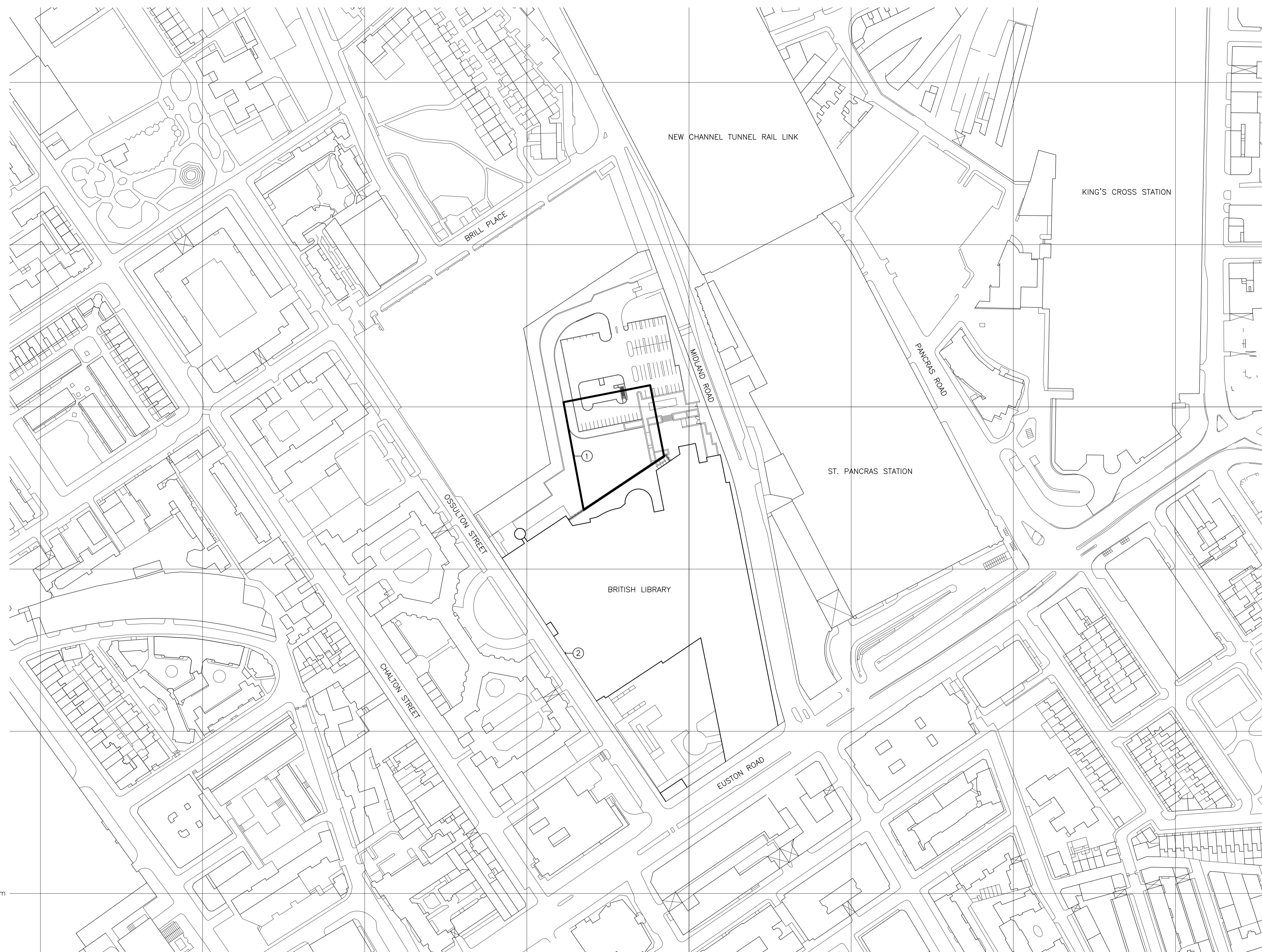
BUS STOP

BUS LANE

Mullins Street

Appendix D

British Library Conservation
Centre drawings



notes
 ① — SITE AREA
 ② — OTHER LAND OWNED BY THE BOARD OF THE BRITISH LIBRARY

date	mk	revision	dwn	chk

Long & Kentish architects
 27 Horsell Road London N5 1XL
 telephone 020 7607 5658 facsimile 020 7607 5621

client
 SIR ROBERT MCALPINE

project
 THE BRITISH LIBRARY
 CENTRE FOR CONSERVATION

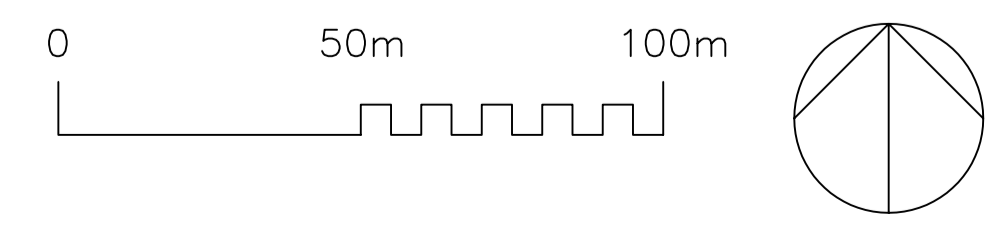
scale 1/12500A1	date 24/06/04
drawn MGB	checked RK
	passed

title
 LOCATION PLAN
 EXISTING
 DRAFT

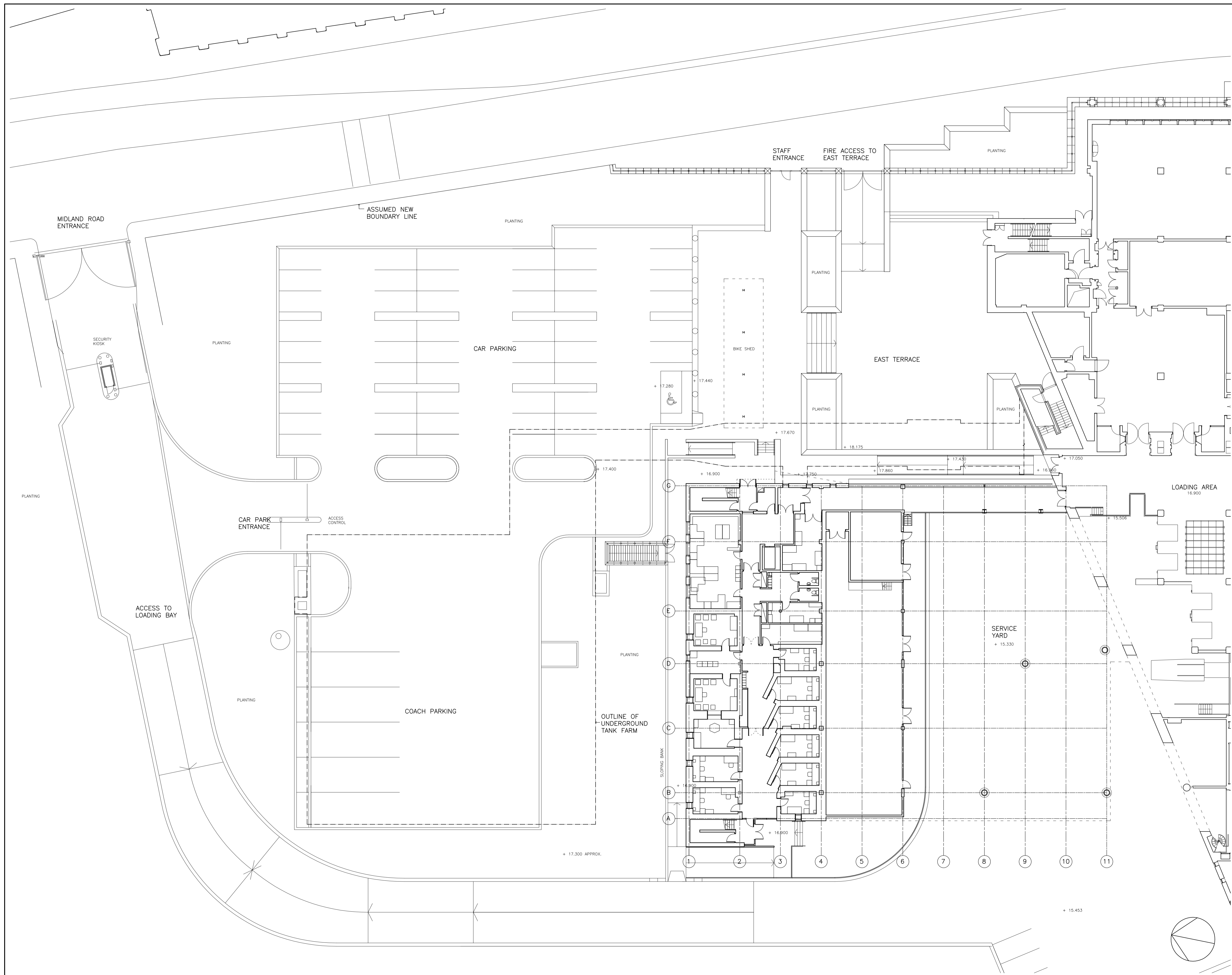
drawing no
 BLCC A(01)01

rev
 A

182700m
 529600m



notes
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date	mk	revision	dwn	chk
24/06/04	A	NEW DRAWING	MGB	--
05/07/04	B	LABELLING AMENDED	MGB	--
11/11/04	C	REVISED STAGE D	MGB	--
19/11/04	D	REVISED STAGE D	MGB	--
10/01/05	E	PLANNING	MGB	--

Long & Kentish architects
 27 Horsell Road London N5 1XL
 telephone 020 7607 5658 facsimile 020 7607 5621

client
SIR ROBERT MCALPINE

project
**THE BRITISH LIBRARY
 CENTRE FOR CONSERVATION**

scale
 1/200@A1

date
 6/02/04

drawn
 MGB

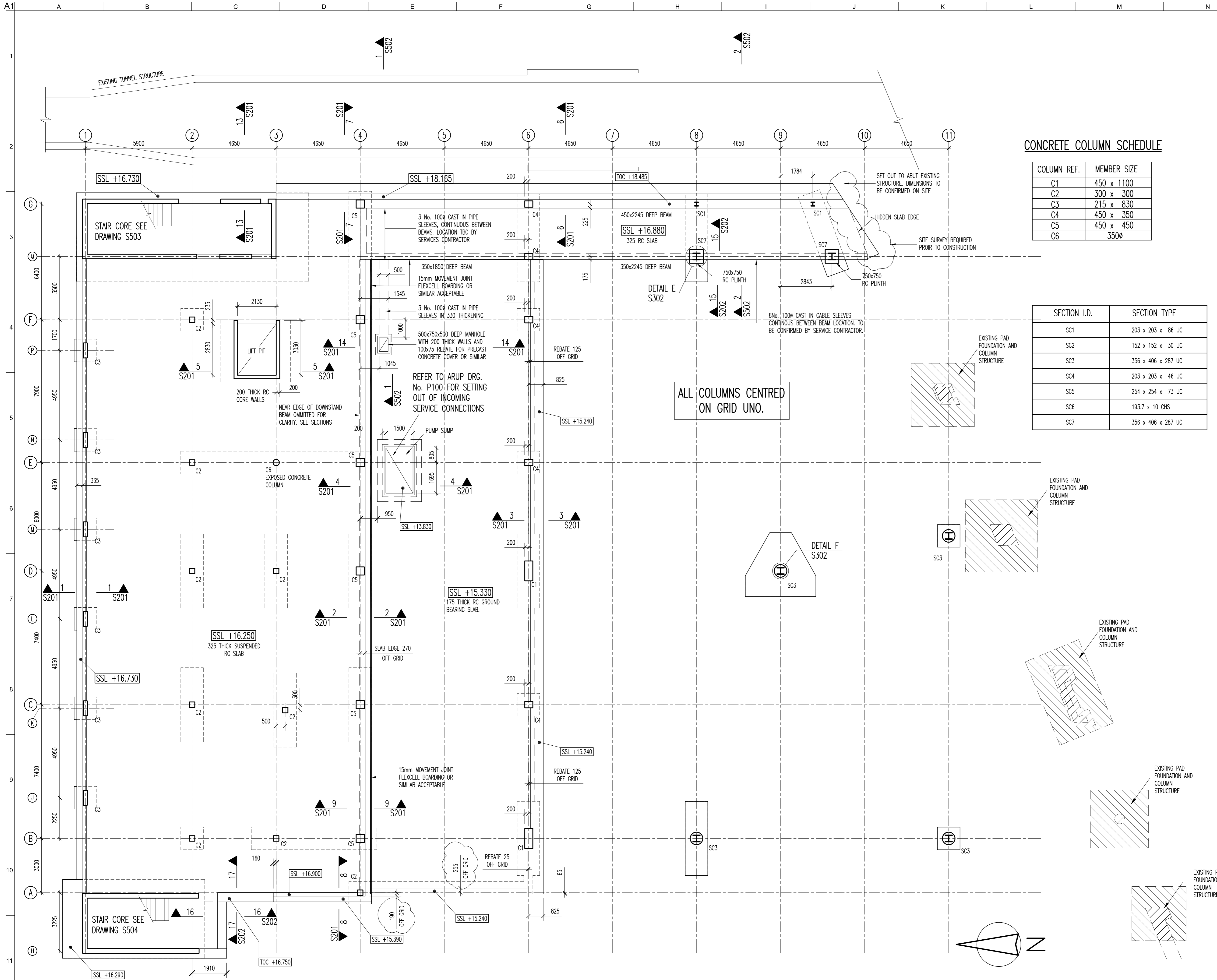
checked
 RK

passed
 RK

title
SITE PLAN

drawing no
BLCC A(01)02

rev
E



CONCRETE COLUMN SCHEDULE

COLUMN REF.	MEMBER SIZE
C1	450 x 1100
C2	300 x 300
C3	215 x 830
C4	450 x 350
C5	450 x 450
C6	350Ø

SECTION I.D.	SECTION TYPE
SC1	203 x 203 x 86 UC
SC2	152 x 152 x 30 UC
SC3	356 x 406 x 287 UC
SC4	203 x 203 x 46 UC
SC5	254 x 254 x 73 UC
SC6	193.7 x 10 CHS
SC7	356 x 406 x 287 UC

ALL COLUMNS CENTRED ON GRID UNO.

