

**KEY**

- ⊕ Structures(s): 3D Retro-targets top & bottom of wall (Final locations to be agreed)
- + Surface levelling studs (~5m c/c)

The limits given in the table are the maximum and not to be exceeded and if at any time it is deemed that the movement are likely to be exceeded, the contractor is to make all necessary arrangement to bring the movement back to within the acceptable limits for the relevant phase or works.

The contractor is to immediately notify the Supervising Officer and Design Team of any such situation and the proposed remedial works.

Stated movement limits and responses are subject to final agreement as part of the party wall process with adjoining party wall surveyors

**Movement Limits and Responses (Adjoining Property)**

Action Level	Response	Ground Surface Level	
		Vert., mm	Horiz., mm
Green	No Action	<5	<5
Green / Amber	Re-assess and agree course of action	5 to 8	5 to 8
Red	Stop works and secure adjoining the area	>8	>8

All readings are to be reported to the Supervising Officer and additional members of the team (TBC) within 48 hours of them being made.

The surveying company is to provide a movement survey report with all readings to be provided in a spreadsheet format with accompanying graphs indicating the development of each observation with time and appropriate suitable profiles. The accompanying text is to be provided highlighting any trends that are or are likely to be encountered and also record against them the type of work undertaken prior to the readings. Each report is to be dated and referenced and have the site location plan included for easy of locating survey points

If any unusual observations or observations suggesting excessive deformation and/or possible instability are made these should be checked and if confirmed, reported to the Contractor and Engineer immediately.

The survey company is to review the positions show are suitable for surveying from agreed base positions and positions are subject to final site survey.

The survey company is to provide a method statement confirming how the works are to be undertaken giving details of all equipment to be used with data sheets confirming up to date equipment calibration.

**Timing of readings (grid level, survey & monitoring)**

An initial base reading is to be undertaken 1 month prior to and at start on site and then every 2 weeks from start of piling works.

Readings are to be taken every 2 weeks during basement excavation works.

If casting of slabs or removal of propping falls within the 2 week period then take additional reading in between at 1 week.

Once the basement box is completed above ground level readings are to be taken every 2 weeks for 3 months and if a trend of reducing rate of movement is established then revert to readings every 4 weeks

If during any of the readings excessive movement is noted revert back to 1 week readings until 2 weeks after readings show excessive movement has stop. Then revert back to readings every 4 weeks.

Ref.	Revisions	By	Date

**3 KIDDERPORE AVENUE  
LONDON  
NW3 7SX**

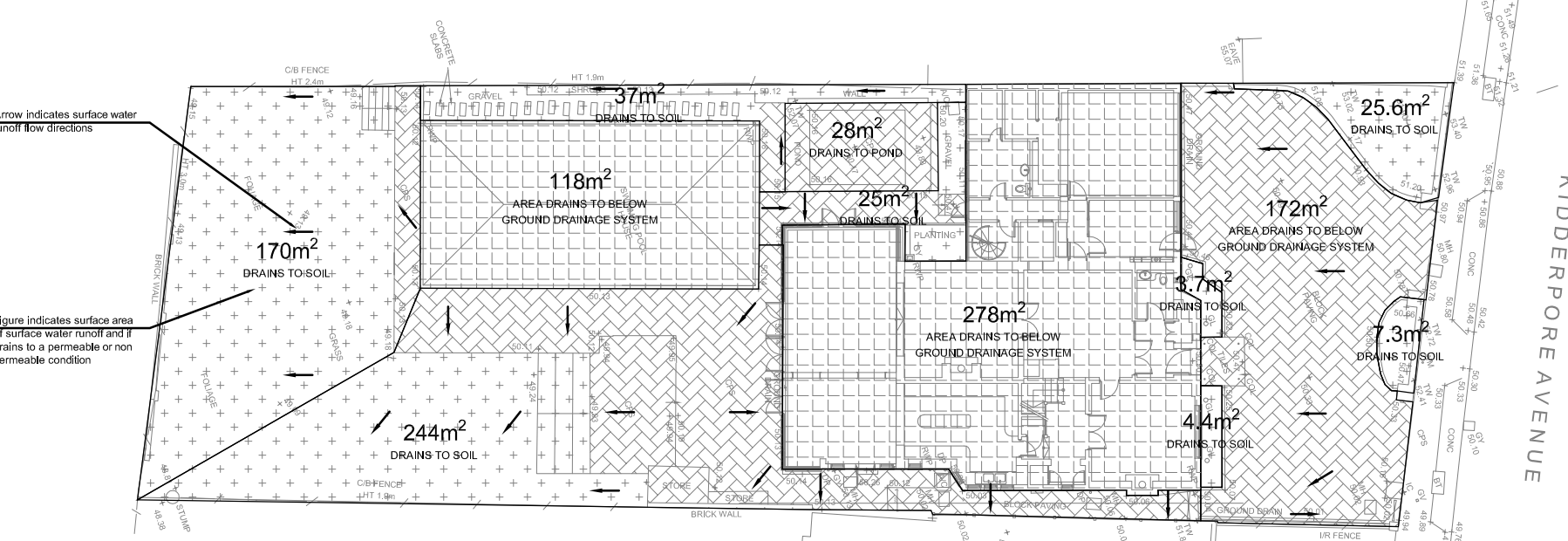
**FOR CONSTRUCTION (D&B)**

**Monitoring of Movement to  
Surrounding Areas and  
buildings**



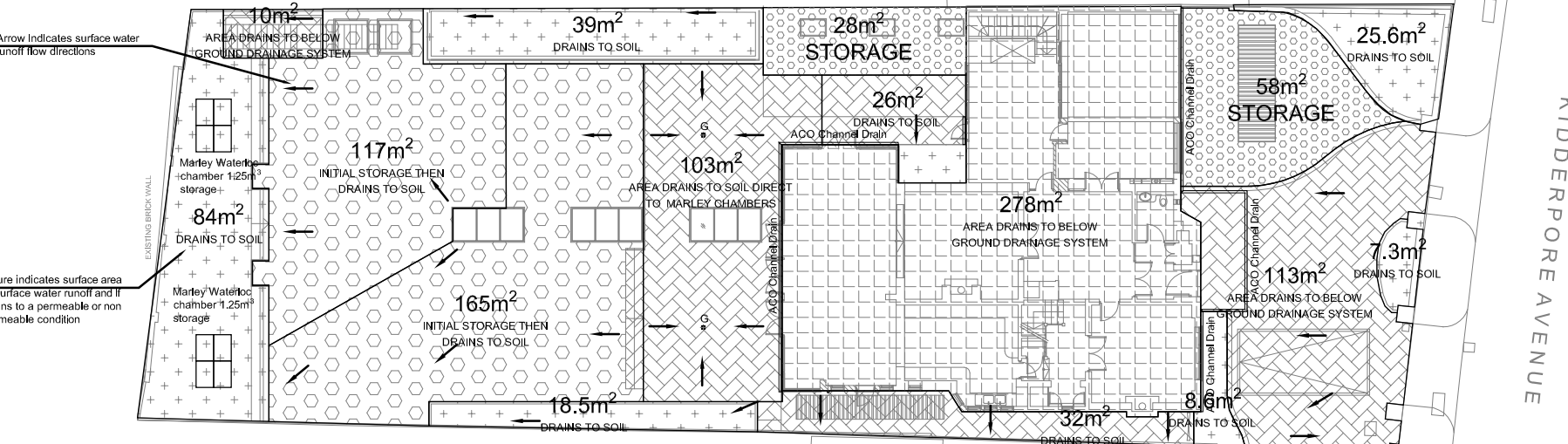
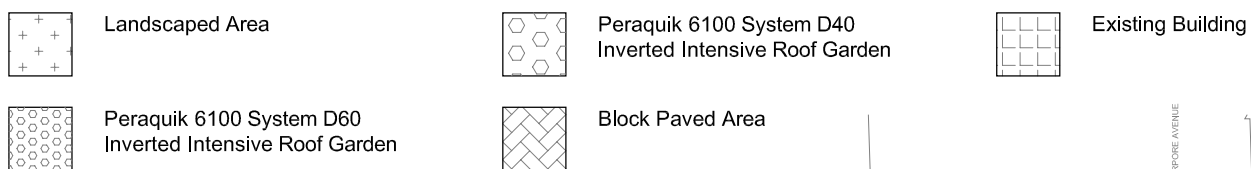
Scale at A1	Date	Drawn By
1:100	15.12.14	AK

