APPENDIX A

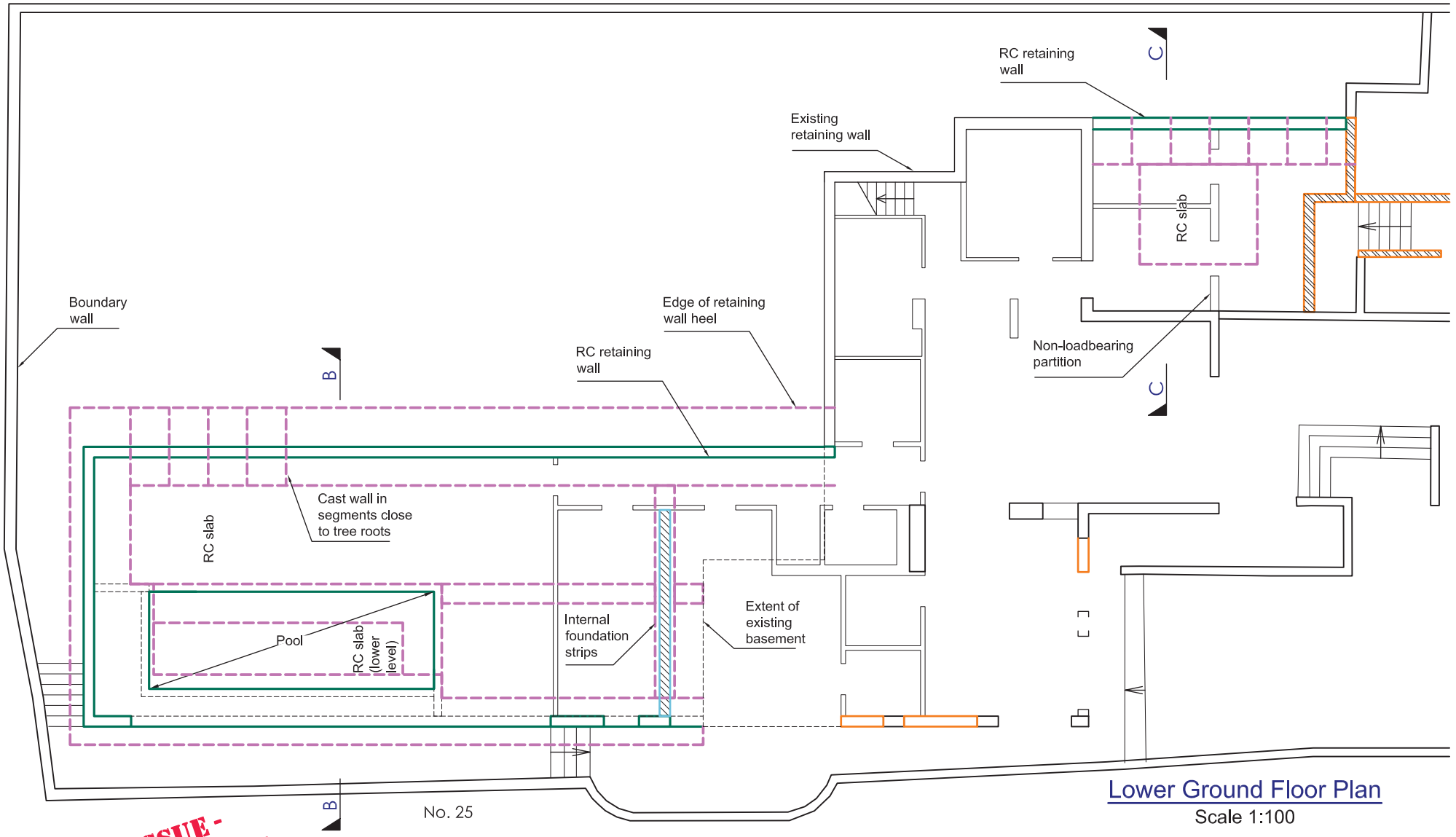
SCREENING ASSESSMENT

Subterranean (groundwater) flow screening chart	
1. a) Is the site located directly above an aquifer?	Yes, the site is located above a 'Secondary A' aquifer comprising the Claygate Member. The proposed basement is not anticipated to have any impact (see Section 4.2).
b) Will the proposed basement extend beneath the water table surface?	Yes. The monitoring performed in the on-site boreholes (BH1 & BH2) encountered groundwater up to 2.18 m above the founding level of the proposed lower ground floor extension given the proposed swimming pool depth. The basement will require waterproofing and appropriate groundwater control and dewatering during construction will be required.
2. Is the site within 100m of a watercourse, well (used/disused) or potential spring line?	No. The nearest surface water feature identified is 122m south west of the site, with a further five within 250m of the site, thought to be associated with the Highgate Pond Chain. However, the site is located within the catchment of the Highgate Pond Chain. The proposed basement is not anticipated to have a significant impact on groundwater flows/levels.
3. Is the site within the catchment of the pond chains on Hampstead Heath?	Yes. The proposed development is within the catchment of the Highgate Pond Chain.
4. Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?	Yes. The proposed development will extend over a larger area than the existing house at No. 26 West Hill Park. Due to the very low risk of surface water flooding conventional measures of managing surface water run-off should be sufficient.
5. As part of the site drainage, will more surface water (e.g. rainfall and runoff) than at present be discharged to the ground (e.g. via soakaways and/or SUDS)?	As above.
6. Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to, or lower than, the mean water level in any local pond or spring line?	No. The nearest surface water feature identified, the Highgate Pond Chain, is at a lower level than the proposed founding level and the proposed basement is not expected to cause any significant impact on groundwater flows (Section 4.2).

Slope stability screening chart	
1. Does the existing site include slopes, natural or manmade, greater than 7 degrees? (approx. 1 in 8)	Yes. The site has a slope angle of approximately 10° from north east to south west (see Section 4.3). The upslope perimeter basement walls must be designed to protect against this potential slope instability.
2. Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7 degrees? (approx. 1 in 8)	No. No re-profiling is planned.
3. Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7 degrees? (approx. 1 in 8)	Yes. The site perimeter includes retaining walls with a difference in ground level of approximately 1.5m to 2.5m with No's 23 & 25 Merton Lane and approximately 1m to 1.5m with the Merton Lane carriageway. As above the upslope perimeter basement walls must be designed to protect against this potential slope instability.
4. Is the site within a wider hillside setting in which the general slope is greater than 7 degrees? (approx. 1 in 8)	No. The surrounding land slopes down to the south west approximately 6-7°.
5. Is the London Clay the shallowest strata at the site?	No. The ground investigation identified the Claygate Member beneath the Made Ground.
6. Will any trees be felled as part of the proposed development and/or are any works proposed within any tree protection zones where trees are to be retained?	Yes. Several mature trees were noted at the site and in the surrounding area which are likely to be subject to root protection zones. The Arboricultural Report (mentioned on Croft Structural Engineers Ground Floor Plan SL-20) should be consulted as to any tree protection guidance.
7. Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at site?	Yes. The Groundsure Report indicates a moderate hazard for shrink-swell clays.
8. Is the site within 100 m of a watercourse or a potential spring line?	No. The nearest surface water feature identified is 122m south west of the site, with a further five within 250m of the site, thought to be associated with the Highgate Pond Chain. However, the site is located within the catchment of the Highgate Pond Chain.
9. Is the site within an area of previously worked ground?	No. Historic maps do no indicate any previous land uses that would indicate worked ground and none was identified in the ground investigation performed by Chelmer.
10. Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?	Yes, the site is located above a 'Secondary A' aquifer comprising the Claygate Member. Yes, the basement is anticipated to extend below groundwater level. The proposed basement is not anticipated to have any impact (see Section 4.2).
11. Is the site within 50 m of the Hampstead Heath Ponds	No. The nearest surface water feature identified is 122m south west of the site, with a further five within 250m of the site, thought to be associated with the Highgate Pond Chain.
12. Is the site within 5 m of a highway or pedestrian right of way?	Yes, within 5m of the Merton Lane carriageway to the rear. Ensure adequate temporary and permanent support and use of best practice underpinning.

13. Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?	No. The smaller basement to the front of the property will be in the vicinity of No.25 West Hill Park, however it will be at the same level as the existing lower ground floor level. The rear basement will involve maximum excavation of approximately 3.8m, however given the existing difference in level between the site and No's 23 & 25 Merton Lane this will only result in a difference in foundation level of 0.276m assuming an existing foundation depth of 0.5m bgl for No's 23 & 25 Merton Lane. A Damage Category Assessment has been carried out to assess the potential damage to neighbouring properties (see Section 6.0).
14. Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?	No. There are no known tunnels underneath the site.

APPENDIX B



Lower Ground Floor Plan

Scale 1:100

- PLANNING ISSUE -
NOT FOR CONSTRUCTION

Rev	Date	Amendments
-	21.04.2017	First issue for comment

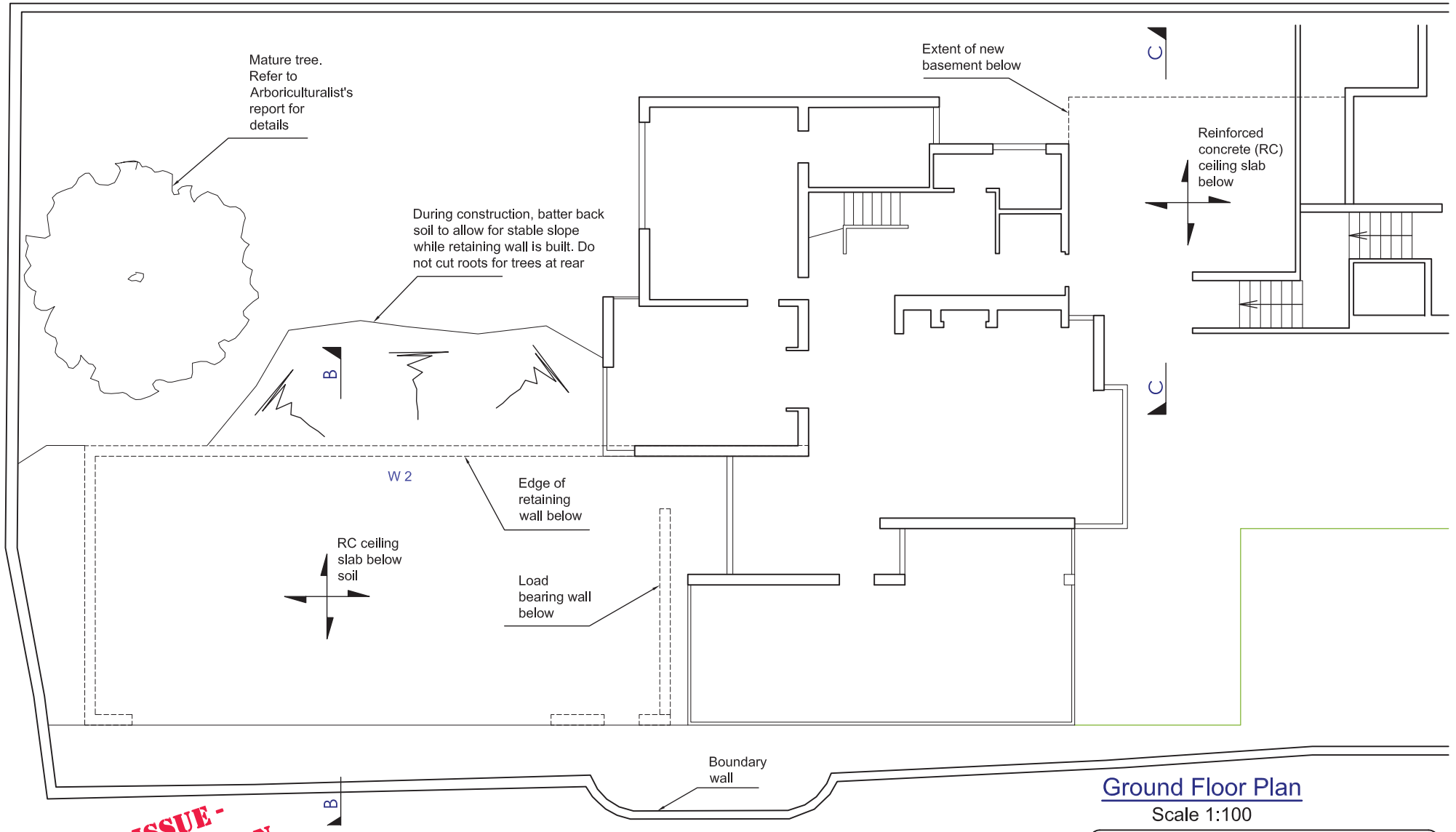
Job No. 161206	Drawn GW / Chk'd -	Scale As shown @ A3
Dwg No. SL-10	Rev. -	Date April 2017