- NOTES**
- FOR GENERAL NOTES SEE S100.
 - FOR INCOMING SERVICE PENETRATIONS REFER ARUP DRAWING C101, UTILITIES CONNECTIONS AND CONNECTIONS/MODIFICATIONS TO EXISTING BUILDING SERVICES
 - FOR LIGHTNING PROTECTION REQUIREMENTS REFER TO ELECTRICAL DRAWINGS AND SPECIFICATION
 - FOR UNDER SLAB DRAINAGE REFER TO ARUP DRAWING P100
 - REFER TO ARCHITECTS DRAWINGS AND SPECIFICATION FOR UNDERSLAB DAMP PROOF MEMBRANE AND INSULATION
 - GROUND FLOOR SLAB CAST ON SAND OR BLINDING
 - ALL COLUMNS ON GRID LINE A TO RECEIVE A 15x15 CHAMFER

C4	02/11/05	PBH	TMT	GC
REVISION ACCORDING TO SRM, L-K AND ARUP AGREED MARK UP				
C3	03/10/05	sam	TMT	TM
REVISION AS PER L&K DCR008				
C2	01/09/05	sam	TMT	IMcV
NOTE ADDED TO PUMP SUMP				
C1	22/08/05	PBH		
ISSUED FOR CONSTRUCTION				
E1	28/02/05	AJG		
Issued for Stage E detailed design				
T1	24/12/04	PBH		
TENDER ISSUE				
S2	24/06/04	PBH		
SCHEME DESIGN SECOND ISSUE				
S1	21/06/04	PBH		
SCHEME DESIGN FIRST ISSUE				
Issue	Date	By	Chkd	Appd

ARUP

13 Fitzroy Street
 London W1T 4BQ
 Tel +44 (0)20 7636 1531 Fax +44 (0)20 7580 3924
 www.arup.com

Client
SIR ROBERT MCALPINE

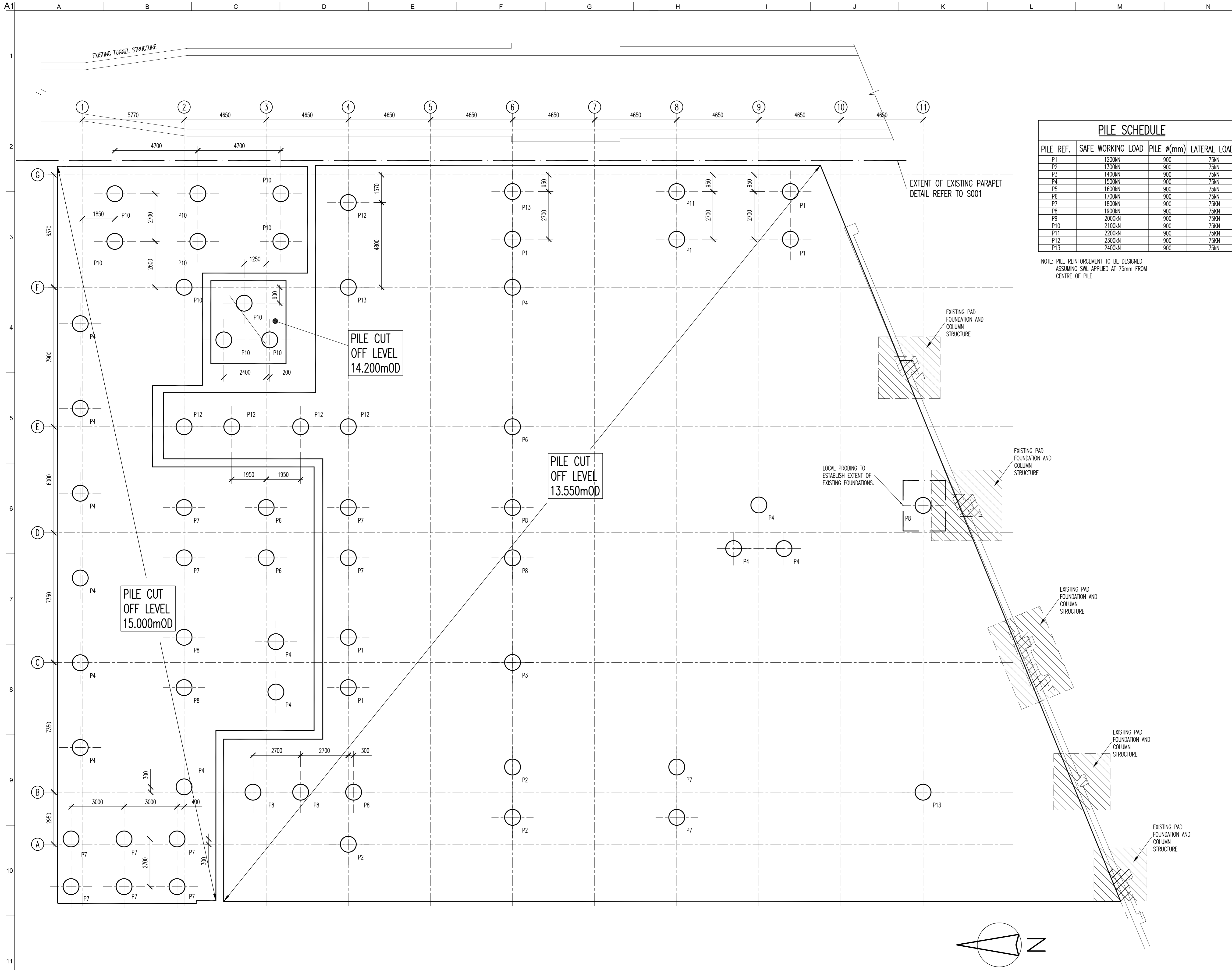
Job Title
BRITISH LIBRARY CENTRE FOR CONSERVATION

Scale at A1 1:100

Plot ID 0693133C-79E0-4B41-B761-B8AD73C20216

Drawing Status
CONSTRUCTION

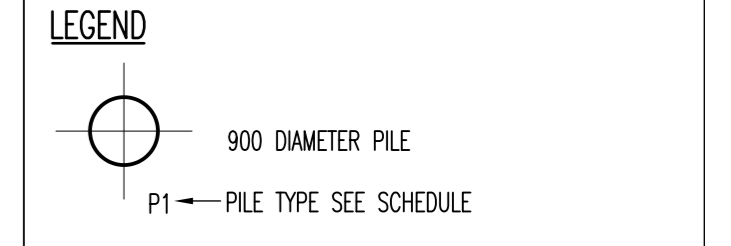
Job No **114845** Drawing No **S101** Issue **C4**



PILE SCHEDULE			
PILE REF.	SAFE WORKING LOAD	PILE Ø(mm)	LATERAL LOAD
P1	1200kN	900	75kN
P2	1300kN	900	75kN
P3	1400kN	900	75kN
P4	1500kN	900	75kN
P5	1600kN	900	75kN
P6	1700kN	900	75kN
P7	1800kN	900	75kN
P8	1900kN	900	75kN
P9	2000kN	900	75kN
P10	2100kN	900	75kN
P11	2200kN	900	75kN
P12	2300kN	900	75kN
P13	2400kN	900	75kN

NOTE: PILE REINFORCEMENT TO BE DESIGNED ASSUMING SWL APPLIED AT 75mm FROM CENTRE OF PILE

- NOTES**
- GENERAL NOTES SEE S100
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SURVEY, EXISTING BUILDING AND SERVICES ENGINEERING DRAWINGS.
 - ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS GIVEN IN METRES ABOVE ORDNANCE DATUM.
 - DO NOT SCALE FROM THESE DRAWINGS.
 - ALL INFORMATION RELATED TO EXISTING STRUCTURE IS INDICATIVE, BASED ON ARCHIVE DRAWINGS AND MUST BE CHECKED ON SITE.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACT DRAWINGS AND SPECIFICATIONS, IN PARTICULAR DRAWING No S100.
 - THE PILES ARE TO BE CONTRACTOR DESIGNED. THE PERFORMANCE CRITERIA ARE NOTED IN THE SPECIFICATIONS.
 - ALL LOADS ARE UNFACTORED. PILE CAP SELF WEIGHT IS INCLUDED.
 - THE DETAILED SUBSTRUCTURE DESIGN IS BASED ON THE PILE LAYOUT INDICATED ON THIS DRAWING. ANY CHANGES PROPOSED BY THE CONTRACTOR TO THE PILE LOCATIONS OR DIAMETERS SHOWN HERE SHALL BE SUBMITTED BY THE CONTRACTOR AT TENDER STAGE AND SHALL REQUIRE APPROVAL BY THE ENGINEER PRIOR TO ACCEPTANCE FOR IMPLEMENTATION.
 - NOTE: ANY REQUIRED REDESIGN WORKS FOR AN ALTERNATIVE LAYOUT WILL NEED TO BE CONSIDERED PRIOR TO ACCEPTANCE
 - THE CONTRACTOR SHALL CONFIRM THAT THE GROUND INVESTIGATION INFORMATION PROVIDED IS ADEQUATE FOR THEIR DESIGN. THE CONTRACTOR IS NOT PRECLUDED FROM CARRYING OUT ADDITIONAL SITE INVESTIGATION TO VERIFY THE GROUND CONDITIONS, DETERMINE PARAMETERS FOR HIS DESIGN AND SATISFY HIMSELF REGARDING THE SAFE TRAFFIC OF HIS PLANT ON THE SITE.
 - OBSTRUCTIONS SHALL BE REMOVED BY PROBING AND PREDIGGING OR PREAUGERING AT PILE LOCATIONS.
 - CONCRETE GRADE TO BE C28/35
 - PILE CONCRETE TO BE DESIGNED TO SULPHATE CLASS 'DS-4', AND CHEMICAL ENVIRONMENT 'AC-4'.
 - REFER TO PILE SCHEDULE FOR LOADS
 - LOCATIONS OF PILES ADJACENT TO EXISTING STRUCTURE ARE BASED ON A MINIMUM DISTANCE OF 1200 FROM CENTRE-LINE OF PILE TO FACE OF EXISTING STRUCTURE FROM SITE SURVEY INFORMATION.



E1	21/02/05	PBH		
STAGE E - DETAIL DESIGN				
S3	12/11/04	PBH		
REVISION TO ARCHITECTS LAYOUTS				
S2	/ /	PBH		
NOT USED				
S1	21/06/04	PBH		
SCHEME DESIGN FIRST ISSUE				
Issue	Date	By	Chkd	Appd

ARUP

13 Fitzroy Street
 London W1T 4BQ
 Tel +44 (0)20 7636 1531 Fax +44 (0)20 7580 3924
 www.arup.com

Client

SIR ROBERT MCALPINE

Job Title
**BRITISH LIBRARY
 CENTRE FOR CONSERVATION**

Drawing Title
PILE LAYOUT

Scale at A1 1:100

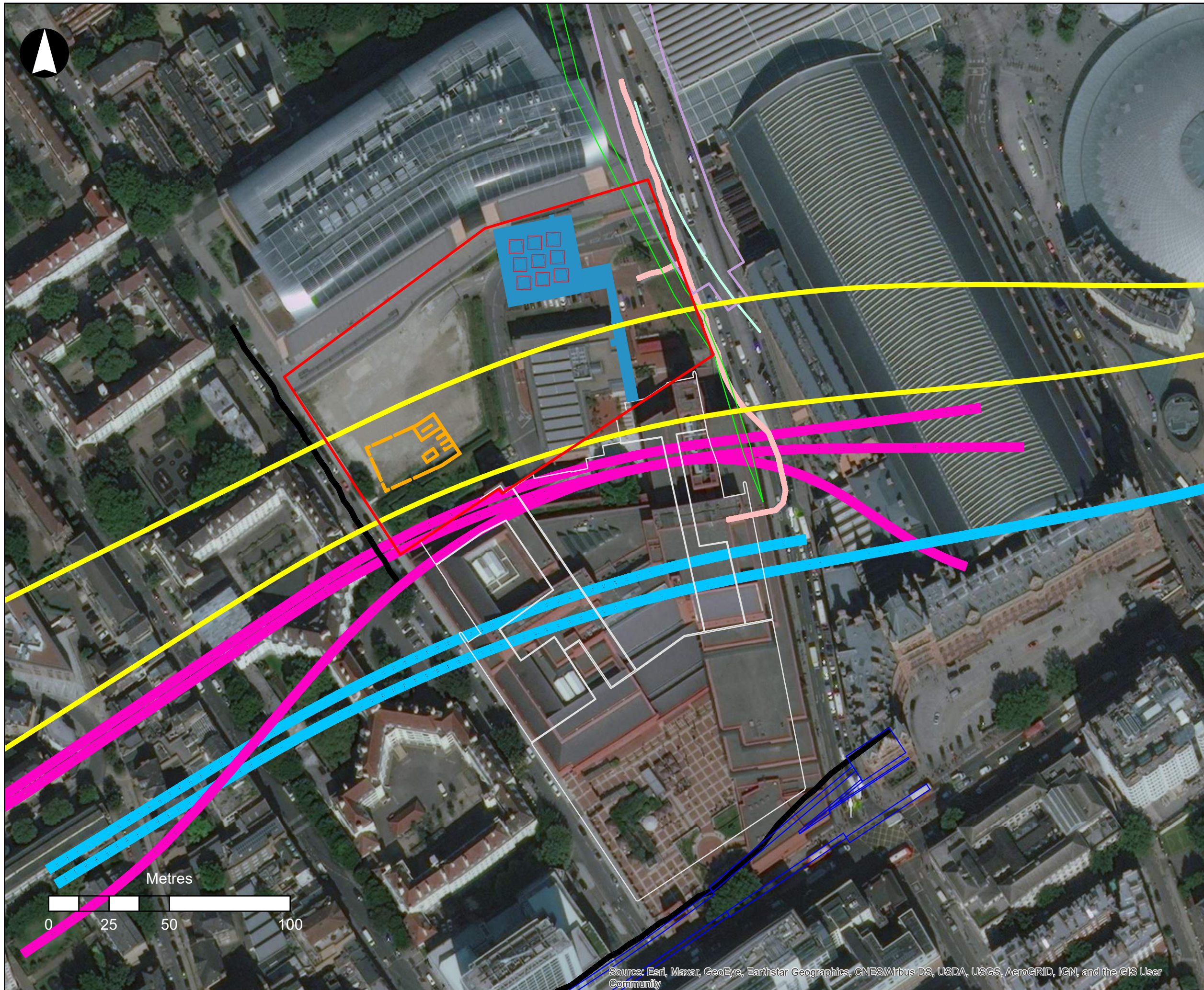
Plot ID 361A0817-50CD-4783-9420-D7A8E878B1D