Project No.	Dwg No.	Rev.
8148	MT01	-



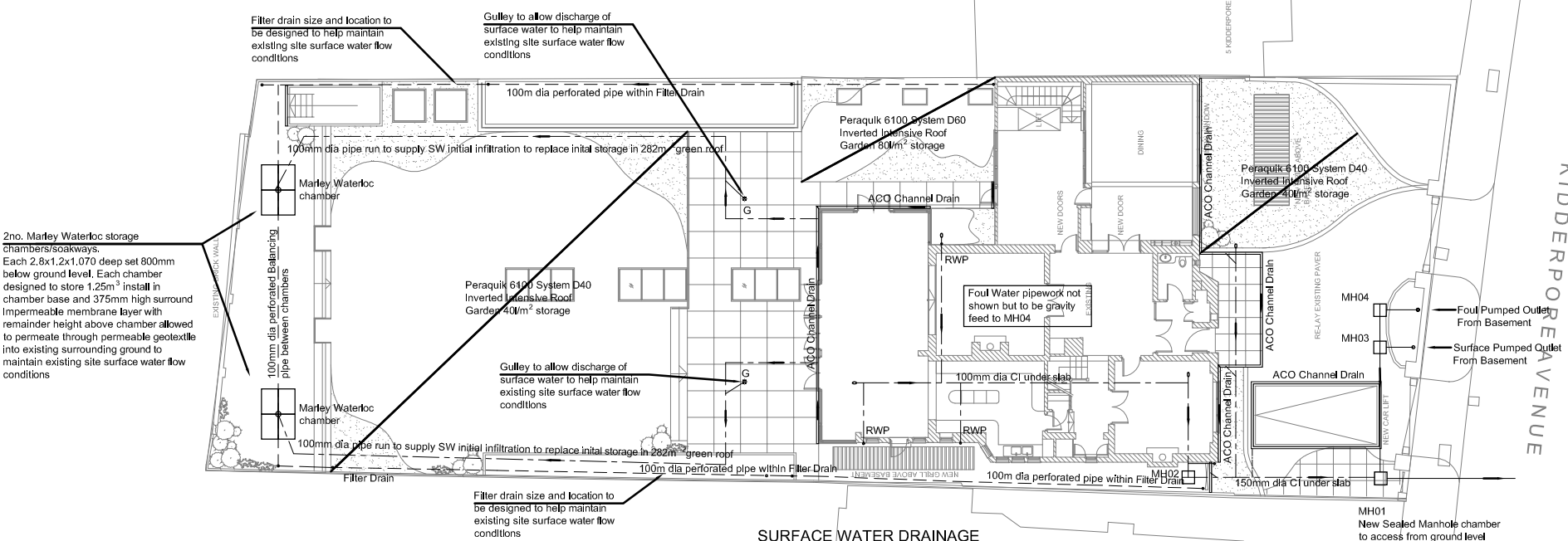
SHOW THE EXISTING SITE CATCHMENT AREA FLOW DIRECTIONS TO ADJOINING PROPERTIES

SCALE 1:150



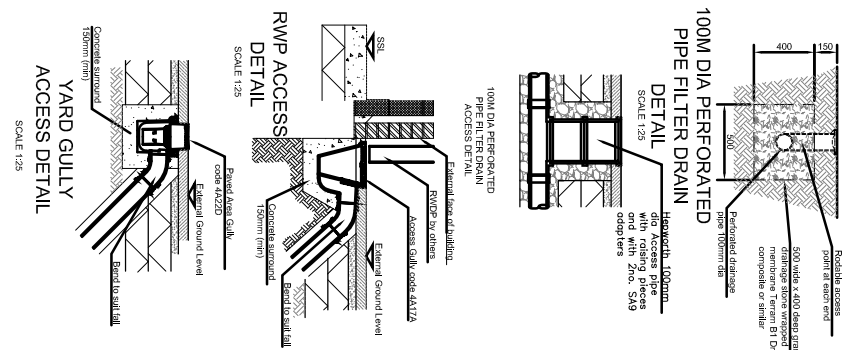
SHOW THE PROPOSED SITE CATCHMENT AREA FLOW DIRECTIONS TO ADJOINING PROPERTIES

SCALE 1:150



SURFACE WATER DRAINAGE GROUND FLOOR LAYOUT

SCALE 1:150

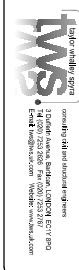


**FOR CONSTRUCTION (D&B)**  
**EXISTING AND PROPOSED SURFACE WATER SITE CATCHMENTS ZONES AND SITE SW DRAINAGE LAYOUT**

Project No.	8148
DWG No.	PH100
Rev.	B

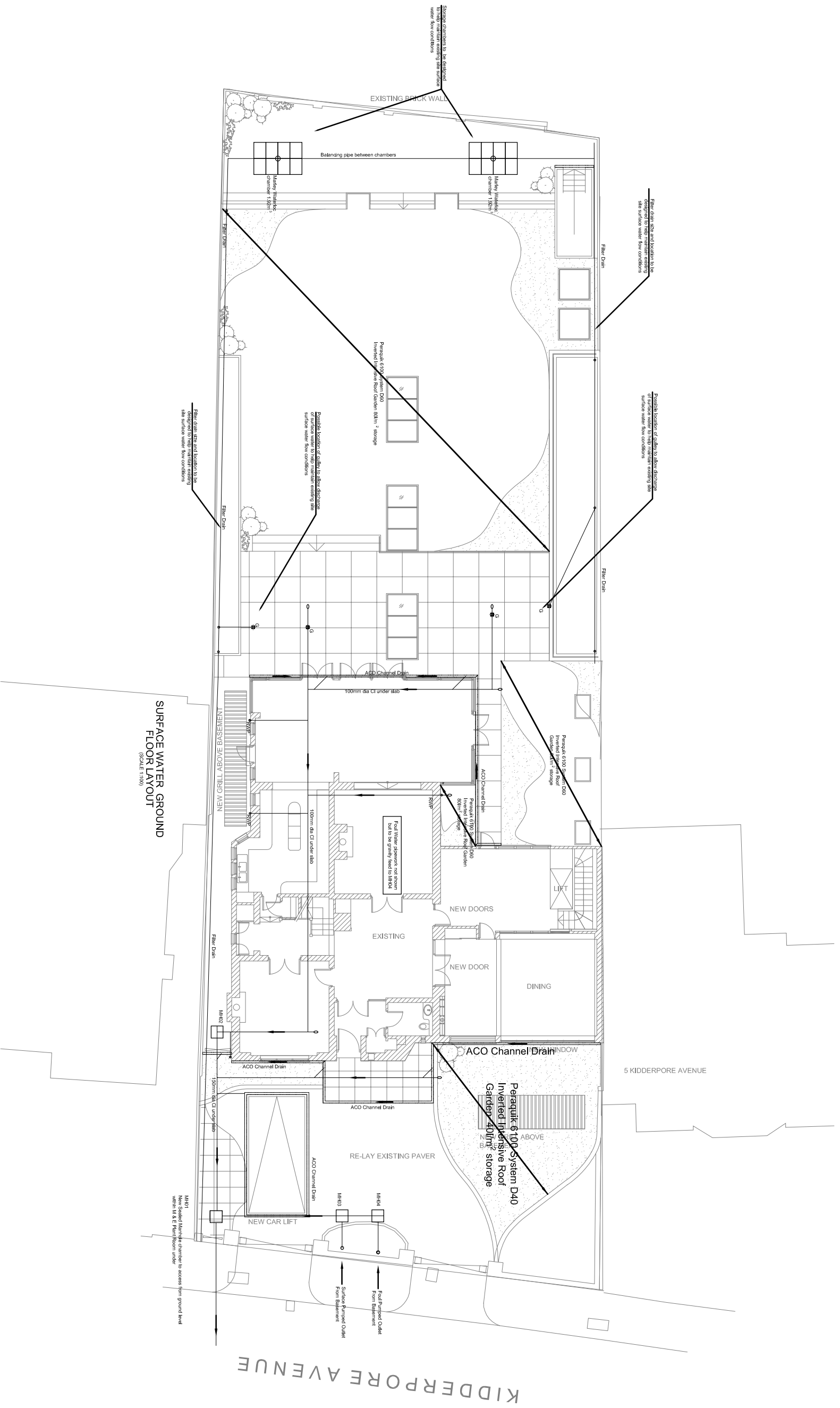
EXISTING SITE CONDITION	
Data:-	
Height:-	Grid reference = 702886
Location:-	SA48 (m) = 544
Area:-	Mean Height = 53.0m for a 1 hour storm
Return period:-	Return period = 100
Percentage runoff:-	Percentage runoff = 40.4% (calculated from:- where: Impervious Area (IPA) = 1073.4m² x 0.075 = 80.55m² UCM = 80.55m² / 199.4m² = 0.404
Volume:-	Volume = 317.2m³
Tidal level:-	Tidal level = 193.1m
Storage (m³):-	Storage (m³) = 7.4m³ (Sum of all balance quantities)
PROPOSED SITE CONDITION	
Data:-	
Height:-	Grid reference = 702886
Location:-	SA48 (m) = 544
Area:-	Mean Height = 53.0m for a 1 hour storm
Return period:-	Return period = 100
Percentage runoff:-	Percentage runoff = 40.4% (calculated from:- where: Impervious Area (IPA) = 1073.4m² x 0.075 = 80.55m² UCM = 80.55m² / 199.4m² = 0.404
Volume:-	Volume = 317.2m³
Tidal level:-	Tidal level = 193.1m
Storage (m³):-	Storage (m³) = 7.4m³ (Sum of all balance quantities)
NOTES	
1. The above surface water calculations are based on actual site conditions and site survey confirming the existing site surface water discharge areas to permeable areas and to existing on the local ground drainage discharging to the public sewer.	
2. A number of hard standing areas at the rear of the site, discharge to permeable areas. The existing drainage area of 516 has been reduced to 316 for the proposed site. Taking into account the hard standing permeable and non permeable areas based on a 1:100 year storm event the overall storage required is 2.5m³. There is to be stored above the roof 2.5m³ of storage. The site has to be permeable accordingly to the above.	
3. The green roof area has been reduced from 282m² to 282m². It is assumed that the green roof will generally always have storage with it to regular irrigation of the roof area. However, if the water table is high and the roof is not irrigated for this initial storage capacity prior to surface water flow. This will maintain the existing surface water runoff/permeable site condition to the boundary line and adjoining properties.	
4. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
5. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
6. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
7. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
8. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
9. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	
10. The two sides and rear of the property, filter drains is to be installed to maintain the site to maintain the below ground water flow.	

3. KIDDERPORE AVENUE  
 LONDON,  
 NW3 7SX.



Scale at A1	1:150	Date	30/04/14	Drawn By	GB
Scale at A2	1:25				
Project No.	8148	DWG No.	PH100	Rev.	B

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A	Drawing For Construction	AK	16.12.14
Rev'd.	Revisions	By	Date

3. KIDDERPORE AVENUE  
LONDON, NW3 7SX

FOR CONSTRUCTION (D&B)