Drawing Status
STAGE E - DETAIL DESIGN

Job No 114845	Drawing No S099	Issue E1
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Appendix E

Underground constraints



- Legend**
- Site boundary
 - Proposed CR2 Shaft
 - Proposed CR2 Alignment North
 - Proposed CR2 Alignment South
 - Approx. Tank Farm Pad Footings
 - Metropolitan Line
 - Services corridor
 - Approx. Tank Farm Extent
 - Abandoned Sewer
 - Basements
 - Midland Loop Tunnel
 - Northern Line Disused
 - Northern Line North Bound
 - Northern Line South Bound
 - Sewer Line (NE)
 - Sewer Line (South)
 - Thameslink Box
 - Victoria Line North Bound
 - Victoria Line South Bound

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P1	14-10-20	AWE/RG	HT/NB	HT/NB
Issue	Date	By	Chkd	Appd

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13 Fitzroy Street
 London W1T 4BQ
 Tel +44 20 7636 1531 Fax +44 20 7580 3924
 www.arup.com

Client
**Stanhope Mitsu British Library
 Developments Ltd**

Job Title
British Library

Indicative plan showing
underground constraints

Scale at A3
1:1,500

Job No 249622-00	Drawing Status For Information
----------------------------	------------------------------------------

Drawing No 001	Issue P1
--------------------------	--------------------

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

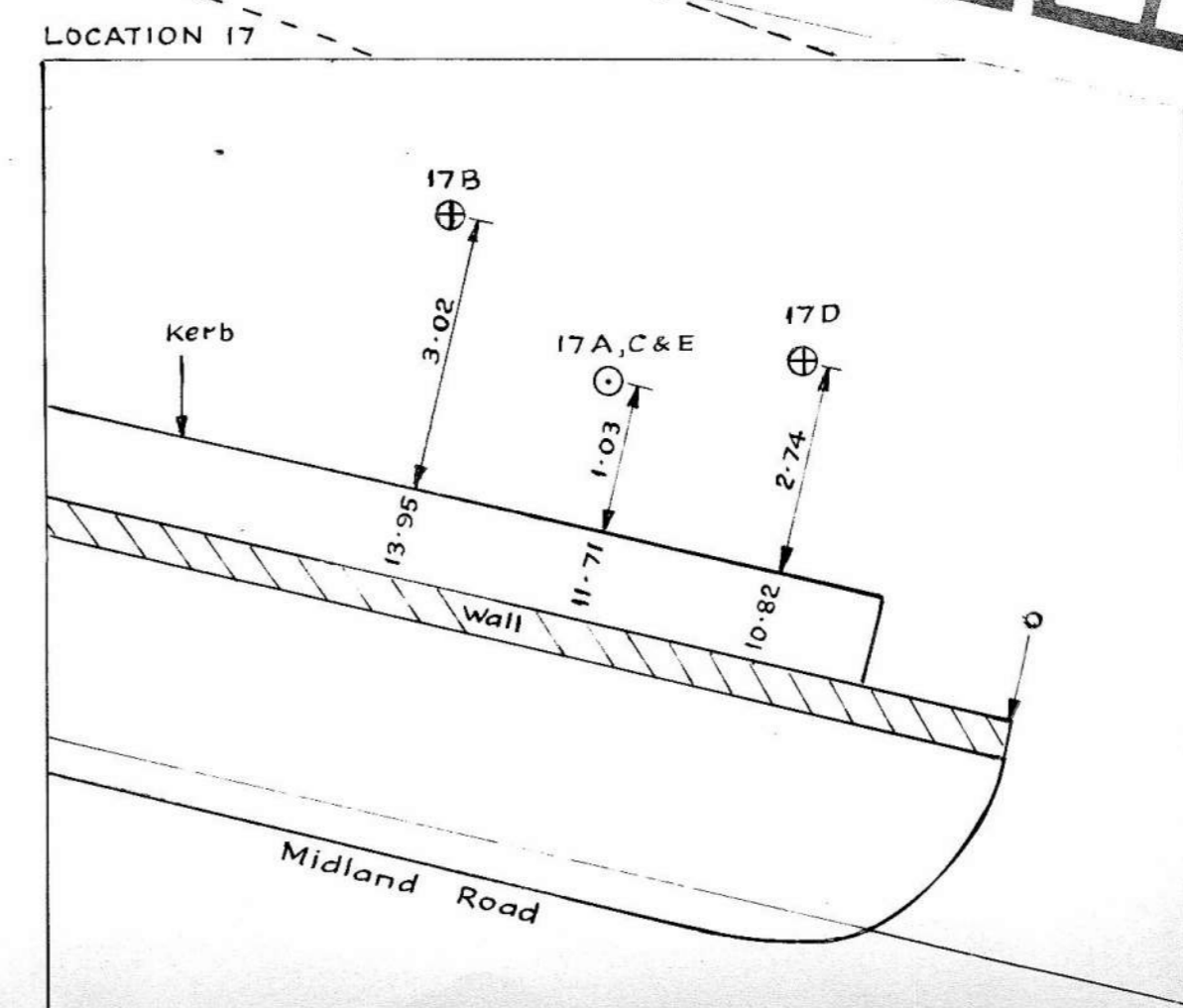
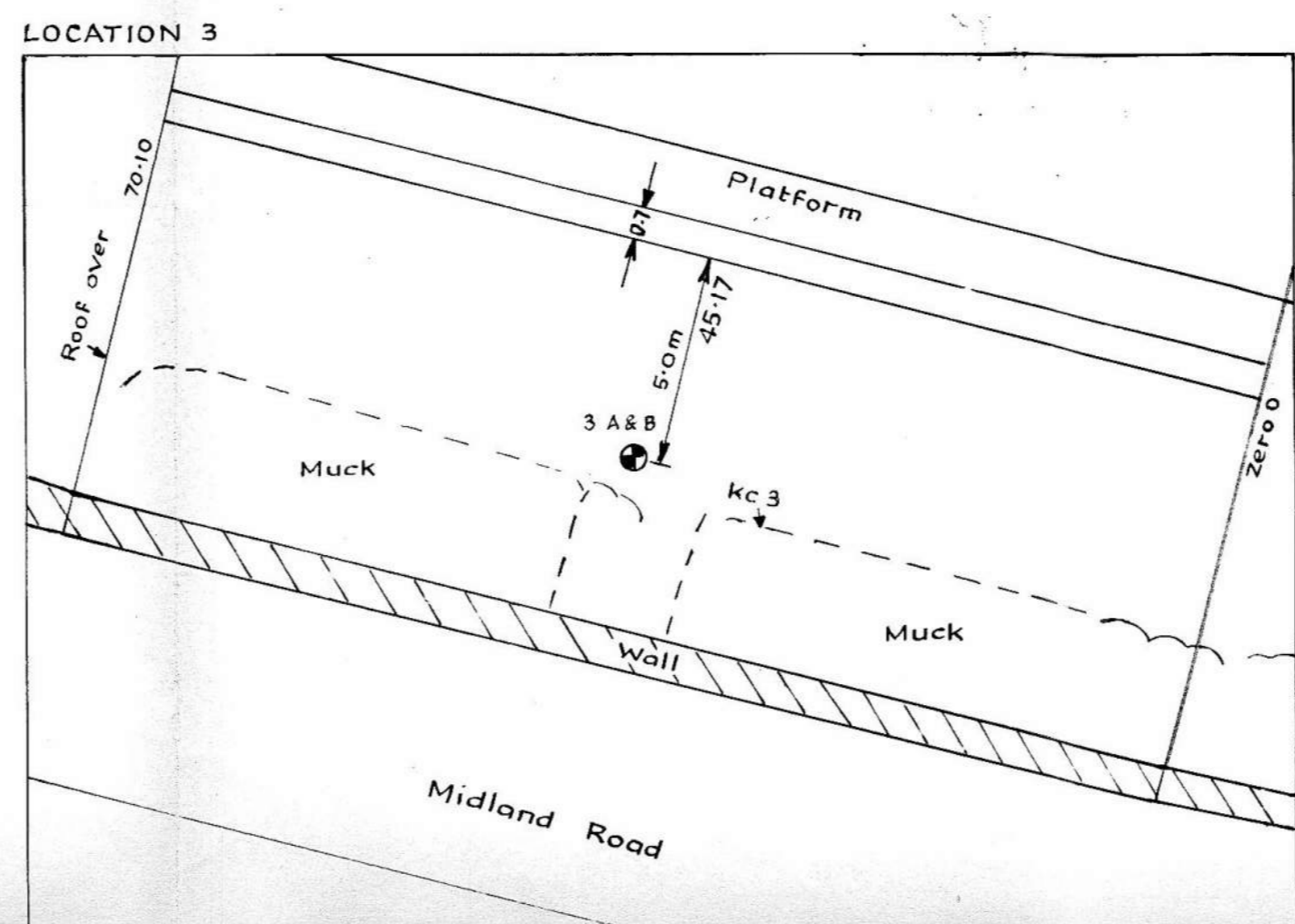
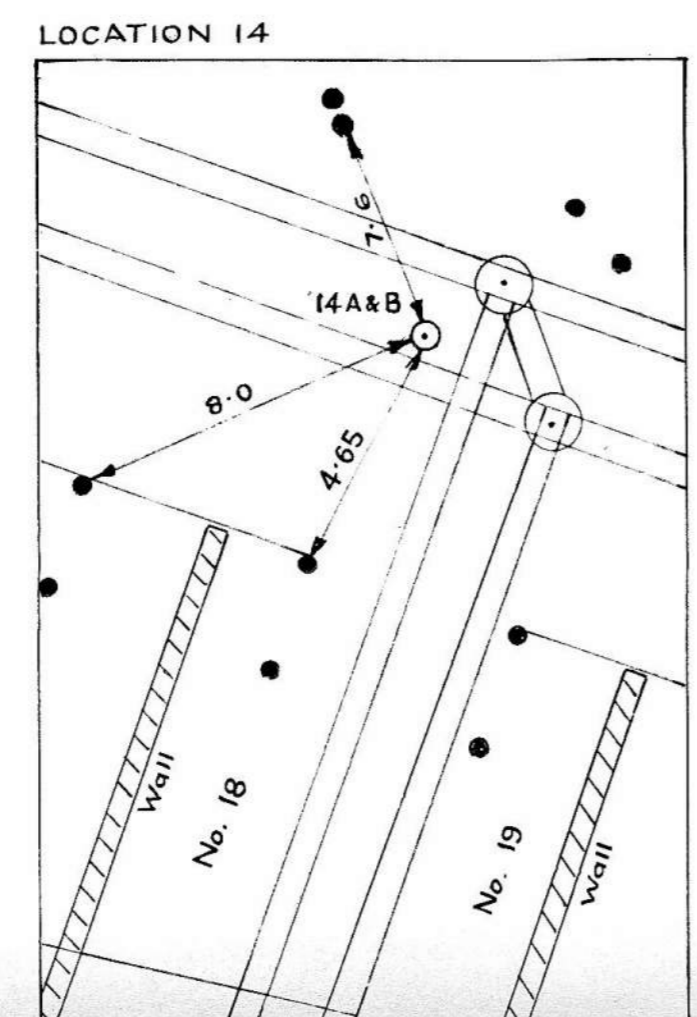
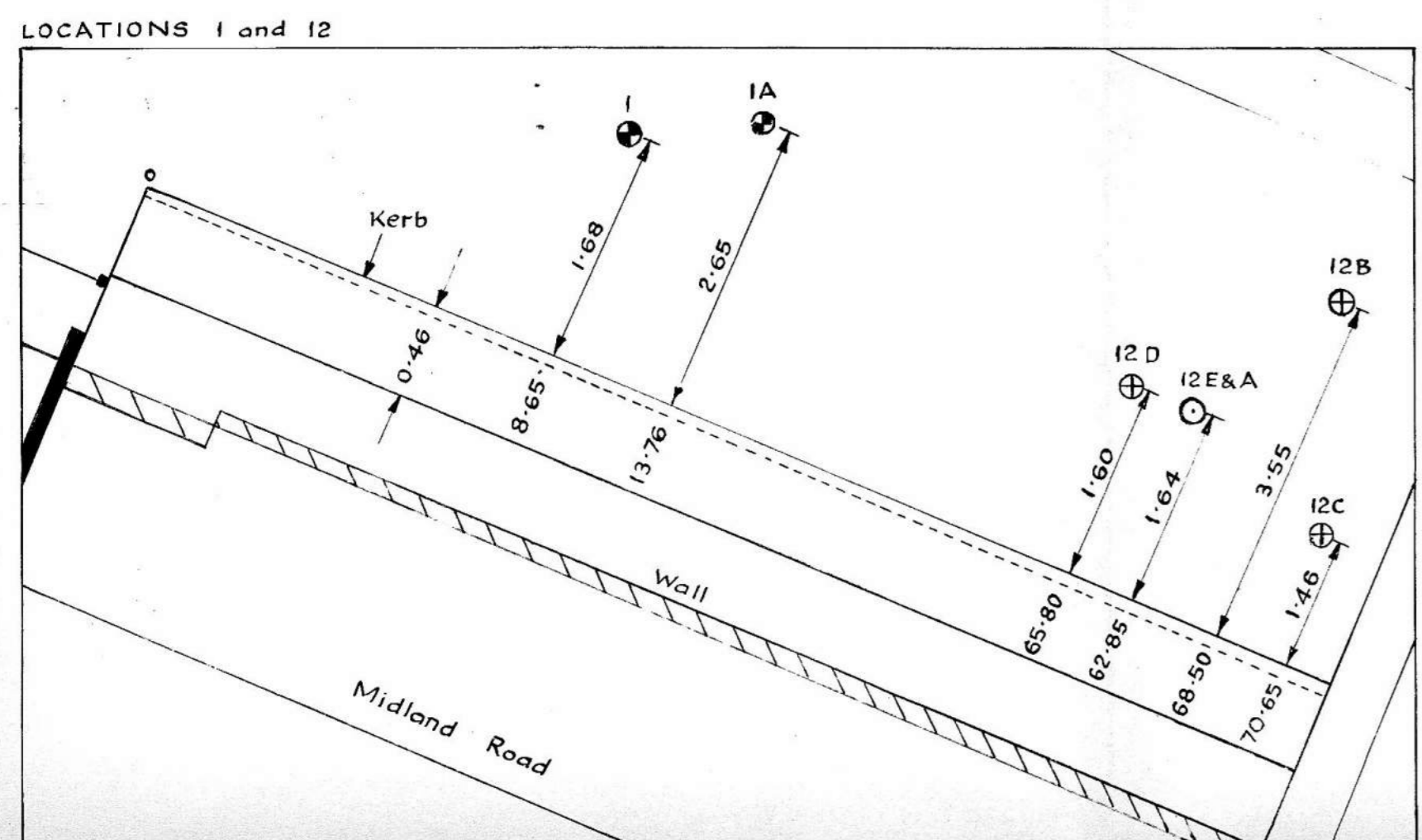
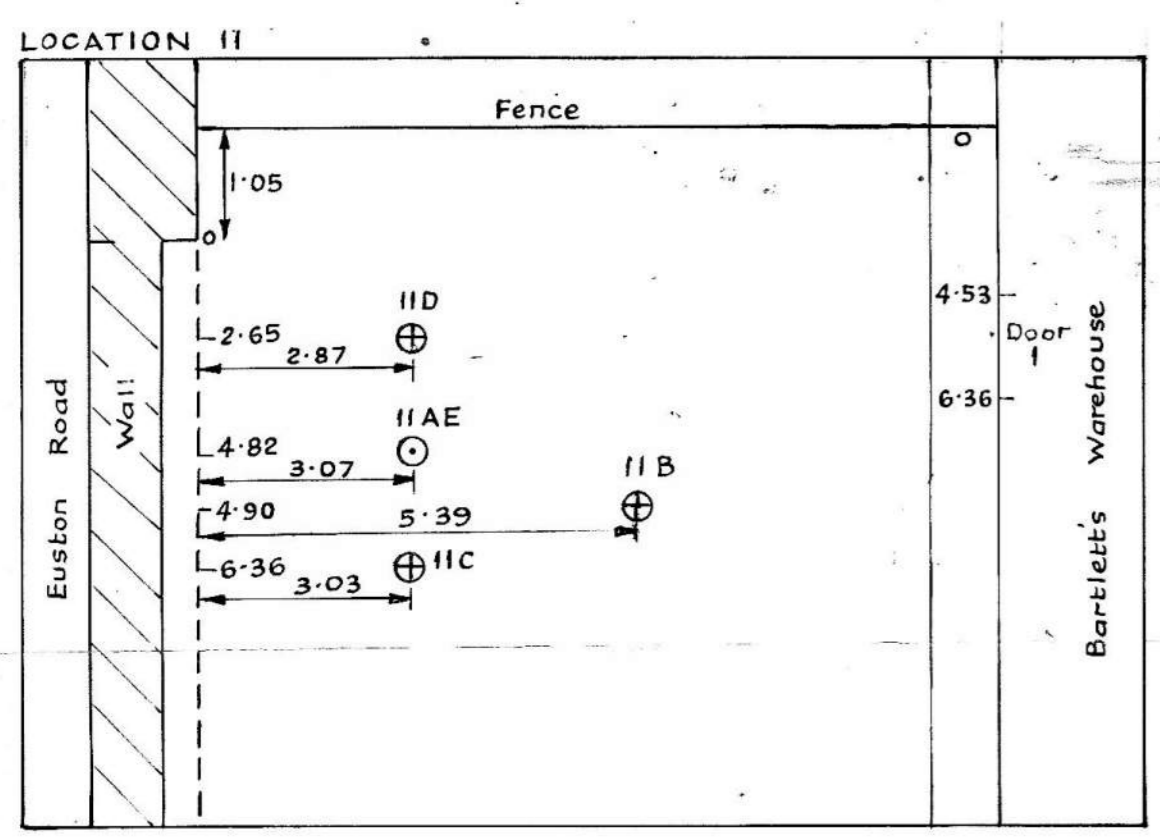
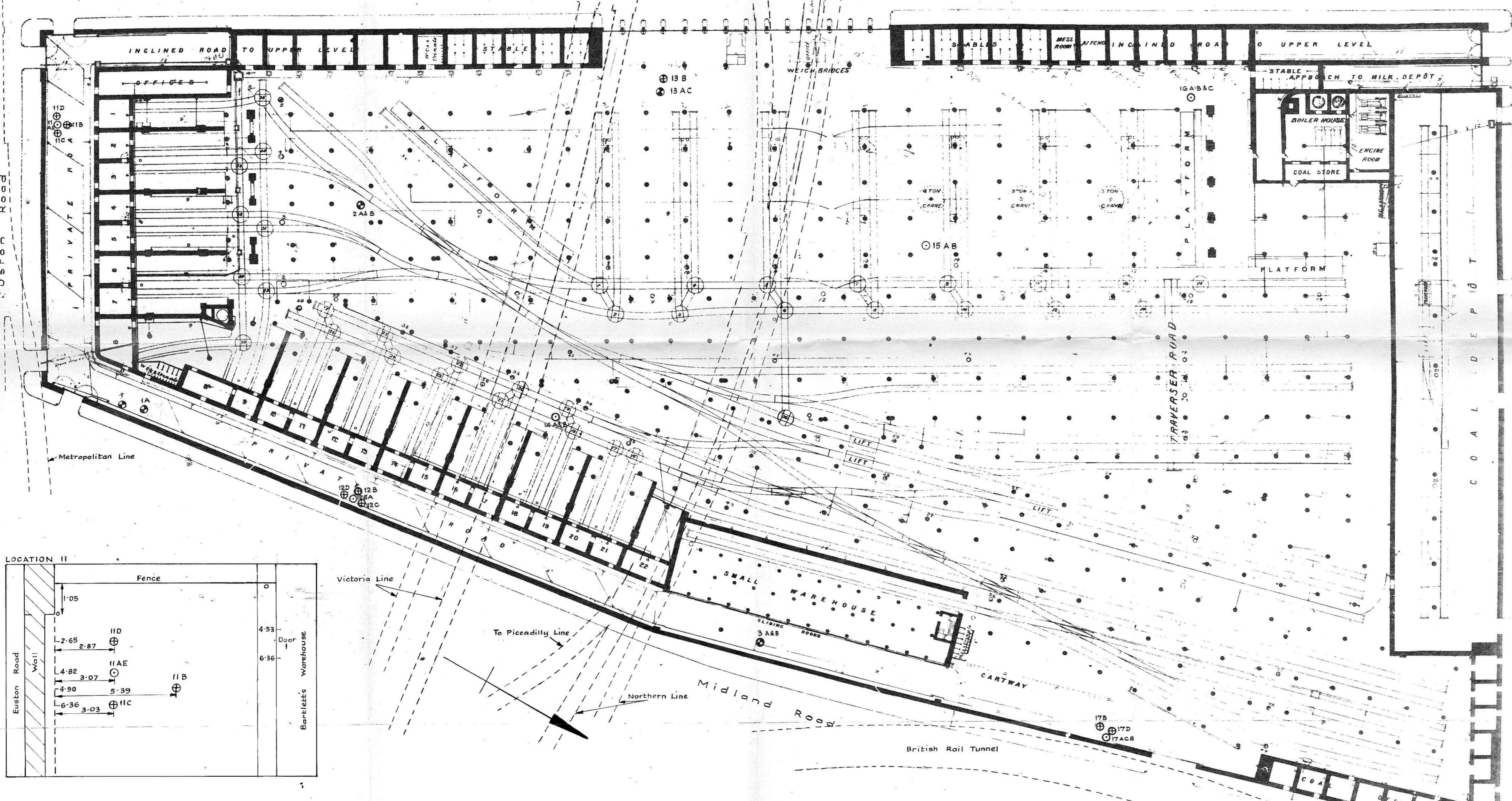
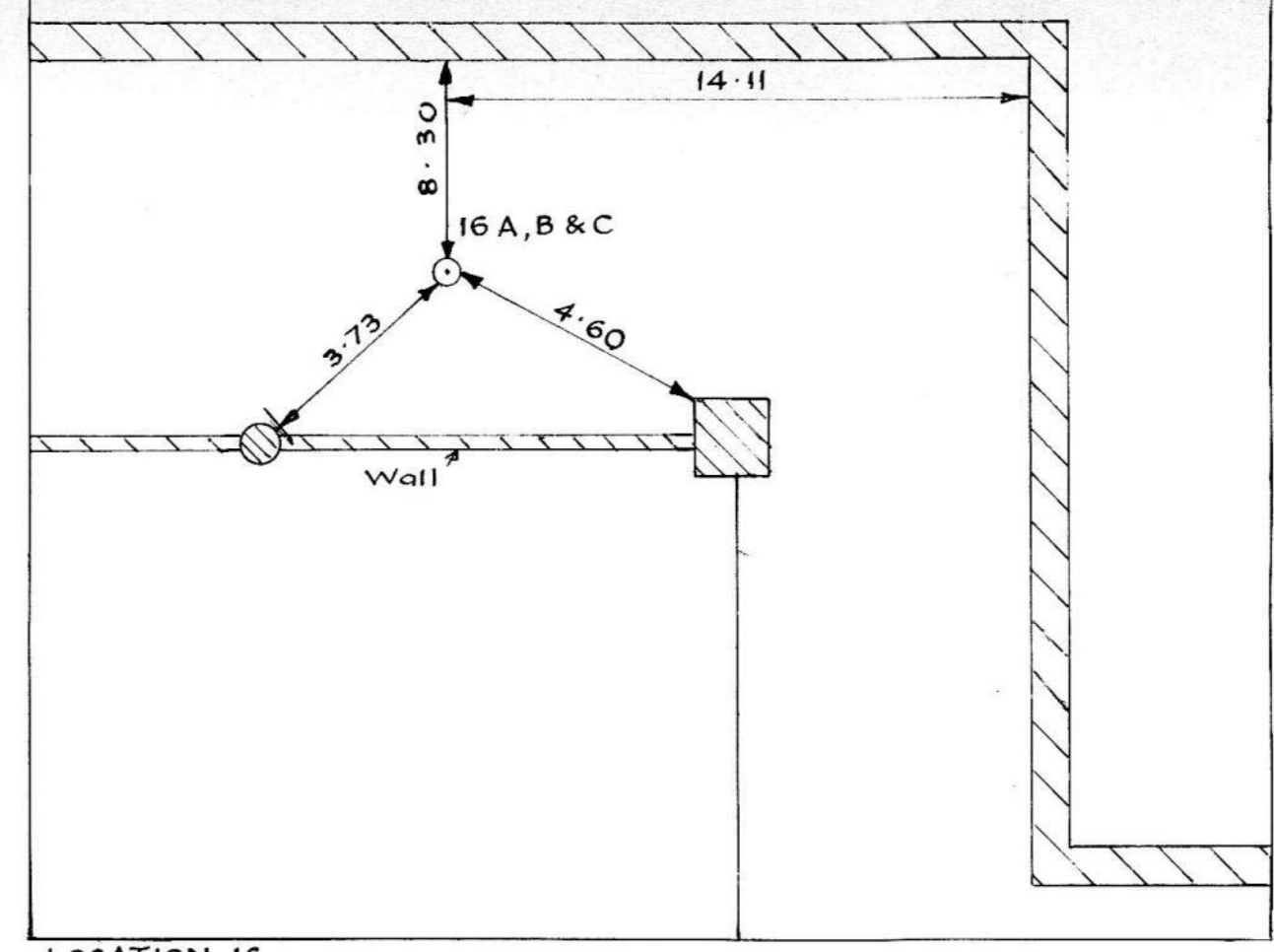
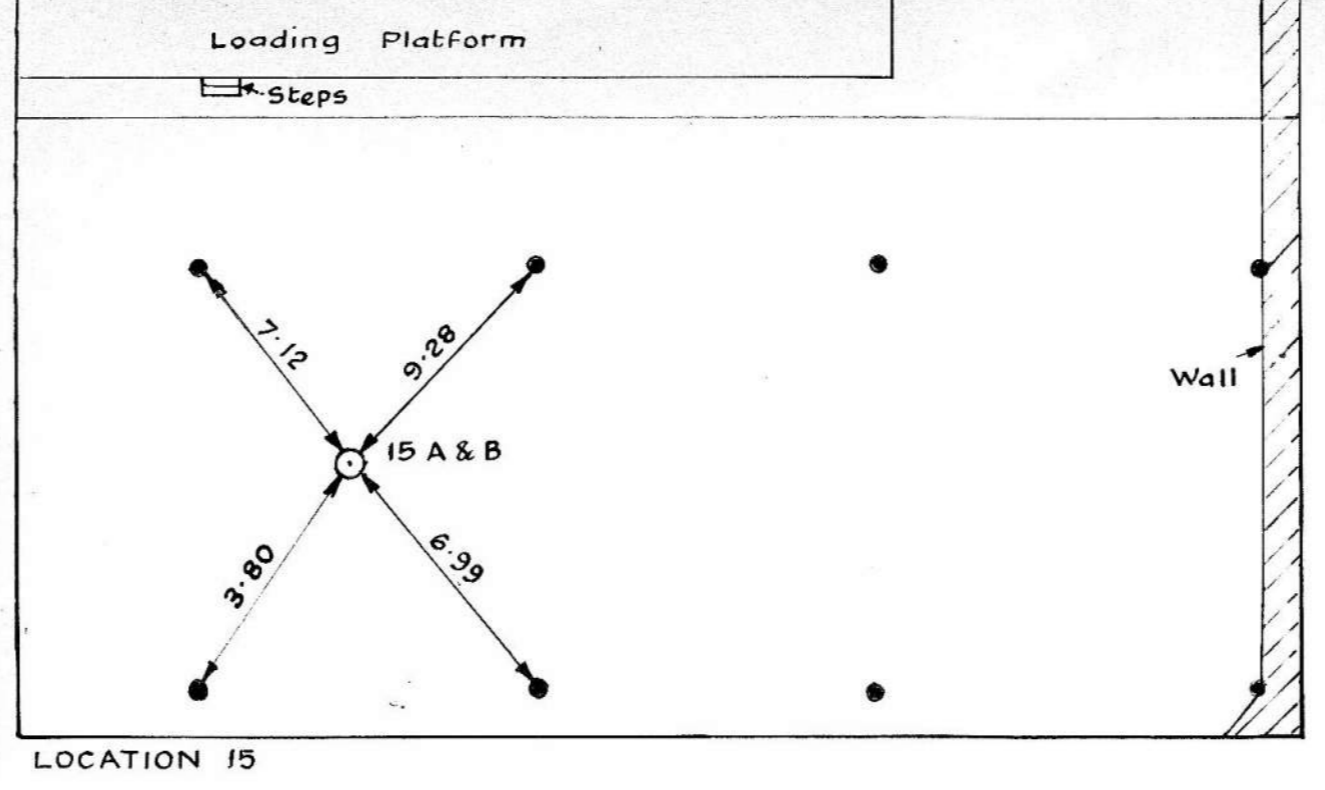
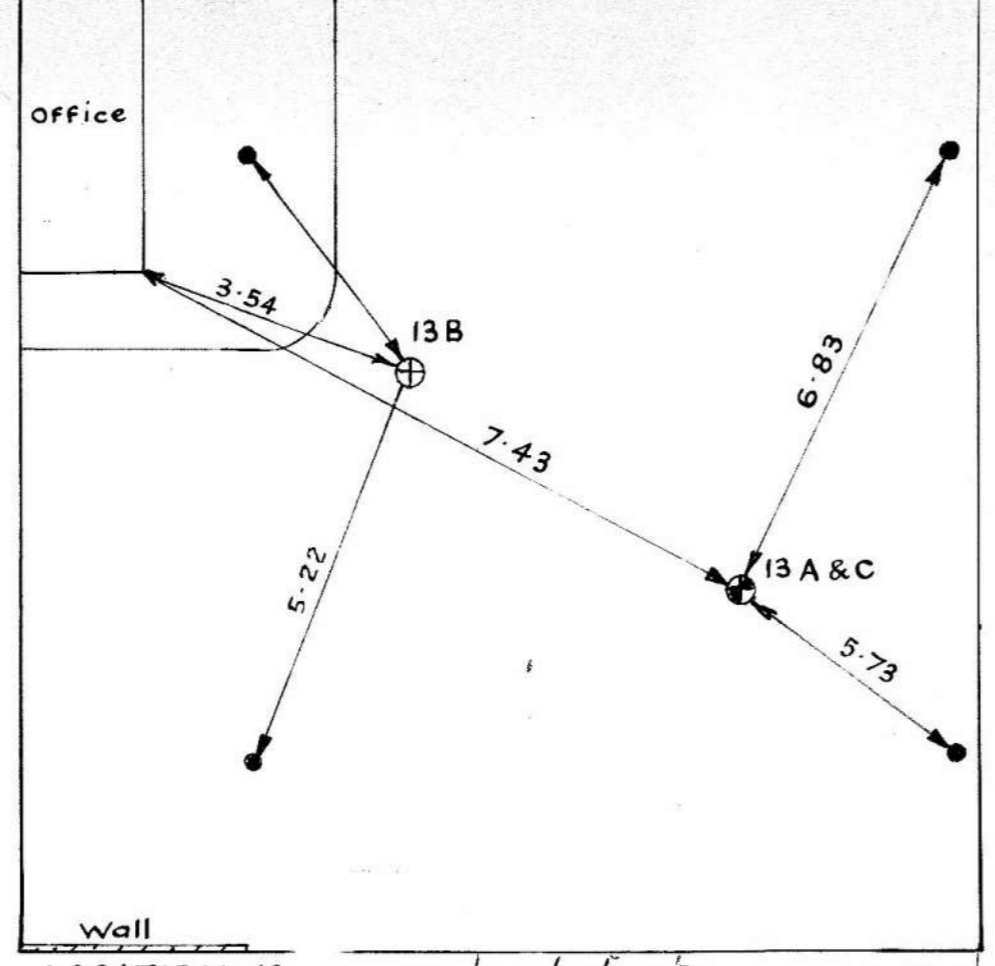
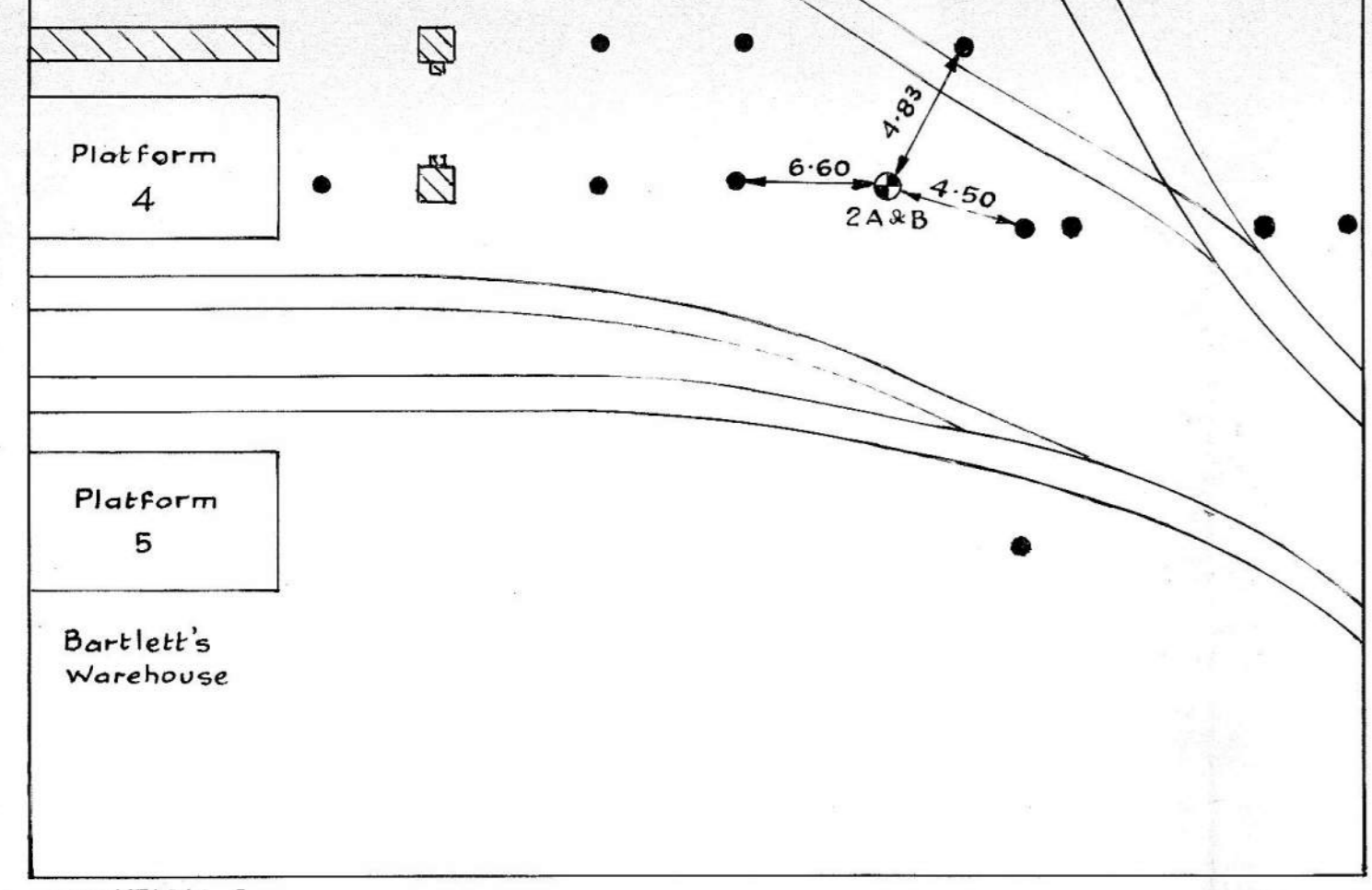
- KEY**
- ⊕ Borehole - rotary-drilled, cored
 - ⊕ Borehole - rotary-drilled, open-hole
 - Borehole - shell and auger
 - Columns