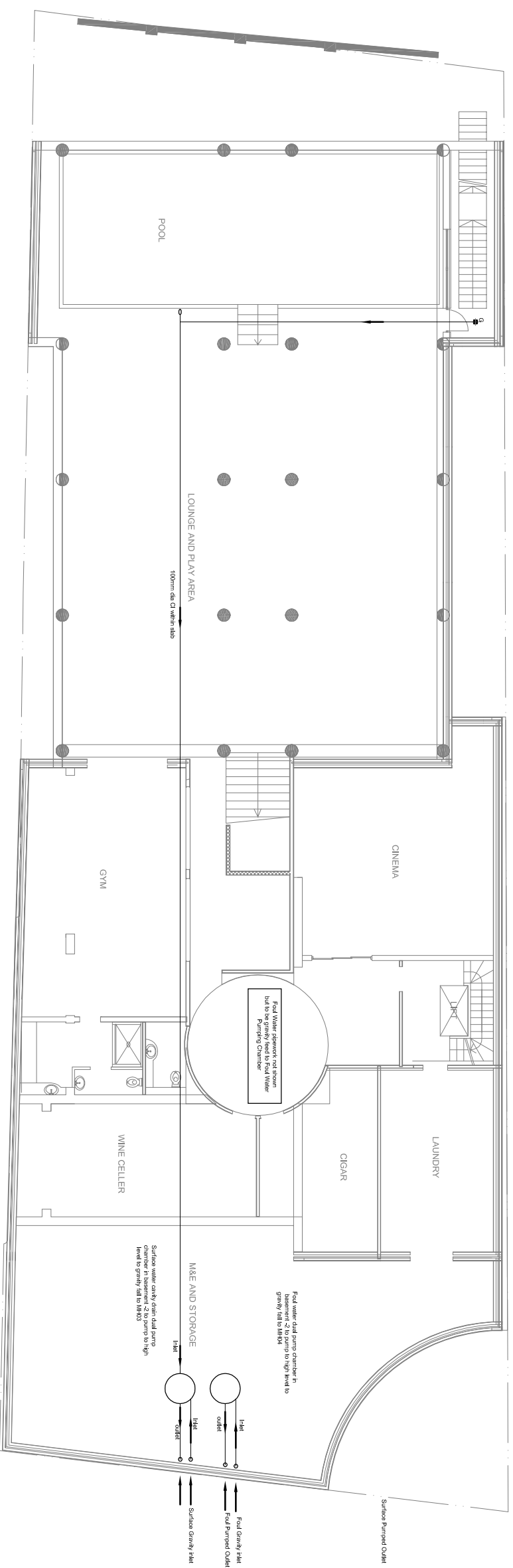
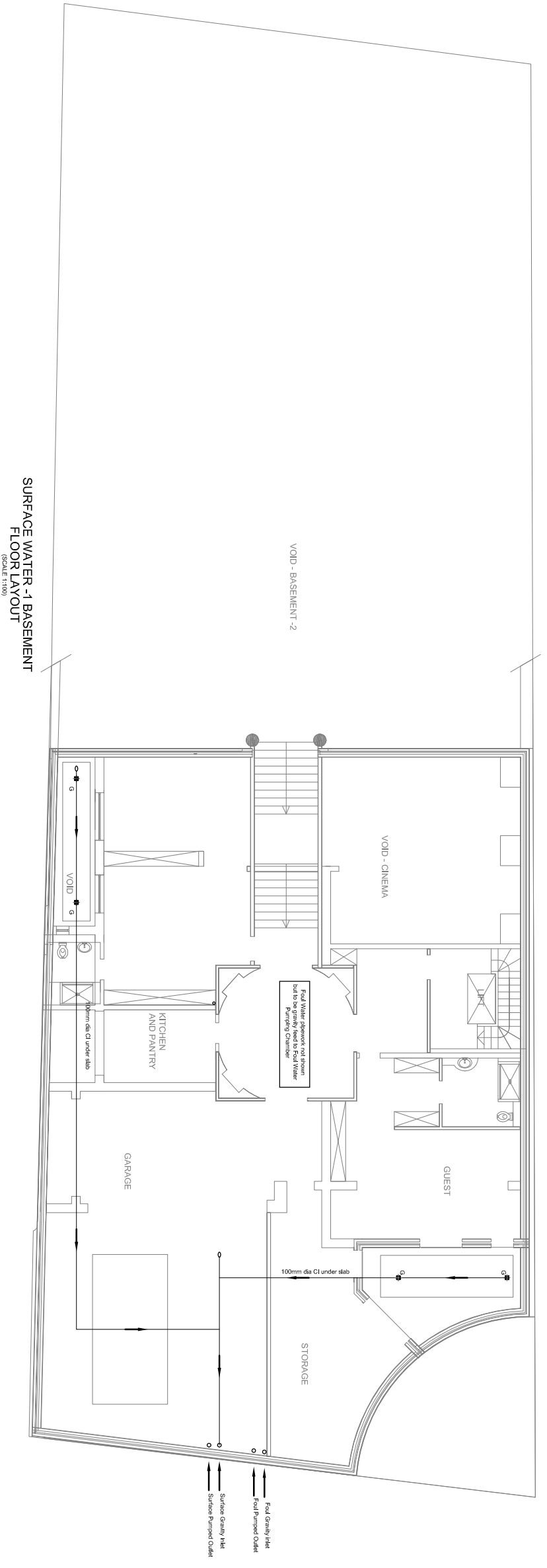
SURFACE WATER ABOVE  
AND BELOW GROUND  
DRAINAGE FOR GROUND  
FLOOR LEVEL



Scale at A1	Date	Drawn By
1:100	27.06.11	GB

Project No.	Dwg No.	Rev.
8148	PPH01	A

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A		Drawing For Construction	AK	16.12.14
Revisions		By	Date	

**3. KIDDERPORE AVENUE  
LONDON, NW3 7SX  
FOR CONSTRUCTION (D&B)**

**SURFACE WATER ABOVE  
AND BELOW GROUND  
DRAINAGE FOR  
BASEMENTS -1 & -2**



Scale at A1	Date	Drawn By	
1:100	27.06.11	GB	

Project No.	Dwg No.	Rev.
8148	PPH02	A

**SURFACE WATER -2 BASEMENT  
FLOOR LAYOUT**  
(SCALE 1:100)

**SURFACE WATER -1 BASEMENT  
FLOOR LAYOUT**  
(SCALE 1:100)

**GENERAL NOTES:**  
 The contractor shall ensure that all health and safety measures necessary to ensure safety of personnel and stability of the structure are in place.

Method statements should be issued for approval of the SCD prior to commencement.

The contractor should take all reasonable steps to prevent damage to the existing services, its operation and its general public.

Safety barriers are to be provided to prevent public access to the site of the works.

The contractor shall provide all necessary plant to allow the excavations to be carried out safely.

Where mechanical diggers are used the contractor shall allow for suitably qualified personnel to prevent damage to existing services and operations.

After completion of the boreholes they are to be back filled with excavated materials and enclosed with fresh material as for existing.

**REQUIREMENT FOR ADDITIONAL SITE INVESTIGATION.**

The object of carrying out the additional investigation is to supplement the existing 3 boreholes which show that the ground at the site is consistently London Clay and that there is little variation in soil strength across the site.

The additional investigation must address the issues and criticisms raised by the consultant in the report of the 10th November 2010.

It is proposed that there is one additional borehole which is to be carried out in the garden area of the site.

In order to examine in detail the condition of the ground near to the surface it is proposed that the contractor shall install a 10 metre interval and 3 metre depth borehole. The contractor shall also install 10 metre interval and 3 metre depth boreholes at 10 metre intervals and 1.5 metre intervals beyond that. Disturbed samples to be retained from SP7's.

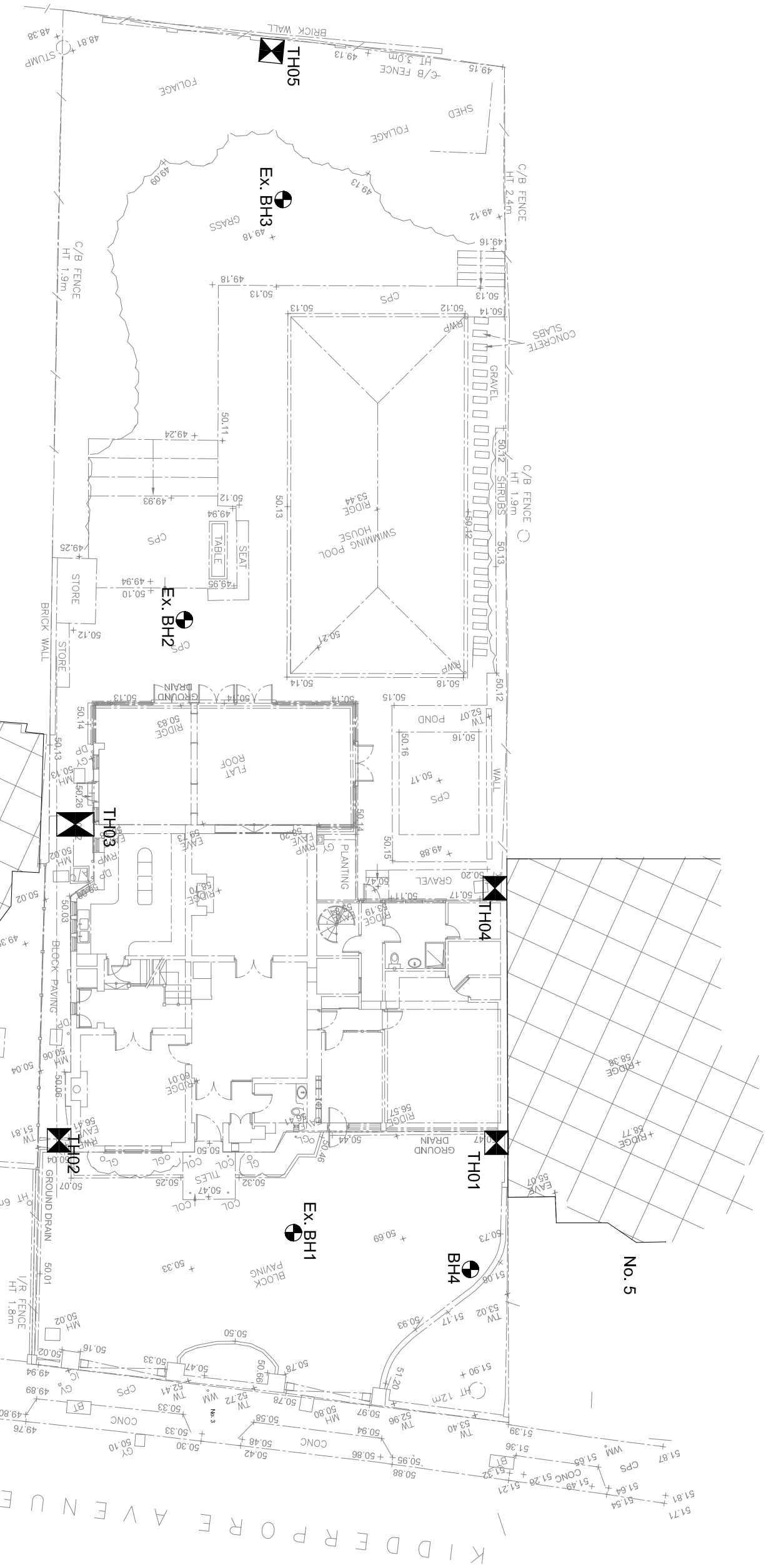
Allowance should be made for the installation of a shallow pit at a depth of 6 metres below ground level.

The work is to be supervised by chartered geologist or engineer (or to be provided).

The samples are to be taken back to the laboratory and retained under the supervision of CG and an agreed log returned. Samples will be photographed after testing.

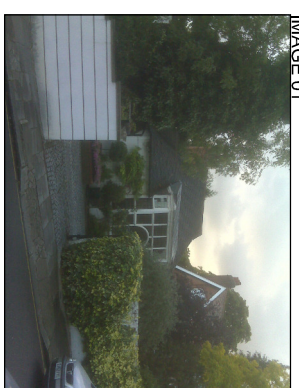
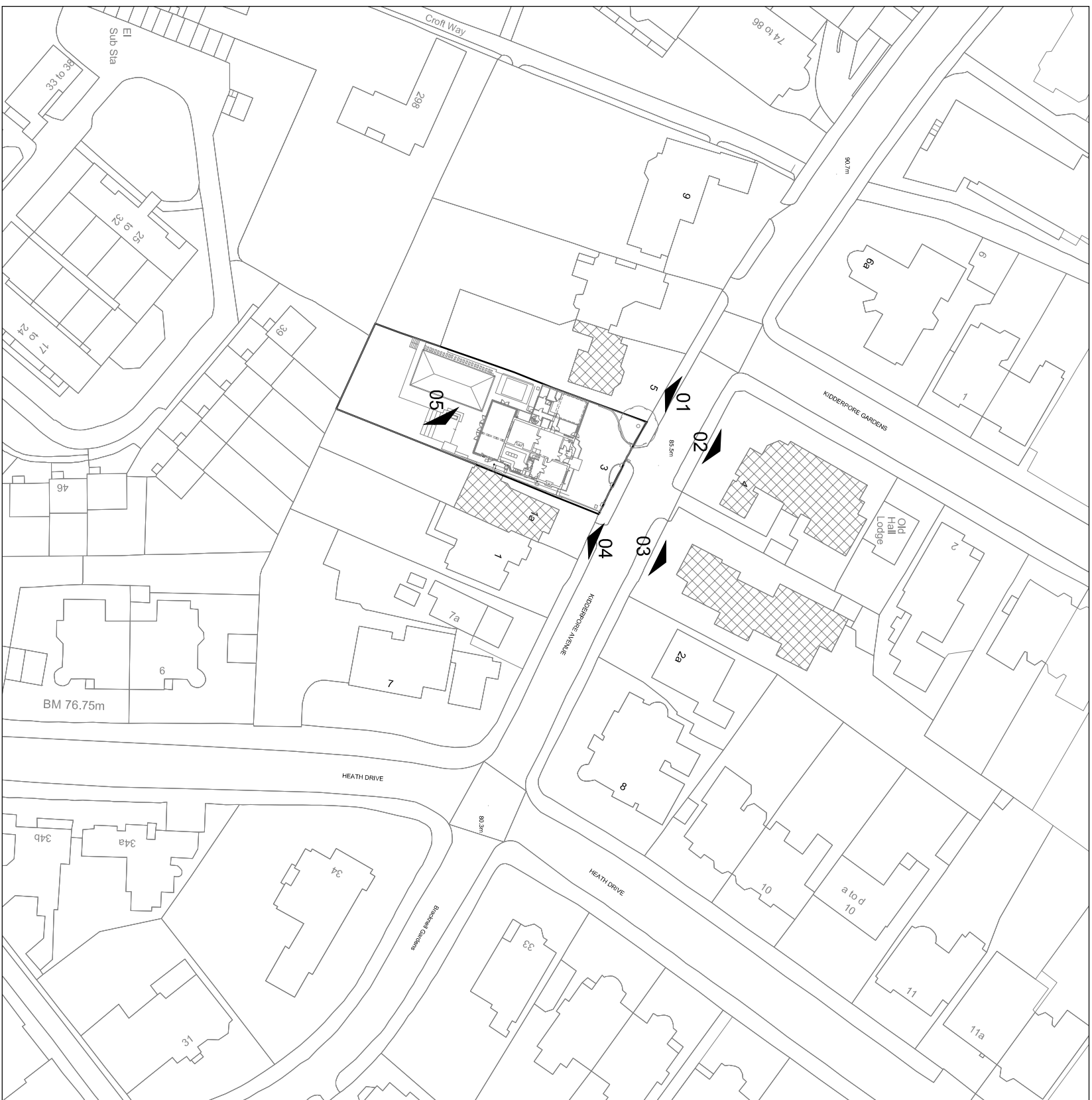
An allowance is to be made for undertaking unconsolidated undrained tests on 100 mm samples on 15 undisturbed samples.

It is suggested that a number of trial pits are dug to examine the existing foundations and the near surface soil conditions, particularly along the utility boundary. This will help in defining the conditions with respect to drainage. The trial pits should be dug to a depth of at least one metre and should be photographed and tagged by a suitably qualified engineer.



A		Drawing for Construction	AK	16.12.14	
Revisions		By	Date		
<b>3 KIDDERPORE AVENUE LONDON NW3 7SX</b>					
<b>FOR CONSTRUCTION (D&amp;B)</b>					
<b>EXISTING SITE LAYOUT INDICATING ADDITION SOIL INVESTIGATION WORKS</b>					
<b>TMS CONSULTING ENGINEERS</b> 31 Dulwich Avenue, Brixton, London SE17 8DQ Tel: (020) 7533 7806 Fax: (020) 7533 2787 Email: enquiries@tms.co.uk Website: www.tms.co.uk					
Scale at A1:	1:100	Date:	31.01.11	Drawn By:	GB
Project No.:	8148	Dwg No.:	SI-02	Rev.:	A

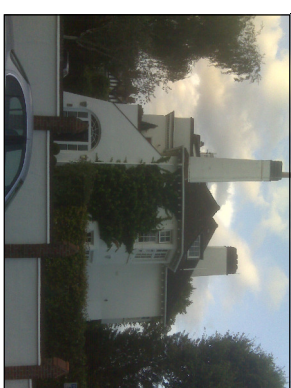




5 Kidderpore Avenue



4 Kidderpore Avenue



2 Kidderpore Avenue



1a Kidderpore Avenue



1a Kidderpore Avenue

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A		Drawing For Construction	AK	16.12.14
Revisions		By	Date	

**3 Kidderpore Avenue,  
Hampstead  
London, NW3 7SX,**

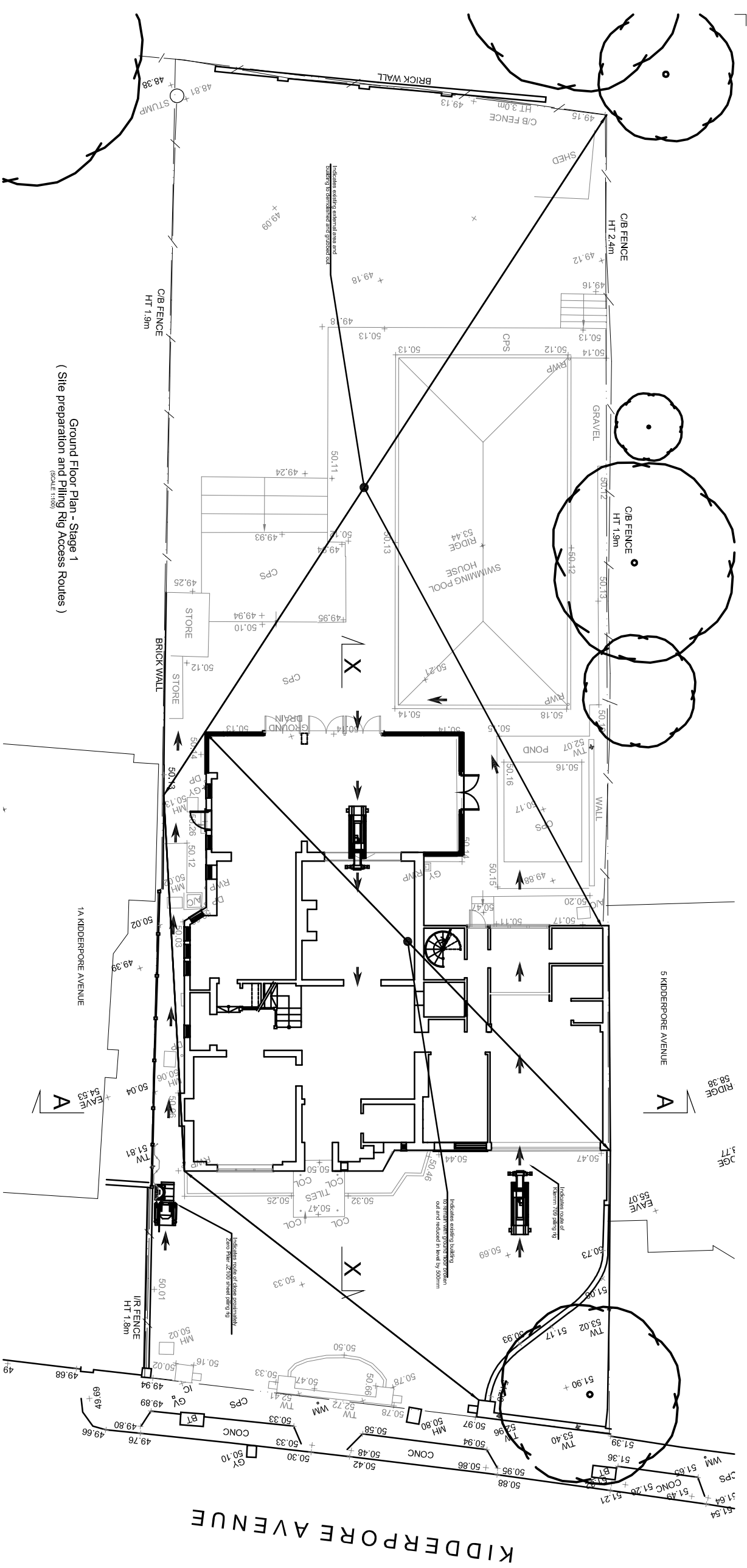
**FOR CONSTRUCTION (D&B)**

**Site Location Plan Also  
Indicating Adjacent  
Properties**



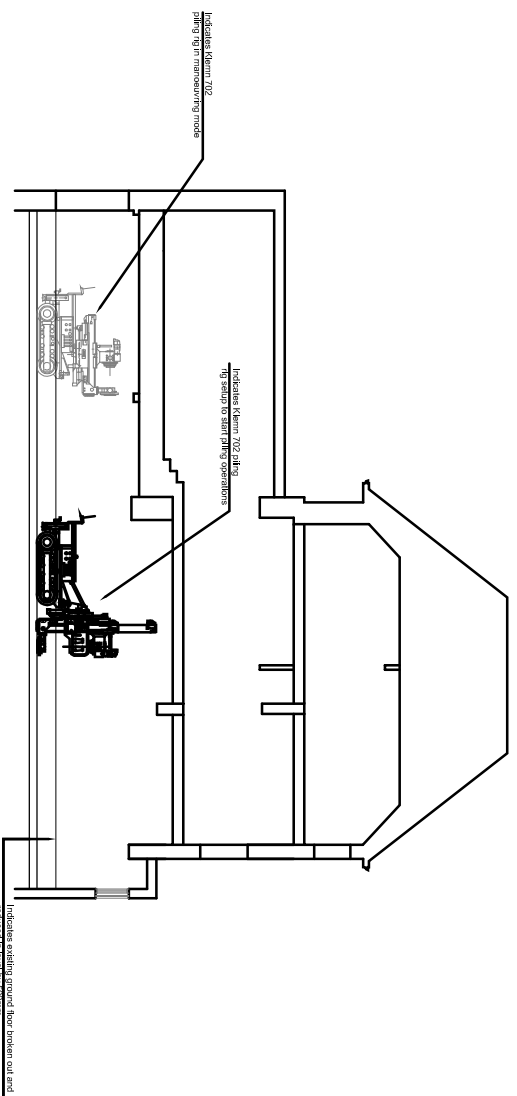
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NTS	02.09.09	GB