Notes

1. The details for the location plan are taken from a plan supplied by British Railways. The scale is approximately 1:500.
2. The location of the London Transport Underground tunnels and the British Railway Tunnel have been added from a recent survey which is a slightly different scale from above.
3. It should be noted that the sketch plans detailing the borehole locations are not to scale. All the measurements shown are in metres.
4. The ground levels at the borehole positions are:-

Borehole	Ground Level (m O.D.)
RC 1	19.33
RC 1A	19.29
RC 2	19.46
RC 3	18.37
RC 13	18.46
SG 11	19.75
SG 12	19.24
SG 14	19.45
SG 15	18.53
SG 16	19.50
SG 17	17.54

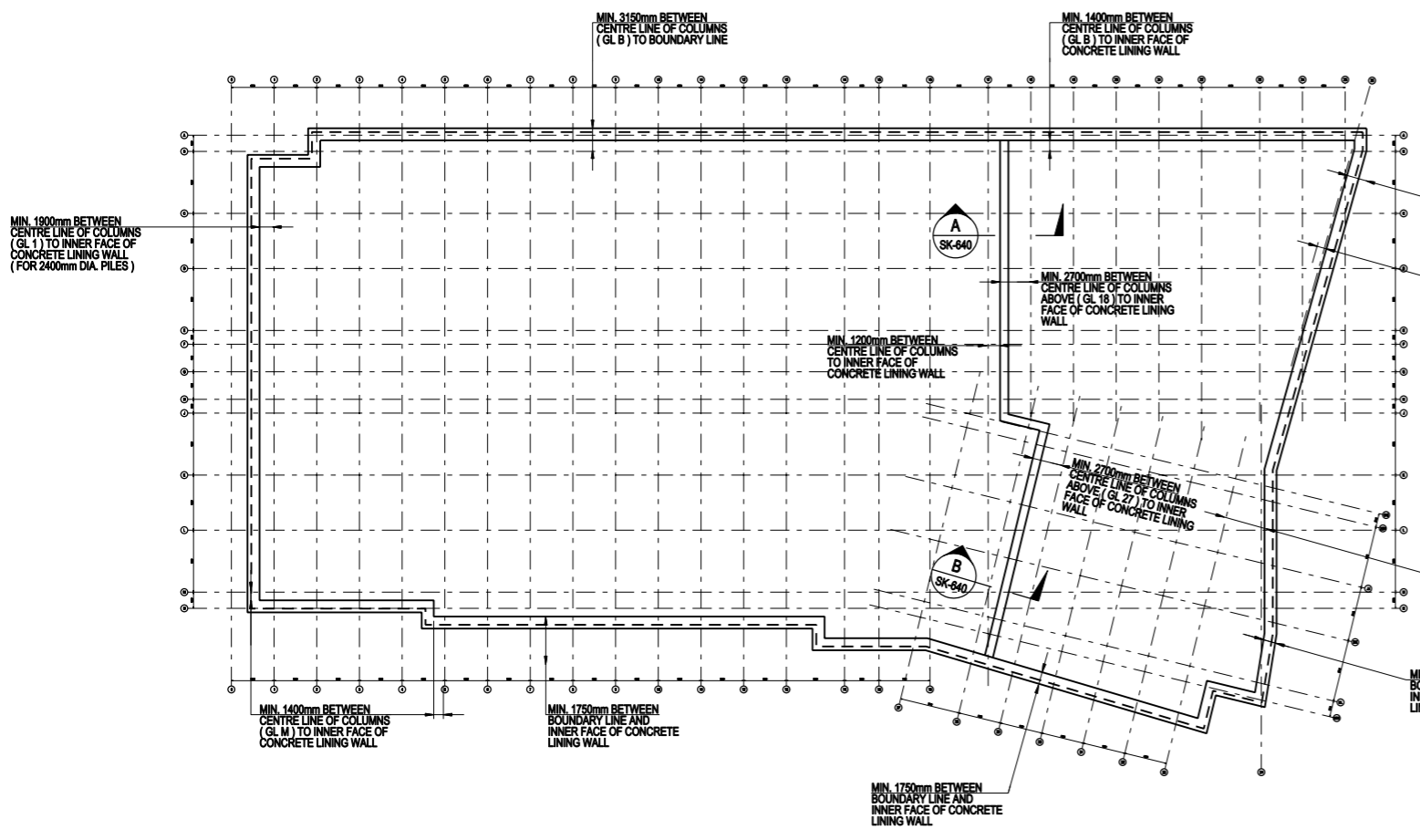
The ground levels adjacent to the boreholes sunk exclusively for piezometer installations are given at the appropriate appendix.