Project No.	Dwg No.	Rev.
8148	SL01	A



Ground Floor Plan - Stage 1  
( Site preparation and Piling Rig Access Routes )  
(SCALE: 1:100)

SECTION X \_ X



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B	Drawing For Construction	AK	16.12.14
A	Changes due to planning requirement	GB	15.1.13
Rev.	Revisions	By	Date

3 KIDDERPORE AVENUE,  
LONDON,  
NW3 7SX

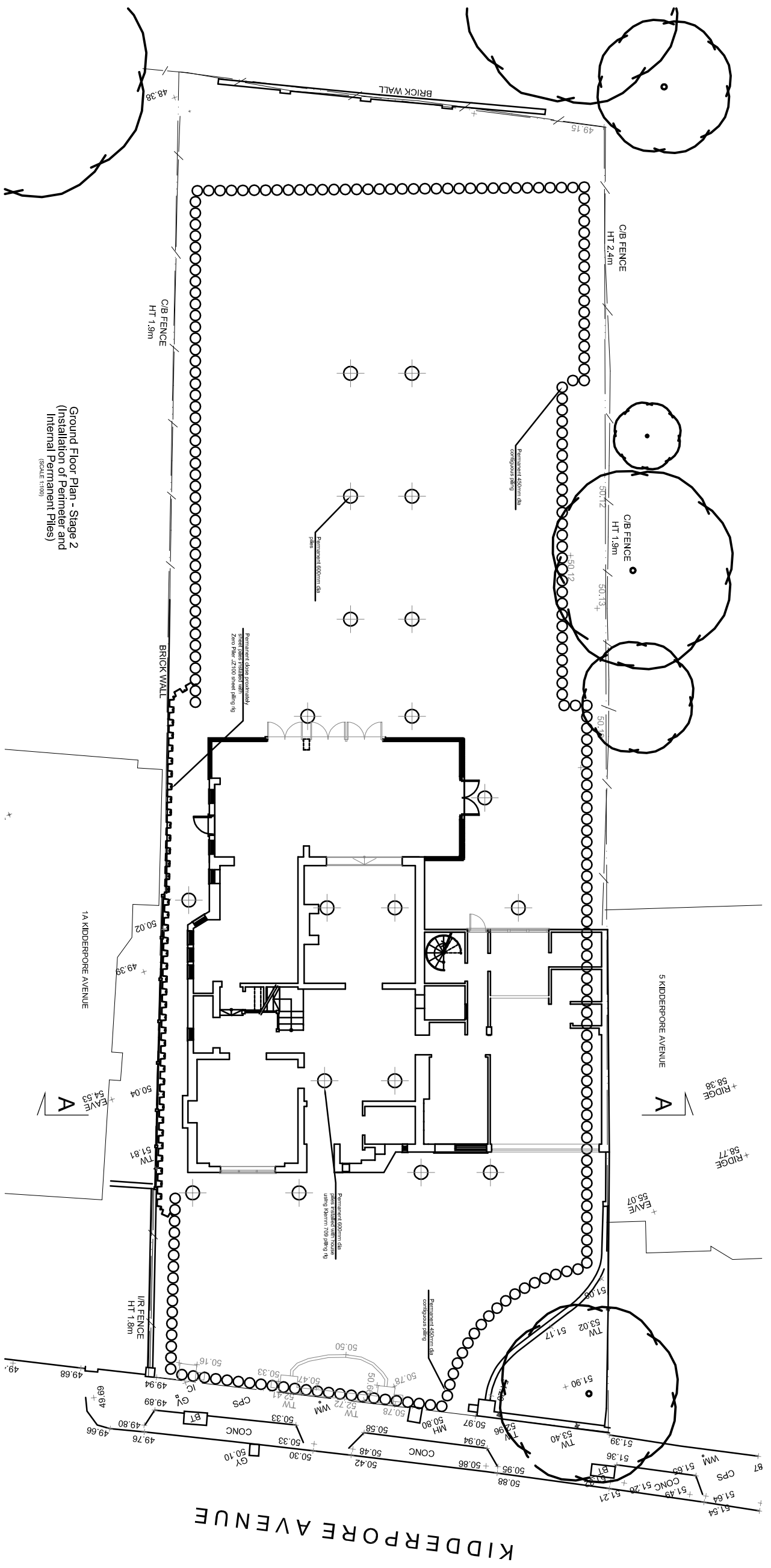
FOR CONSTRUCTION (D&B)

SEQUENCE OF WORKS  
STAGE 1



Scale at A1	Date	Drawn By
1:100	16.02.11	GB

Project No.	Dwg No.	Rev.
8148	ST01	B



Ground Floor Plan - Stage 2  
(Installation of Perimeter and Internal Permanent Piles)  
(SCALE 1:100)

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**PILE LOADING DATA**

Dimension	0.25x.4	0.30x.4	0.35x.4	0.40x.4	0.45x.4	0.50x.4	0.55x.4	0.60x.4	0.65x.4	0.70x.4	0.75x.4	0.80x.4	0.85x.4	0.90x.4	0.95x.4	1.00x.4
SOIL CLASS	1302	22	29	30	32	35	38	42	46	50	55	60	65	70	75	80
KLINMAN 702	2572	51	65	78	91	104	117	130	143	156	169	182	195	208	221	234
KLINMAN 709																

B	Drawing For Construction	AK	16.12.14
A	Changes due to planning requirement	GB	15.1.13
Revisions	By	Date	

**3 KIDDERPORE AVENUE,  
LONDON,  
NW3 7SX**

**FOR CONSTRUCTION (D&B)**

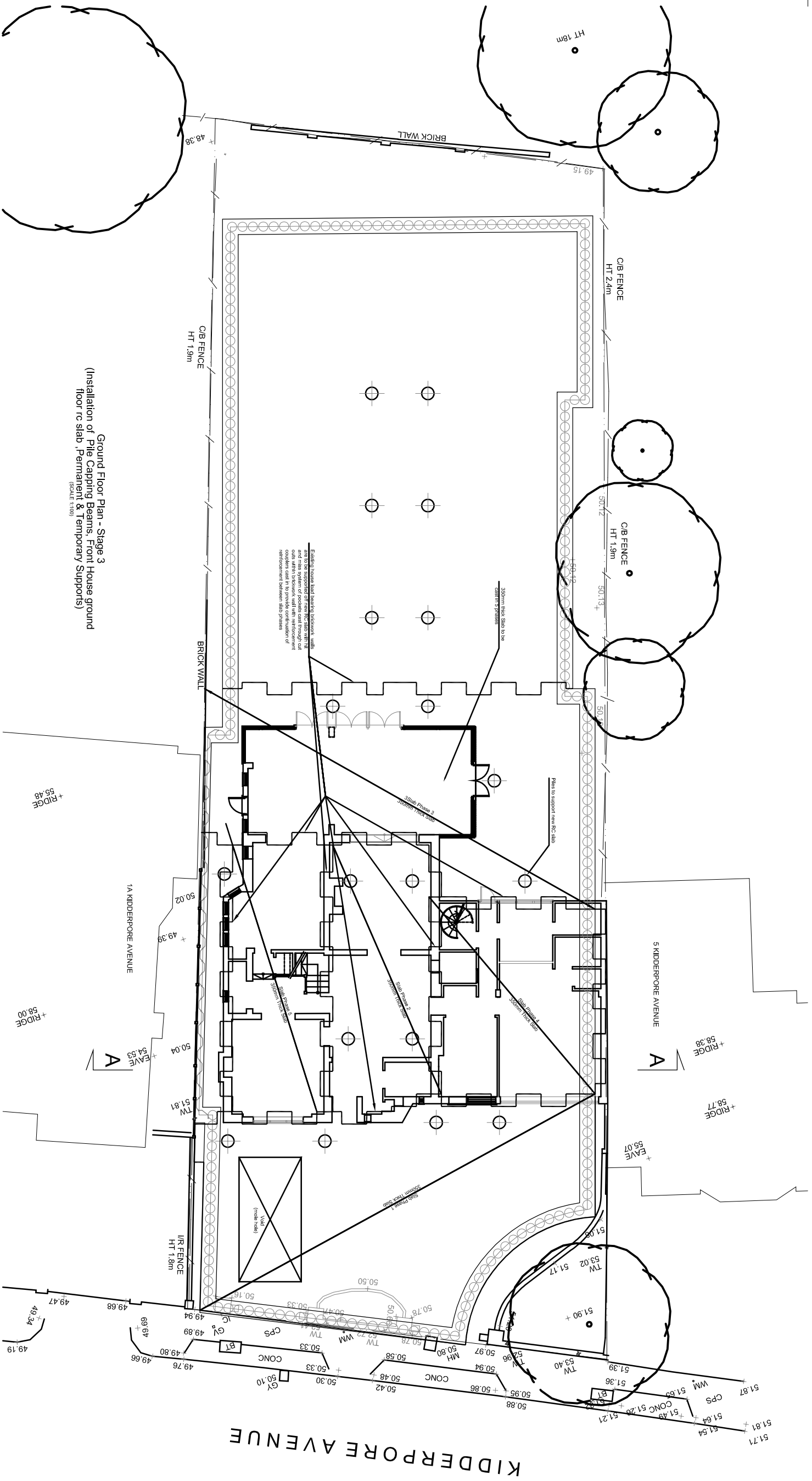
**SEQUENCE OF WORKS  
STAGE 2**



Scale at A1	Date	Drawn By	
1:100	16.02.11	GB	

Project No.	Dwg No.	Rev.
8148	ST02	B





Ground Floor Plan - Stage 3  
(Installation of Pile Capping Beams, Front House ground floor rc slab, Permanent & Temporary Supports)  
(SCALE 1:100)