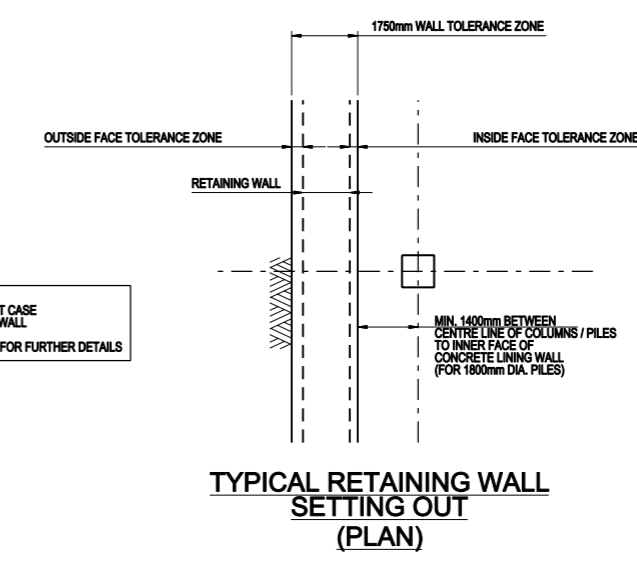
Appendix F

UKCMRI drawings

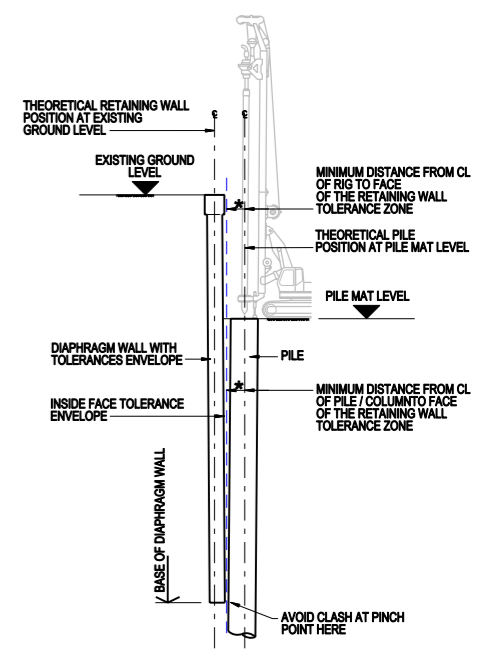
- NOTES**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS AND ENGINEERS DRAWINGS, SPECIFICATIONS AND DETAILS.
 2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS STATED OTHERWISE
 3. DO NOT SCALE FROM THIS DRAWING
 4. FOR MOVEMENT AND TOLERANCES REFER TO DRAWING No S-GEN-005
 5. FOR GENERAL NOTES PLEASE REFER TO -S-GEN-001/004



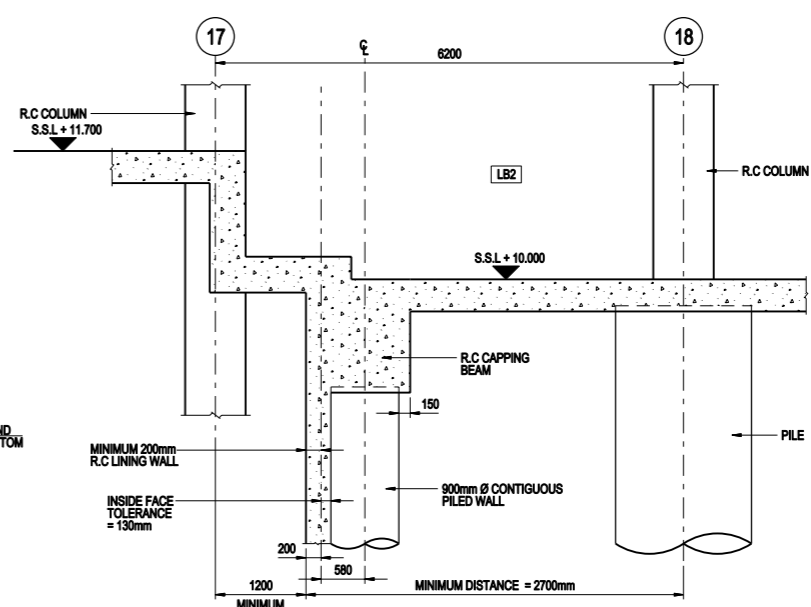
RETAINING WALL PLAN
SCALE 1:500



TYPICAL RETAINING WALL SETTING OUT (PLAN)

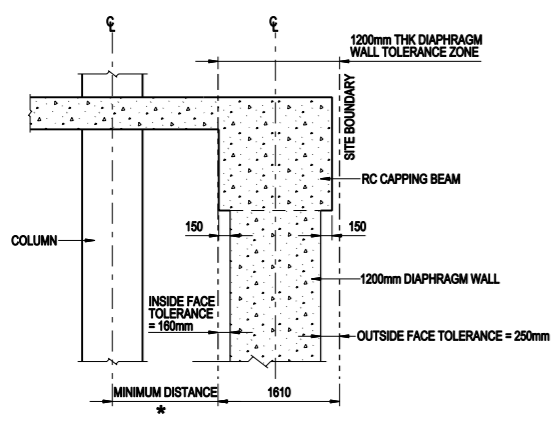
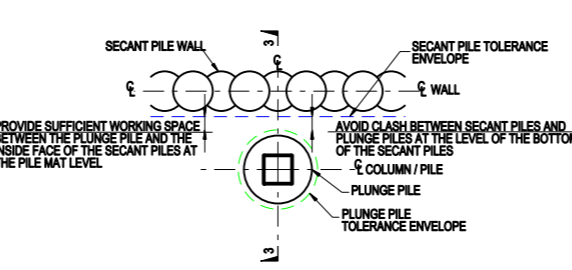
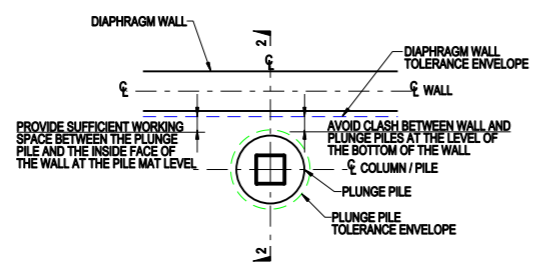
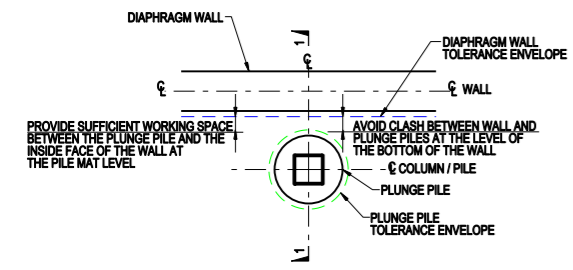


PILES INSTALLED FROM BASEMENT -1 FORMATION LEVEL
- APPROX. 8.2m BELOW EXTERNAL GROUND LEVEL

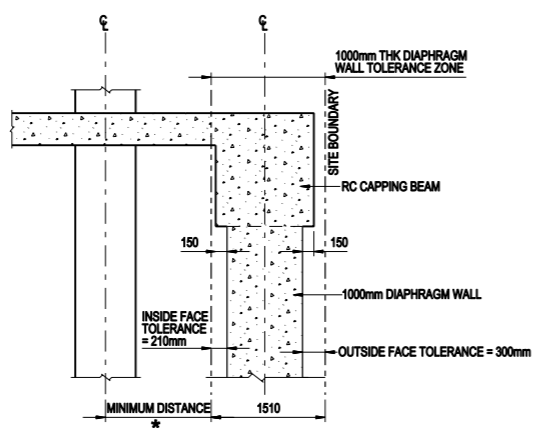


CONTIGUOUS PILED WALL - SETTING OUT SECTION A
SK-640

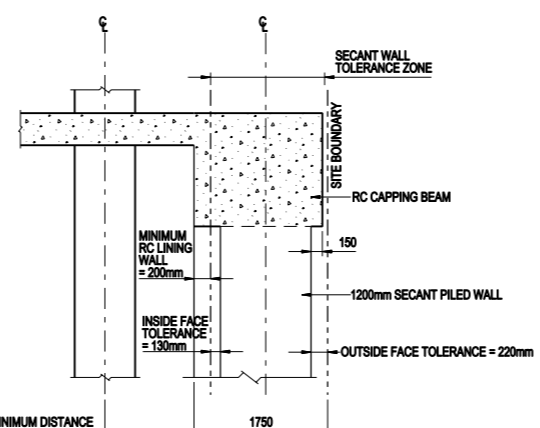
- SETTING OUT DIMENSIONS FOR CONTIGUOUS PILED WALL ARE BASED ON THE FOLLOWING**
- PILE DIAMETER EACH SIDE OF WALL : 2100mm
 - CONTIGUOUS PILES DIAMETER : 900mm
 - TOLERANCES FOR SINGLE / PLUNGE PILE : ±75mm PLAN **
 - TOLERANCES FOR CONTIGUOUS PILES : ±75mm PLAN ±1:150 RAKE



SECTION 1 - 1
1200mm THK DIAPHRAGM WALL
SCALE 1:50



SECTION 2 - 2
1000mm THK DIAPHRAGM WALL
SCALE 1:50



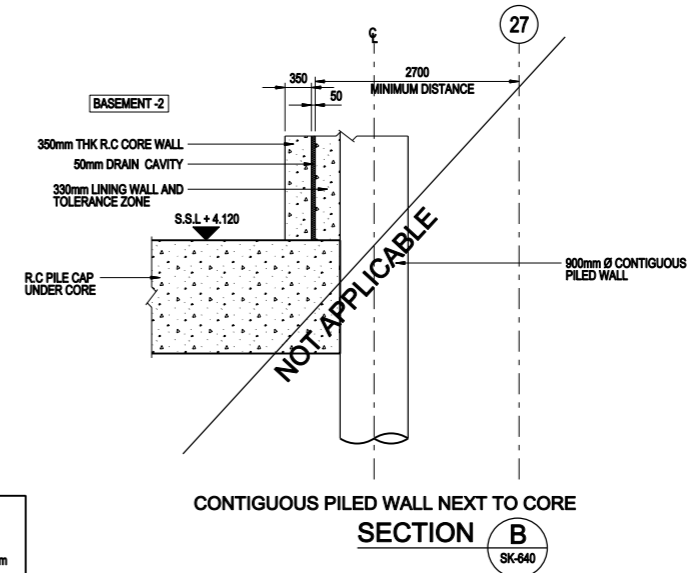
SECTION 3 - 3
1200mm DIA. SECANT PILED WALL
SCALE 1:50

- TOLERANCES BASED ON THE FOLLOWING**
- PILE : ±75mm PLAN ** ±1:150 RAKE
 - DIAPHRAGM WALL (WITH GUIDE WALL) : ±25mm PLAN ±1:125 RAKE

- TOLERANCES BASED ON THE FOLLOWING**
- PILE : ±75mm PLAN ** ±1:150 RAKE
 - DIAPHRAGM WALL (WITHOUT GUIDE WALL) : ±75mm PLAN ±1:125 RAKE

- TOLERANCES BASED ON THE FOLLOWING**
- PILE : ±75mm PLAN ** ±1:150 RAKE
 - SECANT PILE (WITH GUIDE WALL) : ±25mm PLAN ±1:125 RAKE

- MINIMUM DISTANCE FROM CENTRE OF COLUMN / PILE TO WALL TOLERANCE ZONE**
- FOR 1800mm DIA. PILES : ±1400mm
 - FOR 2400mm DIA. PILES : ±1900mm



CONTIGUOUS PILED WALL NEXT TO CORE SECTION B
SK-640

FOR INFORMATION ONLY

RETAINING WALL OPTIONS SETTING OUT ADJACENT TO SITE BOUNDARY
** PILE TOLERANCES FOR PLUNGE PILES IN DOUBLE BASEMENT TO HAVE TIGHTER PLAN TOLERANCE OF ±25mm WITH GUIDE - SEE S-GEN-011. FOR PURPOSES OF SETTING OUT, A WORST CASE TOLERANCE OF ±75mm HAS BEEN ASSUMED