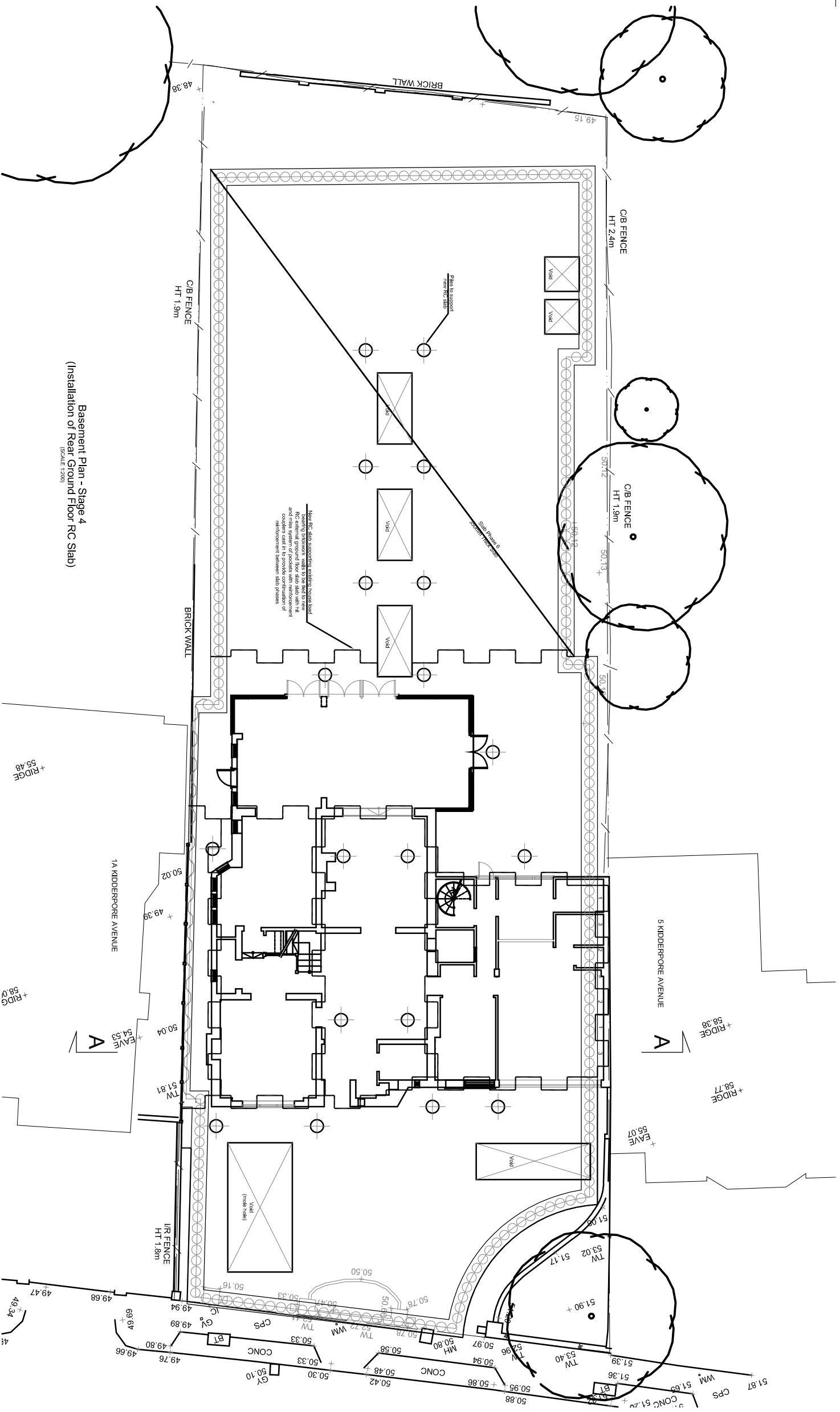
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KIDDERPORE AVENUE

3 KIDDERPORE AVENUE, LONDON, NW3 7SX													
<b>FOR CONSTRUCTION (D&amp;B)</b>													
<b>SEQUENCE OF WORKS STAGE 3</b>													
<table border="1"> <tr> <th>Ref.</th> <th>Revisions</th> <th>By</th> <th>Date</th> </tr> <tr> <td>B</td> <td>Drawing For Construction</td> <td>AK</td> <td>16.12.14</td> </tr> <tr> <td>A</td> <td>Changes due to planning requirement</td> <td>GB</td> <td>15.1.13</td> </tr> </table>	Ref.	Revisions	By	Date	B	Drawing For Construction	AK	16.12.14	A	Changes due to planning requirement	GB	15.1.13	
Ref.	Revisions	By	Date										
B	Drawing For Construction	AK	16.12.14										
A	Changes due to planning requirement	GB	15.1.13										

Scale at A1	Date	Drawn By
1:100	16.02.11	GB
Project No.	Dwg No.	Rev.
8148	ST03	B


Taylor Whalley  
 consulting civil and structural engineers  
 3, Duffield Avenue, Barking, LONDON EC1Y  
 89Q TEL (020) 7255 2828 FAX (020) 7253 2787  
 www.tws.ltd.com

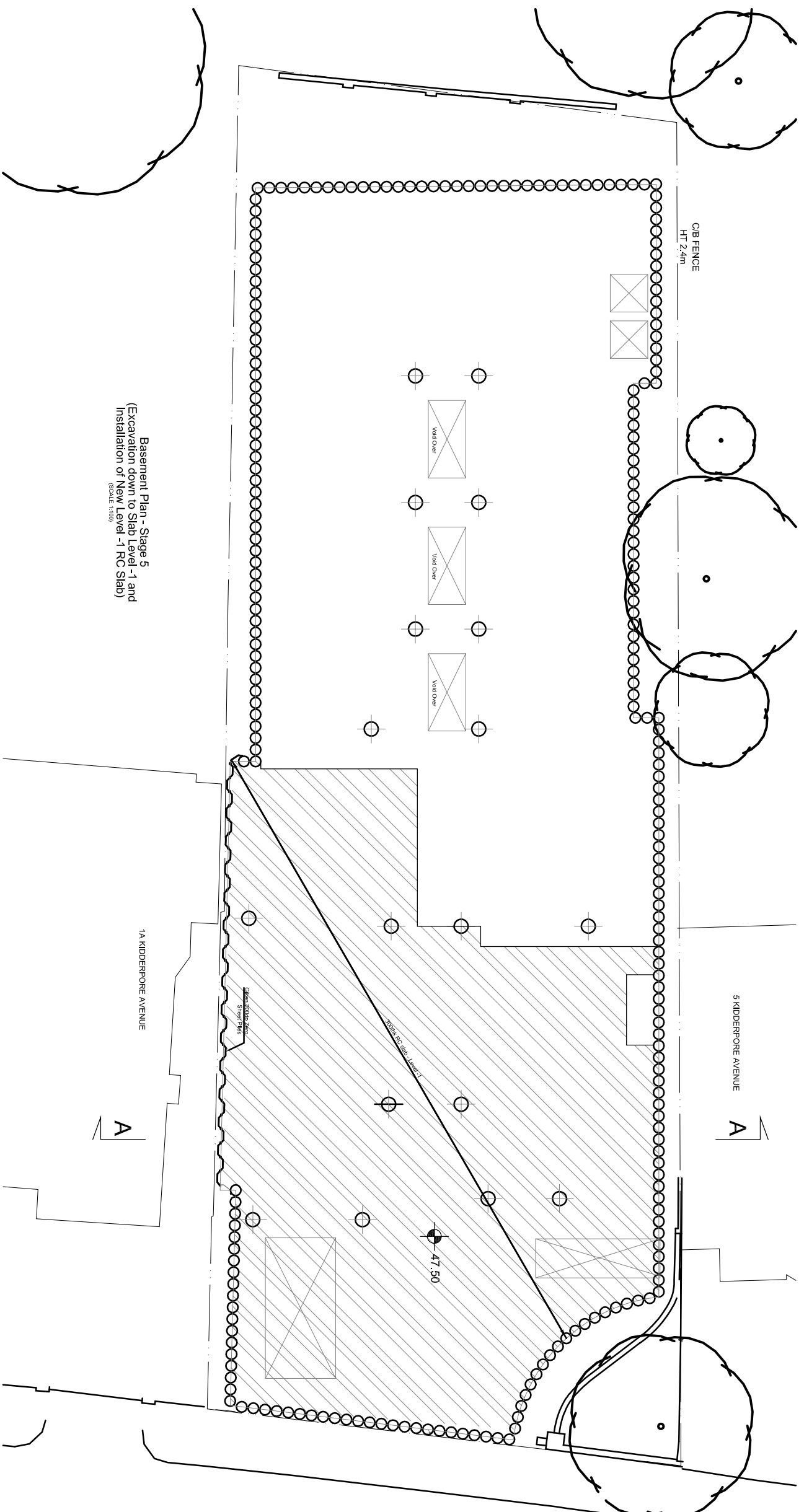


Basement Plan - Stage 4  
(Installation of Rear Ground Floor RC Slab)  
(SCALE 1:200)

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FOR CONSTRUCTION (D&B)	
SEQUENCE OF WORKS STAGE 4	
Ref.	By
B	AK
Drawing For Construction	
Changes due to planning requirement	
Revisions	Date
	16.12.14
	15.1.13

 <small>consulting civil and structural engineers</small> 3, Duffield Avenue, Barking, LONDON EC1Y 8PQ Tel: (020) 7255 2828 Fax: (020) 7253 2787 www.tws-london.com		
Scale at A1	Date	Drawn By
1:100	16.02.11	GB
Project No.	Dwg No.	Rev.
8148	ST04	B



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B	Drawing For Construction	AK	16.12.14
A	Changes due to planning requirement	GB	15.1.13
Rev'd	Revisions	By	Date

**3 KIDDERPORE AVENUE,  
LONDON,  
NW3 7SX**

**FOR CONSTRUCTION (D&B)**

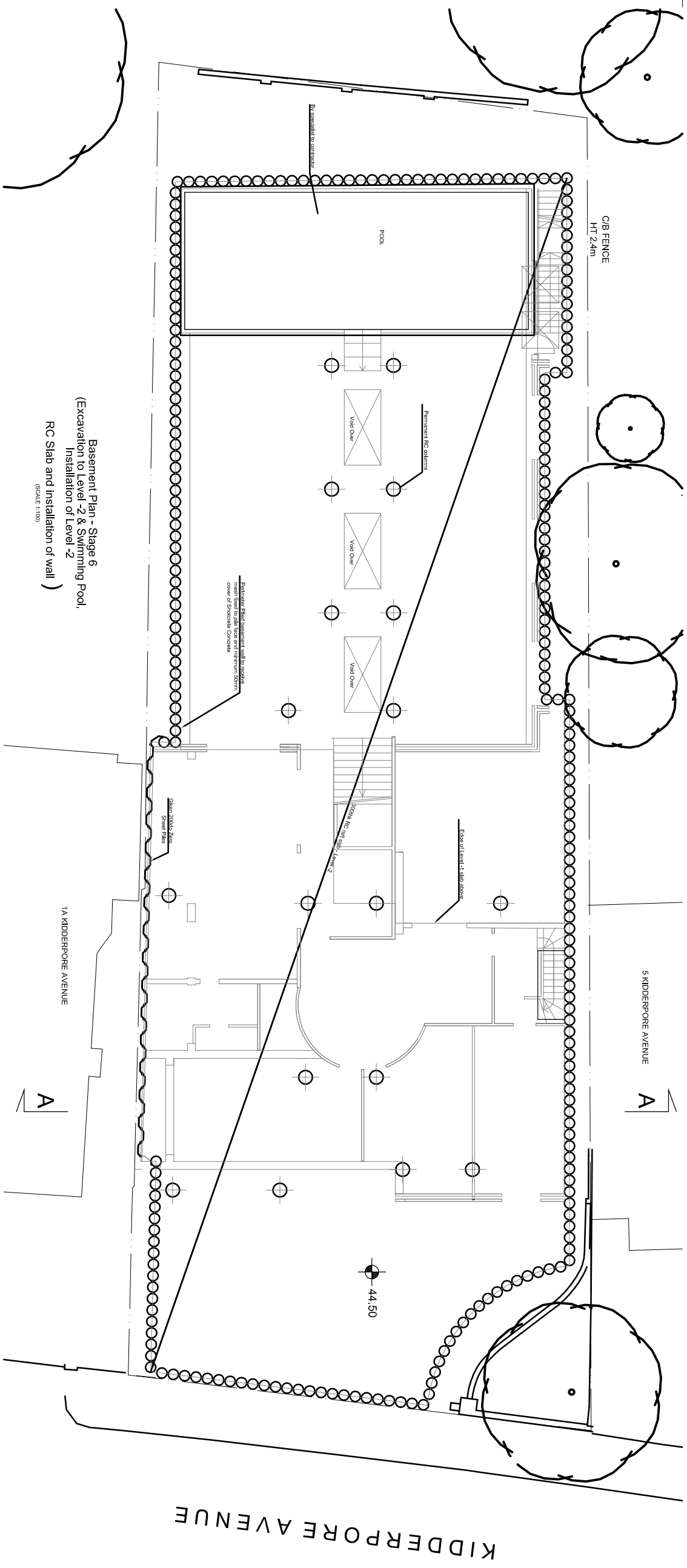
**SEQUENCE OF WORKS  
STAGE 5**



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3 Dufferin Avenue, Barking, LONDON EC1Y  
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Tel: (020) 7253 2628 Fax: (020) 7253 2787  
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Scale at A1	Date	Drawn By	
1:200	16.02.11	GB	

Project No.	Dwg No.	Rev.
8148	ST05	B



Basement Plan - Stage 6  
(Excavation to Level -2 & Swimming Pool,  
Installation of Level -2  
RC Slab and installation of wall )  
(SCALE 1:100)

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Estimated Weights of Reinforcement	
Item	Calc. Weights
300mm RC Slab	138kg/m <sup>2</sup>
400mm RC Slab	150kg/m <sup>2</sup>
General Floor Slab	120kg/m <sup>2</sup>
Columns	150kg/m <sup>3</sup>
Walls	100kg/m <sup>3</sup>
Slabs	110kg/m <sup>3</sup>

B	Drawing For Construction	AK	16.12.14
A	Changes due to planning requirement	GB	15.1.13
Revl.	Revisions	By	Date

3 KIDDERPORE AVENUE,  
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FOR CONSTRUCTION (D&B)

SEQUENCE OF WORKS  
STAGE 6



consulting civil and structural engineers  
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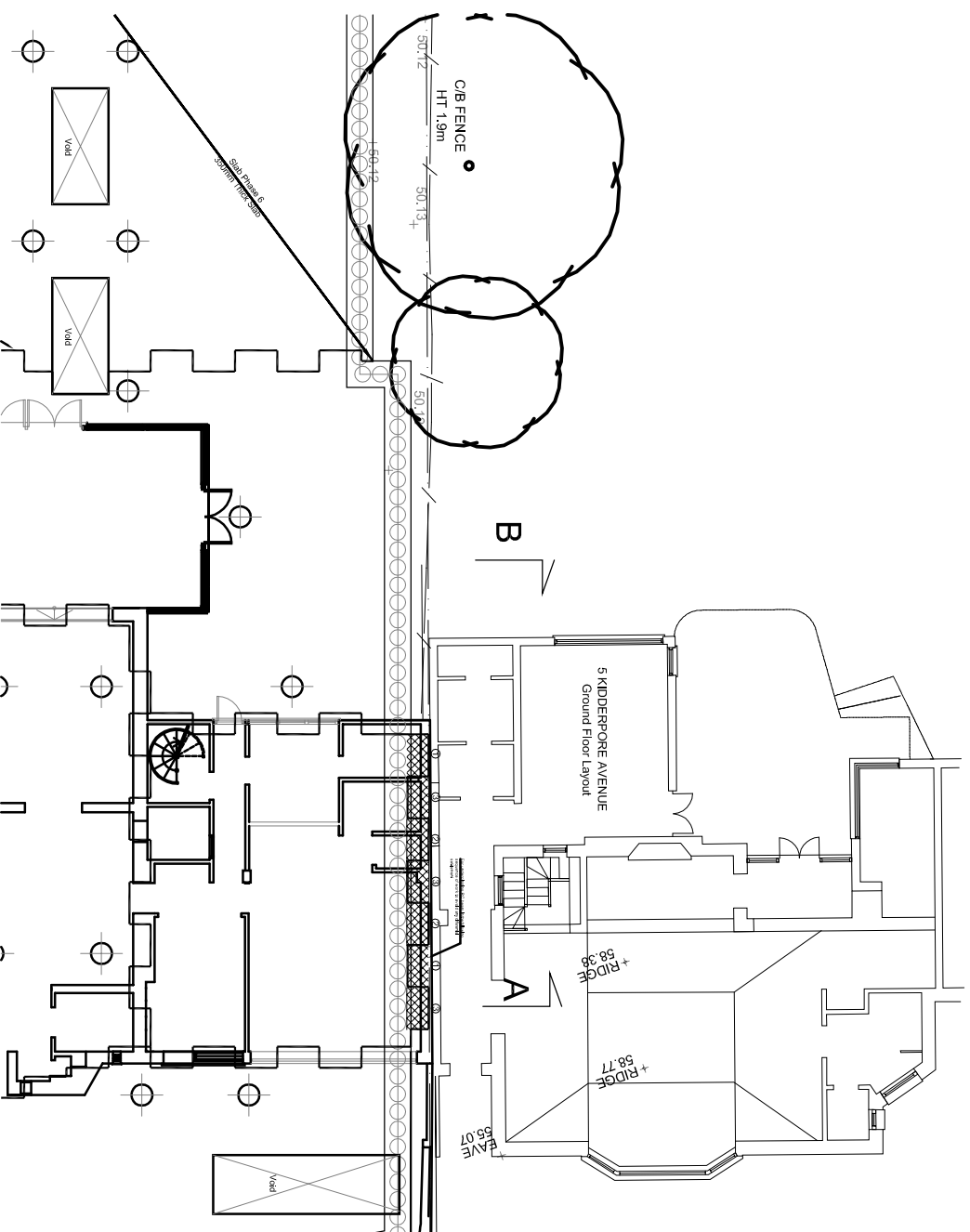
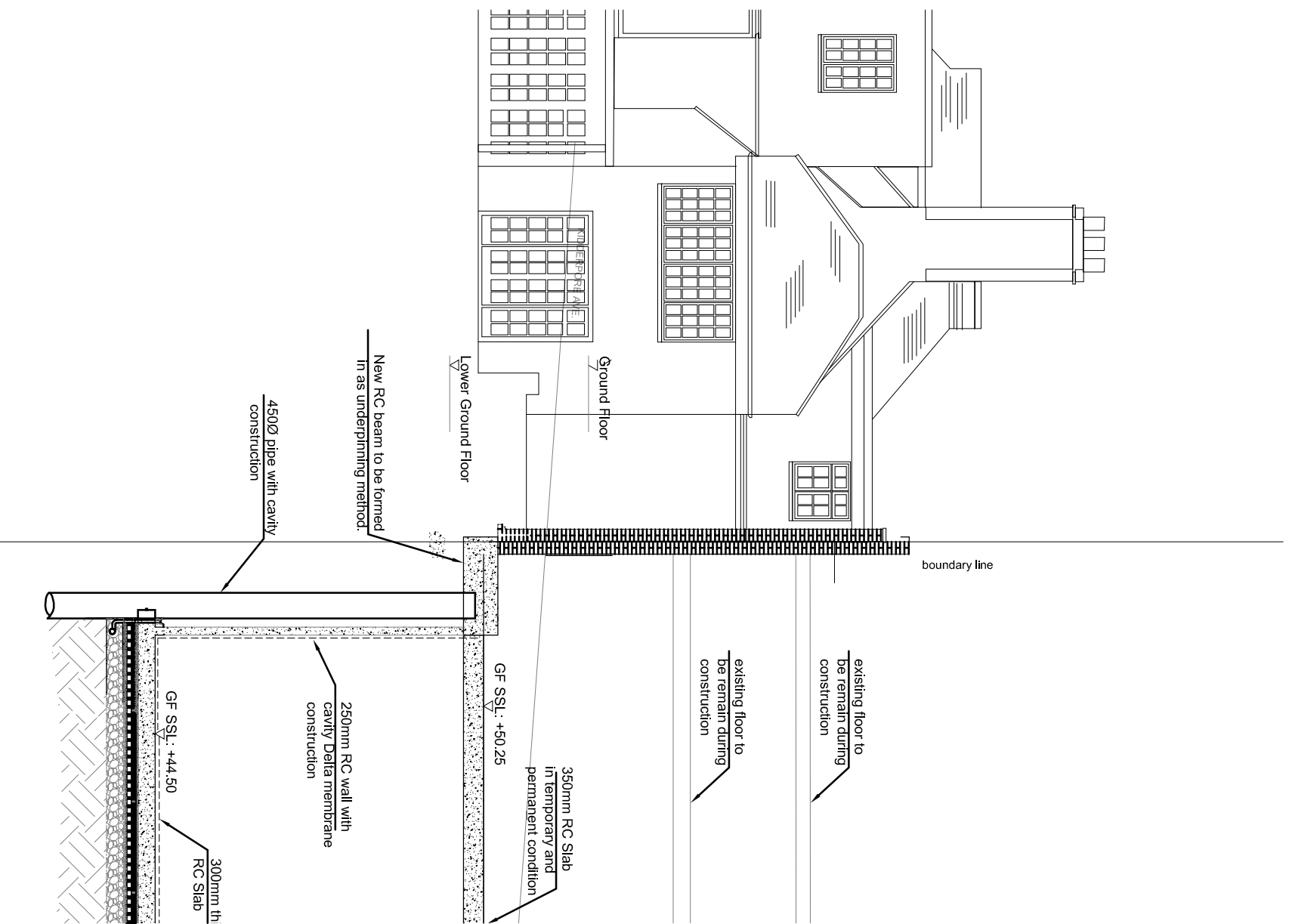
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1:200	16.02.11	GB