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T1	20.08.10	ISSUED FOR TENDER	BB	CN

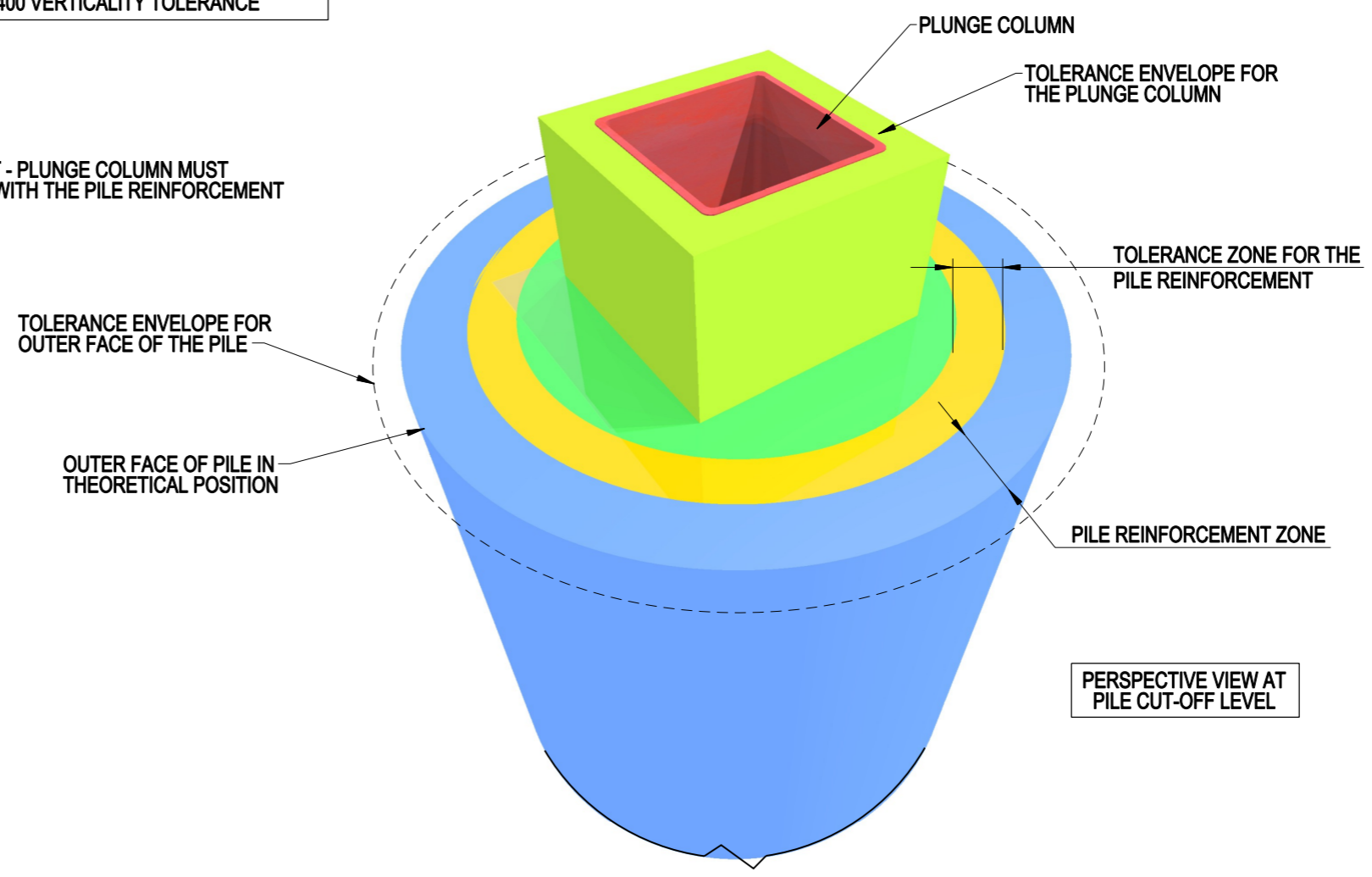
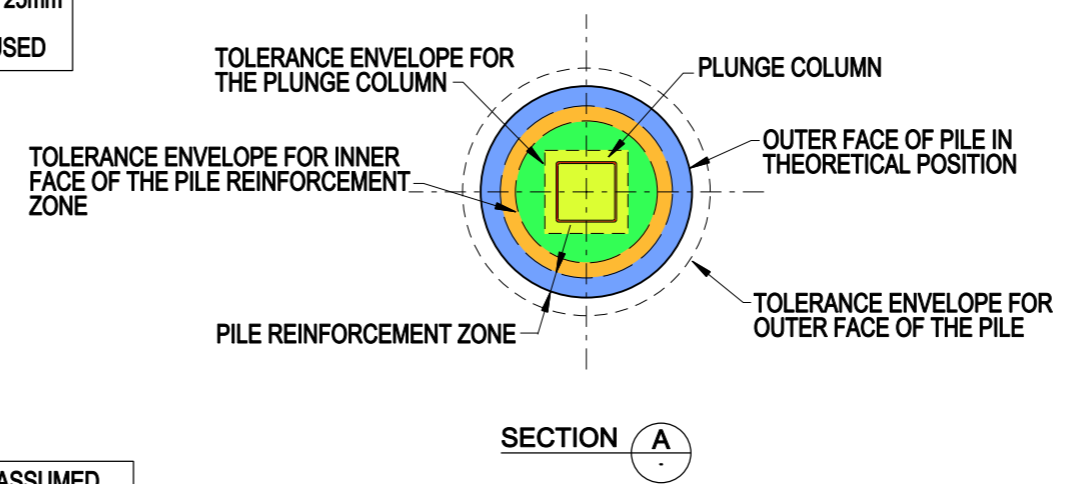
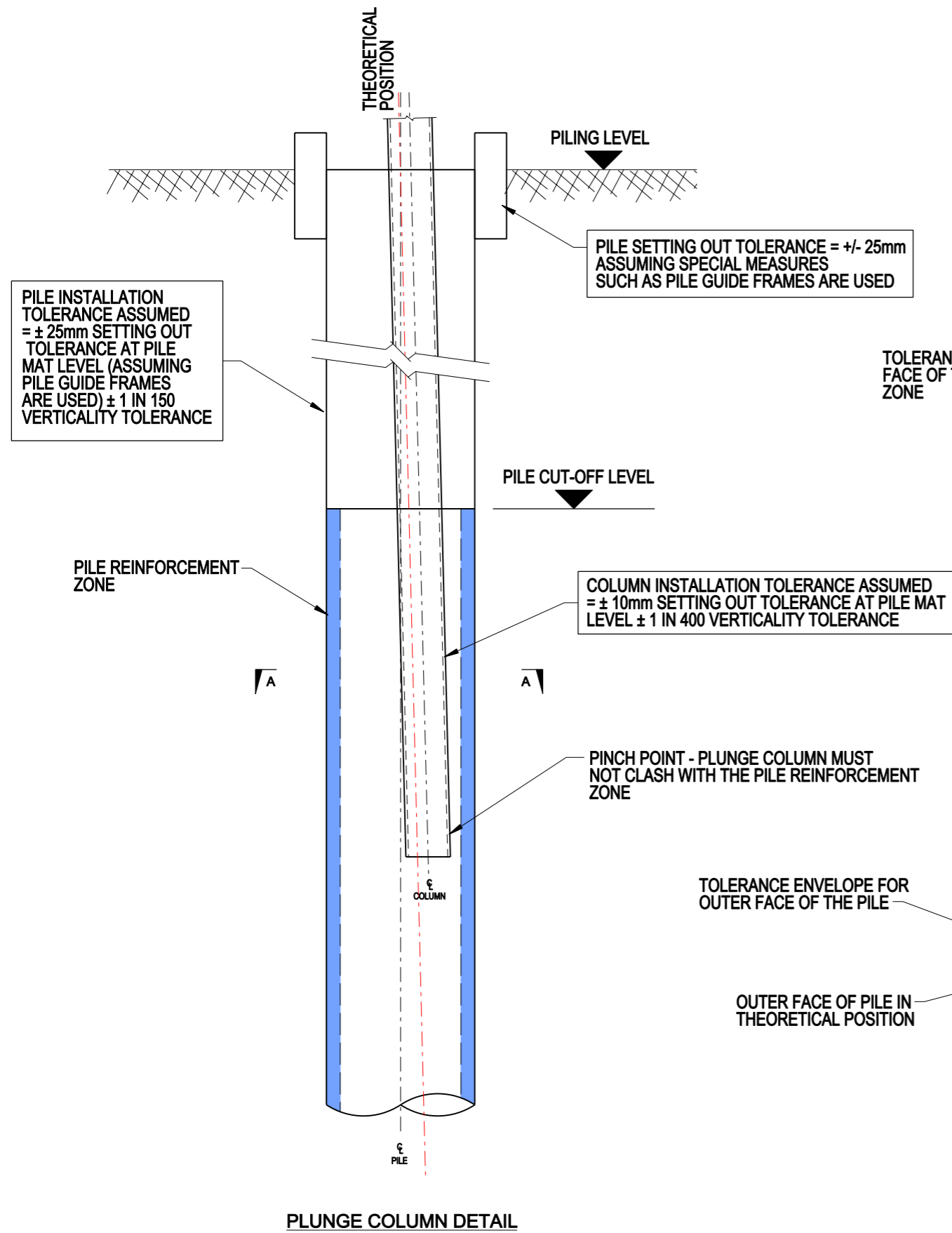
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Consulting Structural and Civil Engineers
100 St. John Street
London EC1M 4EP
T +44 (0)20 7280 7777
F +44 (0)20 7280 7050
E info@akt-uk.com
W www.akt-uk.com

UKCMRI	CLIENT
UKCMRI	PROJECT
RETAINING WALLS SETTING OUT DIMENSIONS / TOLERANCE	
TITLE	AS SHOWN @ A1
DRAWN TS	SCALE
DATE MAY '10	CAD FILENAME S-GEN-010.dgn
CHECKED CN	STATUS INFORMATION
A041949	S-GEN-010
PROJECT No.	DRAWING No.
P1	REVISION

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS AND ENGINEERS DRAWINGS, SPECIFICATIONS AND DETAILS.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS STATED OTHERWISE
3. DO NOT SCALE FROM THIS DRAWING
4. FOR MOVEMENT AND TOLERANCES REFER TO DRAWING No S-GEN-005
5. FOR GENERAL NOTES PLEASE REFER TO -S-GEN-001/004



P1	11.02.11	ISSUED FOR STAGE D	TS	RP
T1	20.09.10	ISSUED FOR TENDER	BB	CN

akt
ADAMS KARA TAYLOR
A MFG Group Company

Consulting Structural and Civil Engineers
100 St. John Street
London EC1M 4ED1
T +44 (0)20 7380 7777
F +44 (0)20 7380 7055
E info@akt-uk.com
W www.akt-uk.com