Project No.	Dwg No.	Rev.
8148	ST06	B





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A	Drawing For Construction	AK	16.12.14

**3 KIDDERPORE AVENUE  
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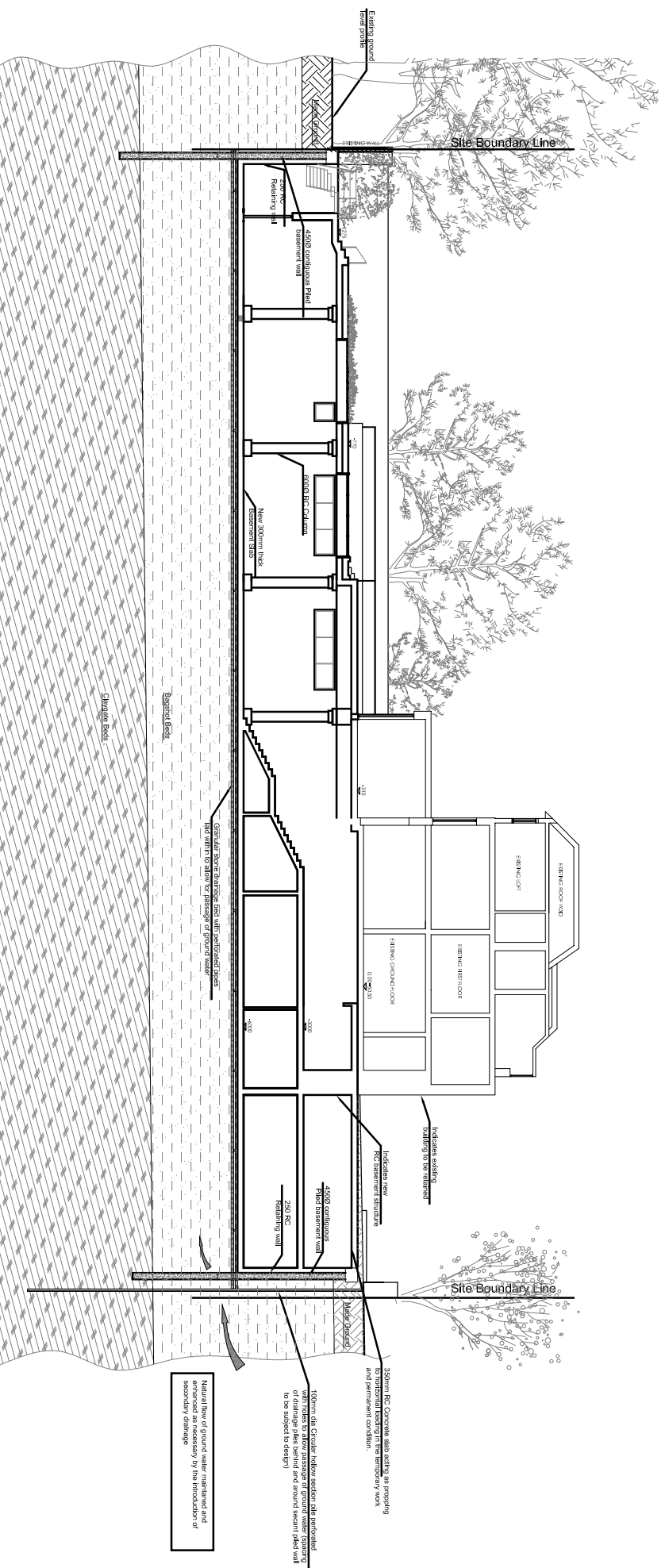
**FOR CONSTRUCTION (D&B)**

**SECTION B-B**

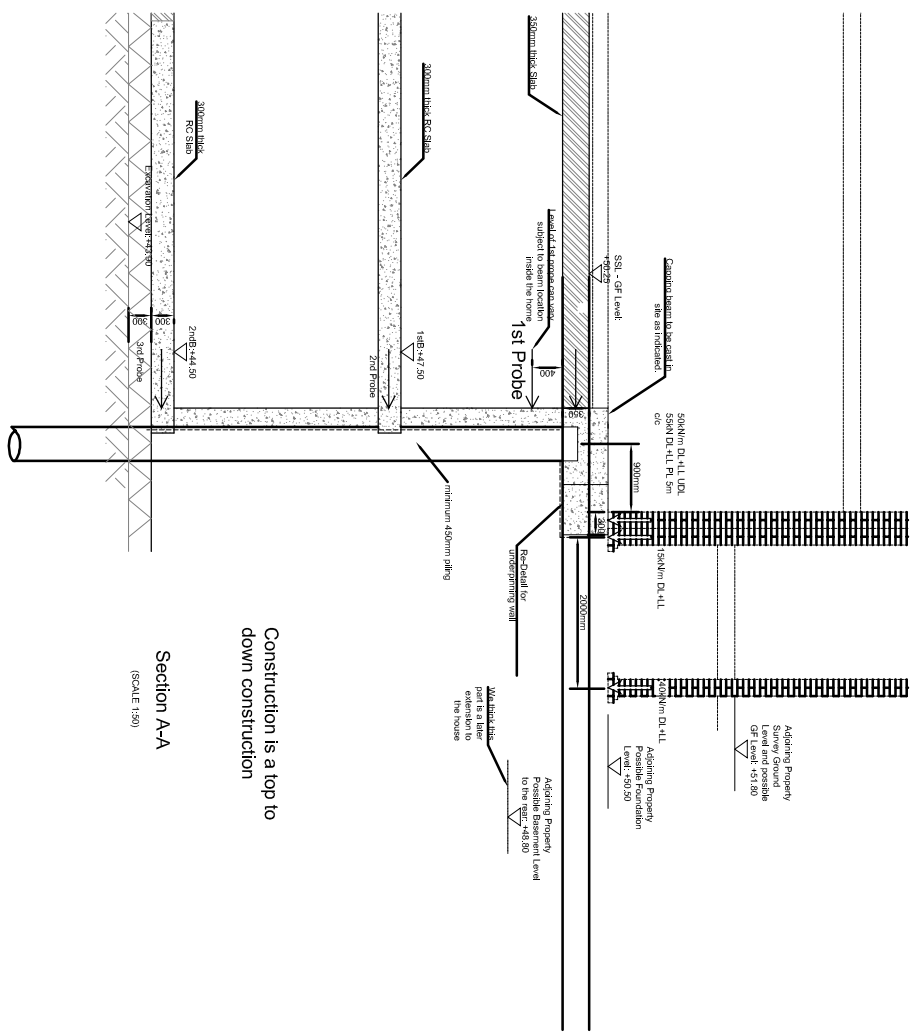


Scale at A1	Date	Drawn By
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1:50		

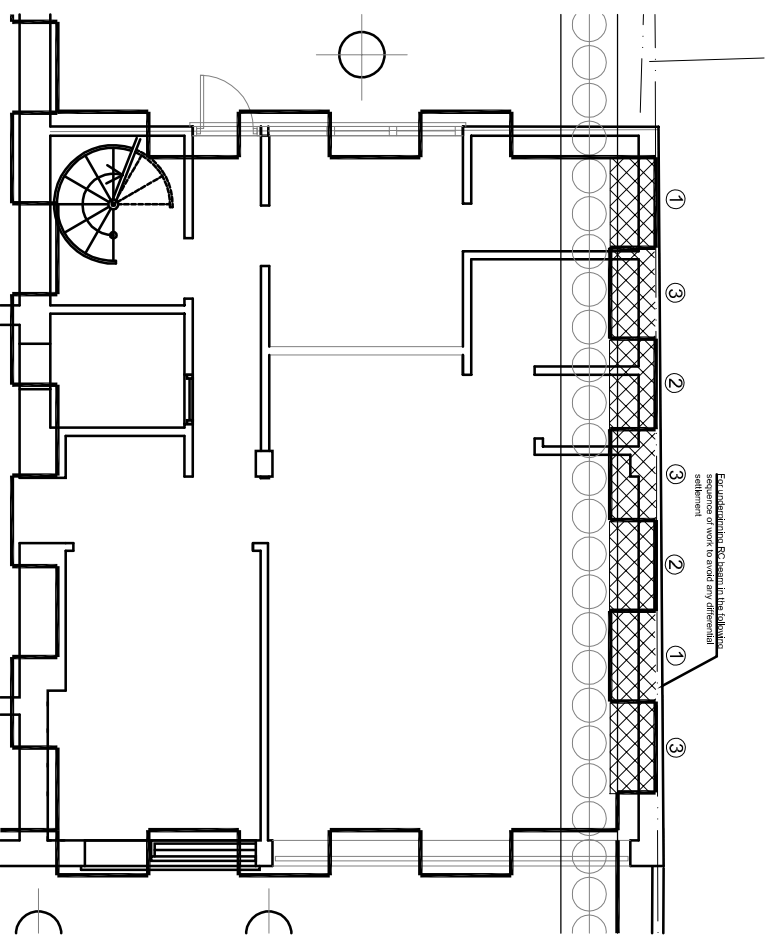
Project No.	Dwg No.	Rev.
8148	ST08	A



Building Section Indicating Drainage and Geology (SCALE 1:150)



Section A-A (SCALE 1:50)  
Construction is a top to down construction



Enlarge plan for boundary wall at No.5 (SCALE 1:50)

1. This Drawing to be read in conjunction with all other Engineers, Architects and Specialists drawings and specifications.
2. No dimensions are to be scaled from this drawing.
3. No deviation may be made from the details shown on this drawing without prior agreement of the Engineers.
4. Any discrepancy between this drawing and any other document should be referred immediately to the Engineer.

Ref.	A	Drawing For Construction	AK 16.12.14	By	Date
Revisions					

3 Kidderpore Avenue,  
Hampstead  
London, NW3 7SX.

**FOR CONSTRUCTION (D&B)**

**Building Section Indicating Drainage and Geology & Section A-A**



Scale at A1	Date	Drawn By
1:100	02.09.09	GB

Project No.	Dwg No.	Rev.
8148	TM01	A