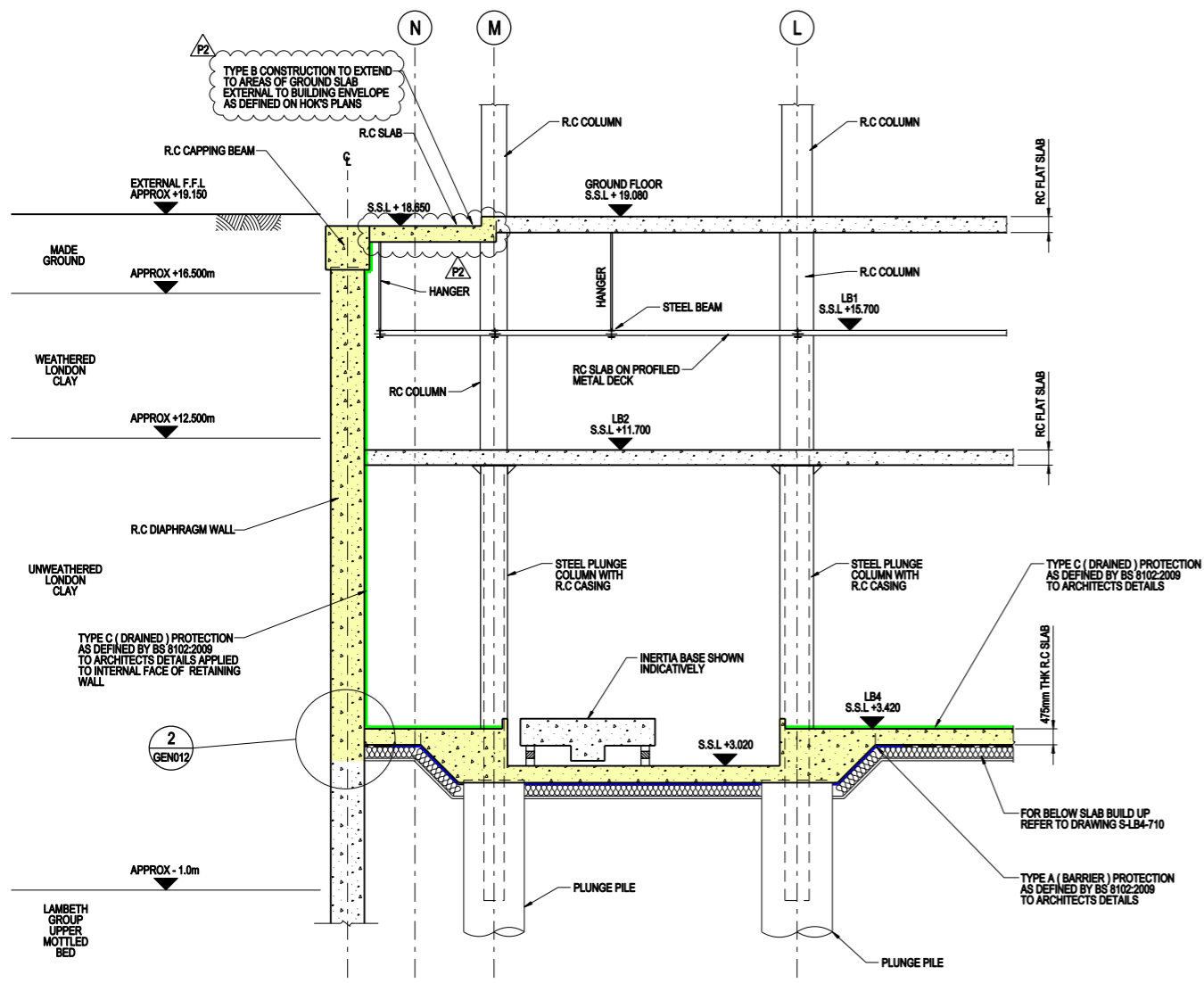
CLIENT: UKCMRI

PROJECT: UKCMRI

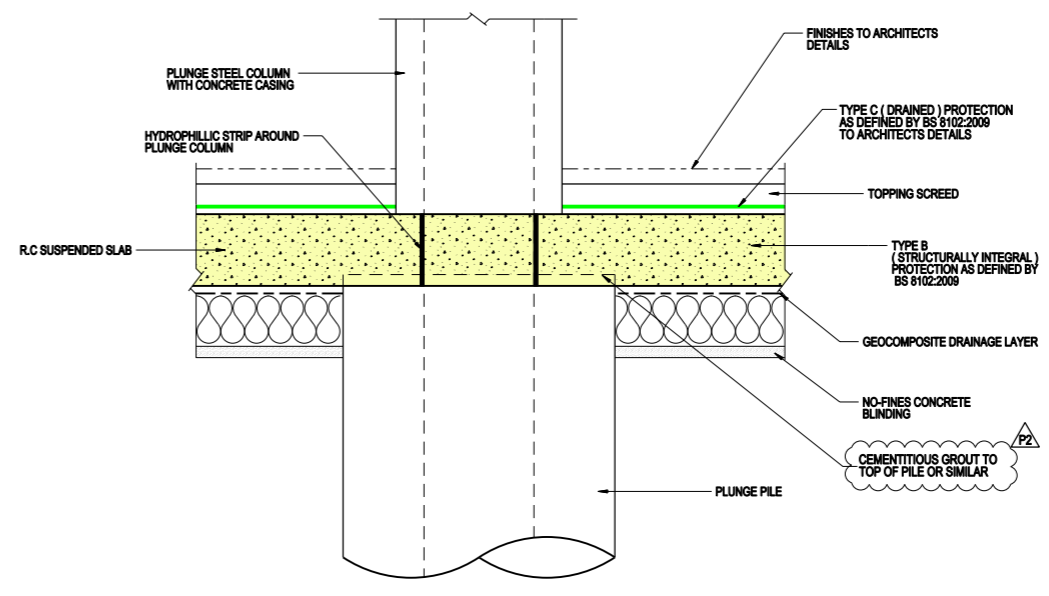
PLUNGE COLUMN TOLERANCES

TITLE			
DRAWN: BB	SCALE: 1:25 @ A1	CAD FILENAME: S-GEN-011	
DATE: SEP '10	CHECKED: CN	STATUS: INFORMATION	
PROJECT No: A041949	DRAWING No: S-GEN-011	REVISION: P1	

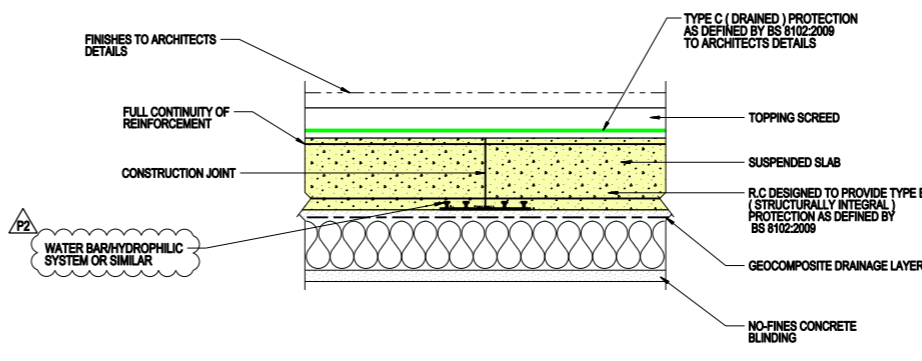
FOR INFORMATION ONLY



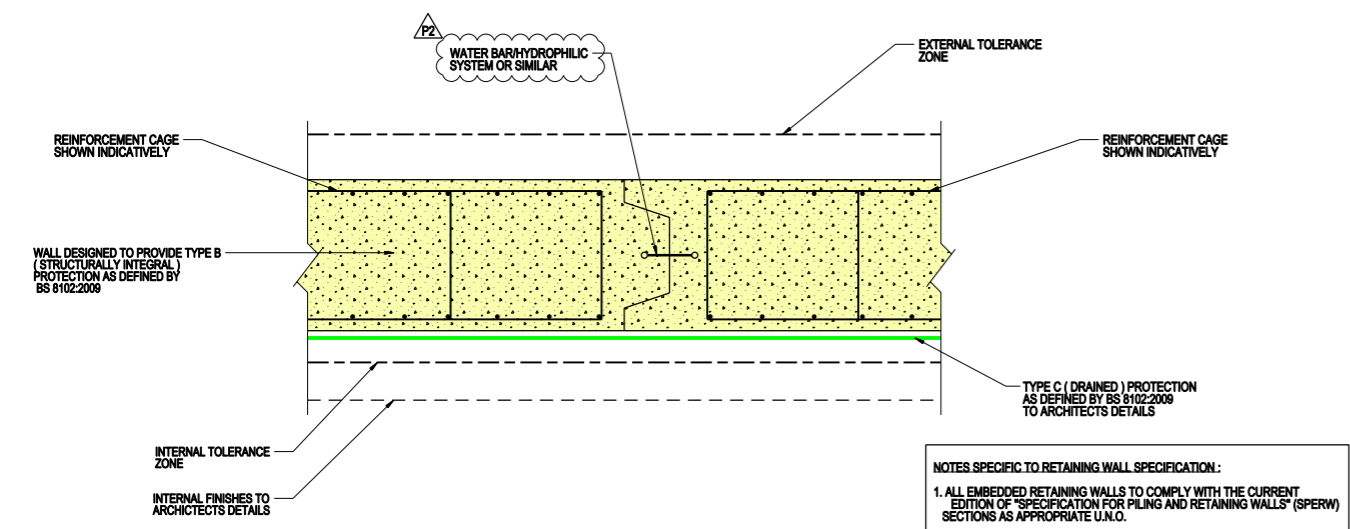
TYPICAL SECTION THROUGH DOUBLE BASEMENT AND RETAINING WALL
INDICATIVE ONLY
SCALE 1:100 @ A1



DETAIL 4 TYPICAL BASEMENT SLAB TO PILE CONNECTION
DETAILS ARE INDICATIVE ONLY - EMBEDDED RETAINING WALLS ARE A CONTRACTOR DESIGNED PORTION
SCALE 1:20 @ A1



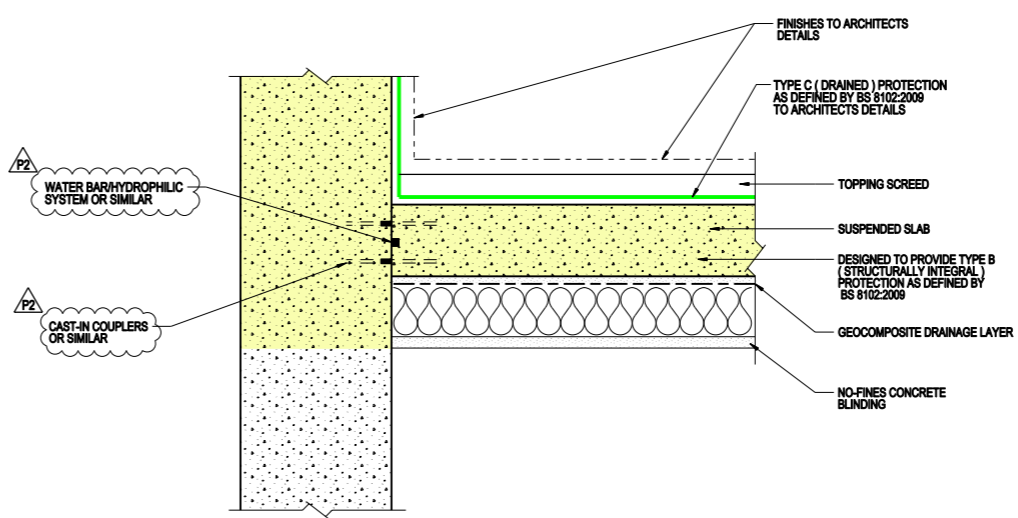
DETAIL 3 TYPICAL BASEMENT SLAB CONSTRUCTION JOINT
DETAILS ARE INDICATIVE ONLY - EMBEDDED RETAINING WALLS ARE A CONTRACTOR DESIGNED PORTION
SCALE 1:20 @ A1



DETAIL 1 TYPICAL DIAPHRAGM WALL PANEL VERTICAL CONNECTION
DETAILS ARE INDICATIVE ONLY - EMBEDDED RETAINING WALLS ARE A CONTRACTOR DESIGNED PORTION
SCALE 1:20 @ A1

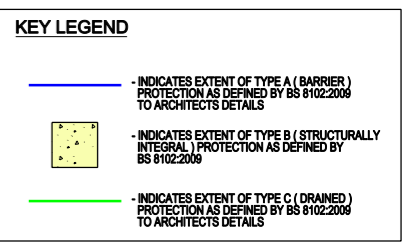
NOTES SPECIFIC TO RETAINING WALL SPECIFICATION:

1. ALL EMBEDDED RETAINING WALLS TO COMPLY WITH THE CURRENT EDITION OF "SPECIFICATION FOR PILING AND RETAINING WALLS" (SPERW) SECTIONS AS APPROPRIATE U.N.O.
2. DESIGN AND CONSTRUCTION OF EMBEDDED RETAINING WALLS IS TO BE COMPLETED IN ACCORDANCE WITH SPERW, CLAUSE B1.4, OPTION 3 "CONTRACTOR DESIGN OF PILES". EMBEDDED RETAINING WALL DETAILS INCLUDED ON THIS DRAWING ARE INDICATIVE ONLY.
3. ACCEPTABLE LIMITS FOR LEAKAGE OF THE EMBEDDED RETAINING WALL TO BE IN ACCORDANCE WITH SPERW CLAUSE B1.9.
4. TYPE B (STRUCTURALLY INTEGRAL) PROTECTION AS DEFINED BY BS 8102:2009 AND CIRIA REPORT 139, "WATER RESISTING BASEMENTS".



DETAIL 2 TYPICAL BASEMENT SLAB TO DIAPHRAGM WALL CONNECTION
DETAILS ARE INDICATIVE ONLY - EMBEDDED RETAINING WALLS ARE A CONTRACTOR DESIGNED PORTION
SCALE 1:20 @ A1

- NOTES**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS AND ENGINEERS DRAWINGS, SPECIFICATIONS AND DETAILS.
 2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS STATED OTHERWISE.
 3. DO NOT SCALE FROM THIS DRAWING.
 4. FOR MOVEMENT AND TOLERANCES REFER TO DRAWING No S-GEN-005.
 5. FOR GENERAL NOTES PLEASE REFER TO S-GEN-001/004.
 6. MATERIALS: CONCRETE C32 / 40 STEEL RIBBED BAR, GRADE B500B.
 7. FOR DETAILS OF FULL SITE INVESTIGATION REFER TO NORTHWEST HOLST REPORT REF: F15468, No. F02, REVISION "FINAL", DATED 31/03/2010 AND ADDENDUM "ADDITIONAL TRIAL PITS ALONG THE NORTHERN BOUNDARY WALL" REF F15468F03-ADD, DATES 27/07/2010.



NOTE: WATER PROOFING STRATEGY AND DETAILS ARE THE RESPONSIBILITY OF THE ARCHITECT. ACT TAKE RESPONSIBILITY FOR TYPE B DESIGN AND DETAILING OF RC ELEMENTS EXCEPT THE DIAPHRAGM WALL. THE DESIGN AND DETAILING OF WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR.

NOTE: UNDER SLAB DRAINAGE TO CAVITY DRAINAGE DESIGNED FOR A MAXIMUM FLOW RATE OF 20 l/sec

REV	DATE	DESCRIPTION	BY	CHECKED
P2	09.02.11	ISSUED FOR STAGE D	KT	RP
P1	13.01.11	ISSUED FOR INFORMATION	TS	TW

Consulting Structural and Civil Engineers
100 St. John Street
London EC1M 4EH
T +44 (0)20 7290 7777
F +44 (0)20 7290 7050
E info@akt-uk.com
W www.akt-uk.com

UKCMRI

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PROJECT

REINFORCED CONCRETE WATER PROOFING DETAILS

TITLE

DRAWN	TS	SCALE	1:100 @ A1	CAD FILENAME	S-GEN-012.dgn
DATE	JAN '11	CHECKED	TW	STATUS	PRELIMINARY
PROJECT No.	A041949	DRAWING No.	S-GEN-012	REVISION	P2

PLOT DATE 11/02/2011 BY 10614/enghr

PRELIMINARY