Croft Structural Engineers
Clockshop Mews,
r/o 60 Saxon Rd,
London, SE25 5EH.
020 8684 4744
www.croftse.co.uk

Client: Nadia Gobova

Project: 26 West Hill Park

Title : Structural Scheme Design - Lower Ground Floor Plan



Ground Floor Plan

Scale 1:100

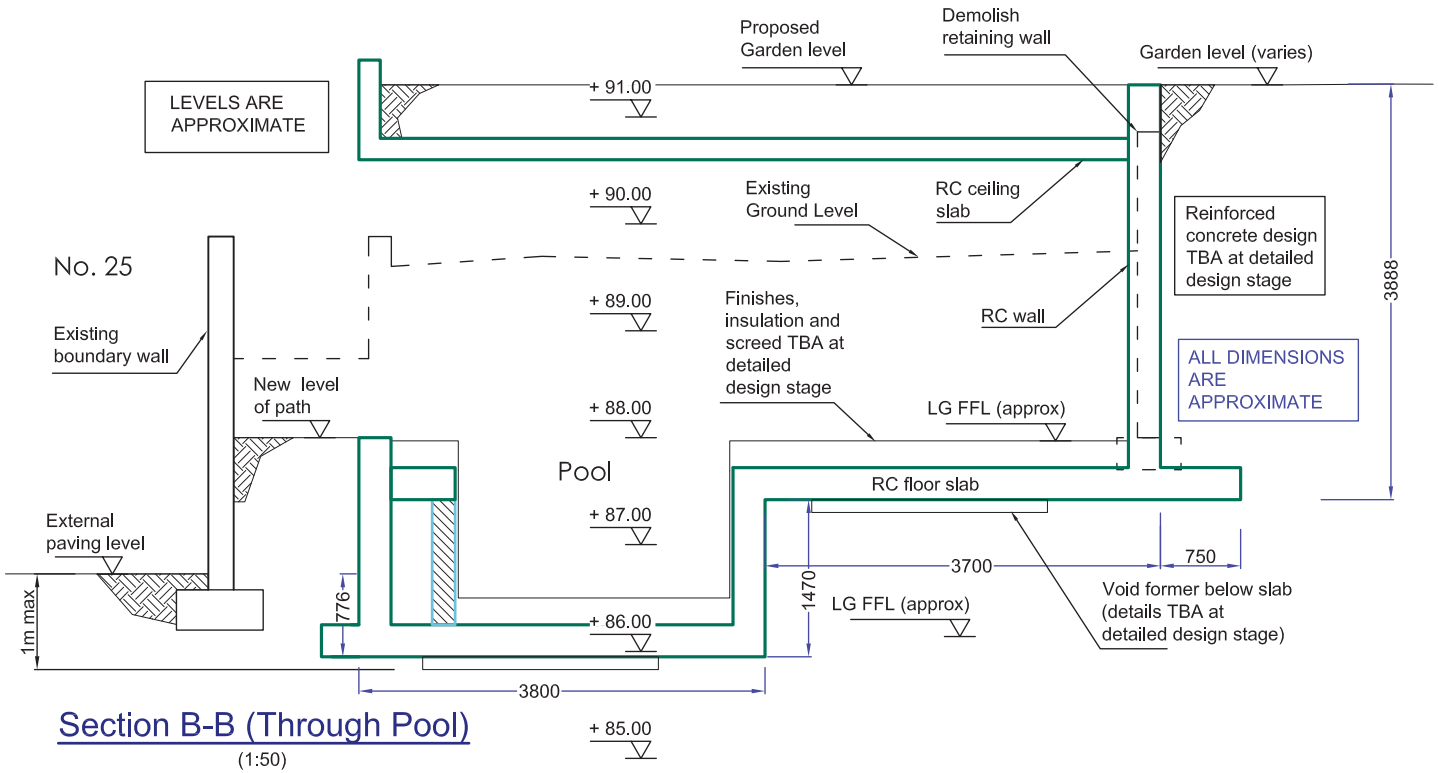
- PLANNING ISSUE -
NOT FOR CONSTRUCTION

Rev	Date	Amendments
-	21.04.2017	First issue for comment

Job No. 161206	Drawn GW	Scale As shown @ A3
	Chk'd -	
Dwg No. SL-20	Rev. -	Date April 2017

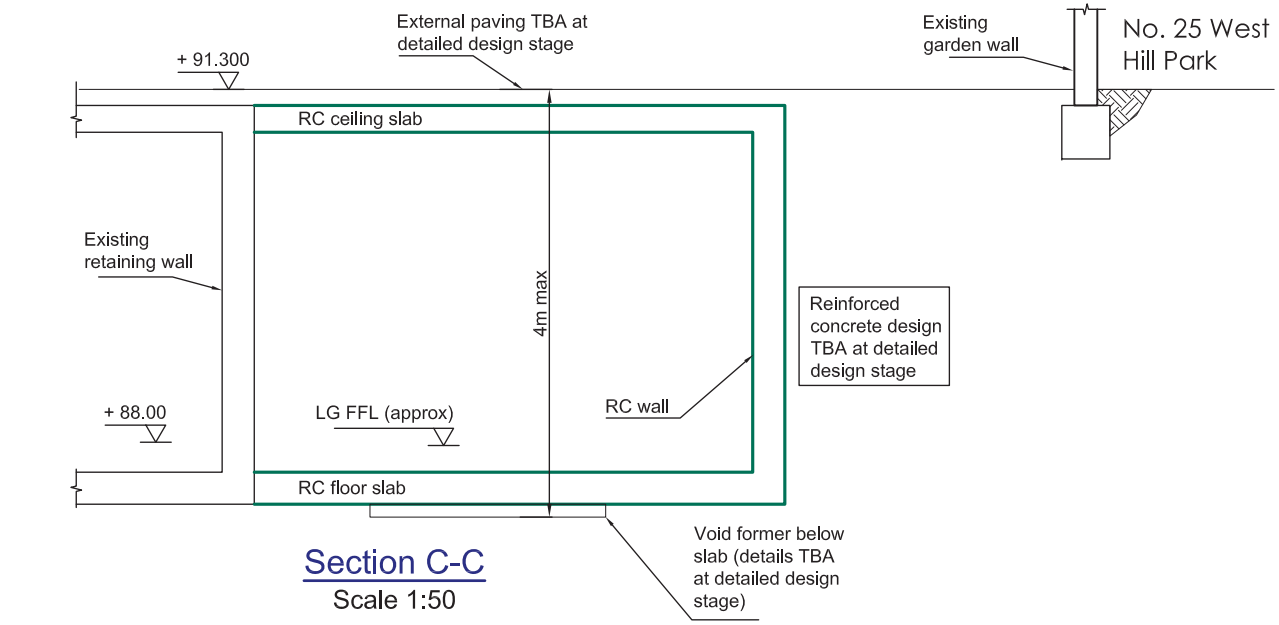
Croft Structural Engineers
Clockshop Mews,
r/o 60 Saxon Rd,
London, SE25 5EH.
020 8684 4744
www.croftse.co.uk

Client:	Nadia Gobova
Project:	26 West Hill Park
Title :	Structural Scheme Design - Ground Floor Plan



Section B-B (Through Pool)

(1:50)



Section C-C

Scale 1:50

- PLANNING ISSUE - NOT FOR CONSTRUCTION

Rev	Date	Amendments
-	21.04.2017	First issue for comment

Job No. 161206	Drawn GW / Chk'd -	Scale As shown @ A3
Dwg No. SD-11	Rev. -	Date April 2017

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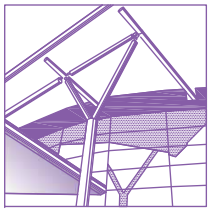
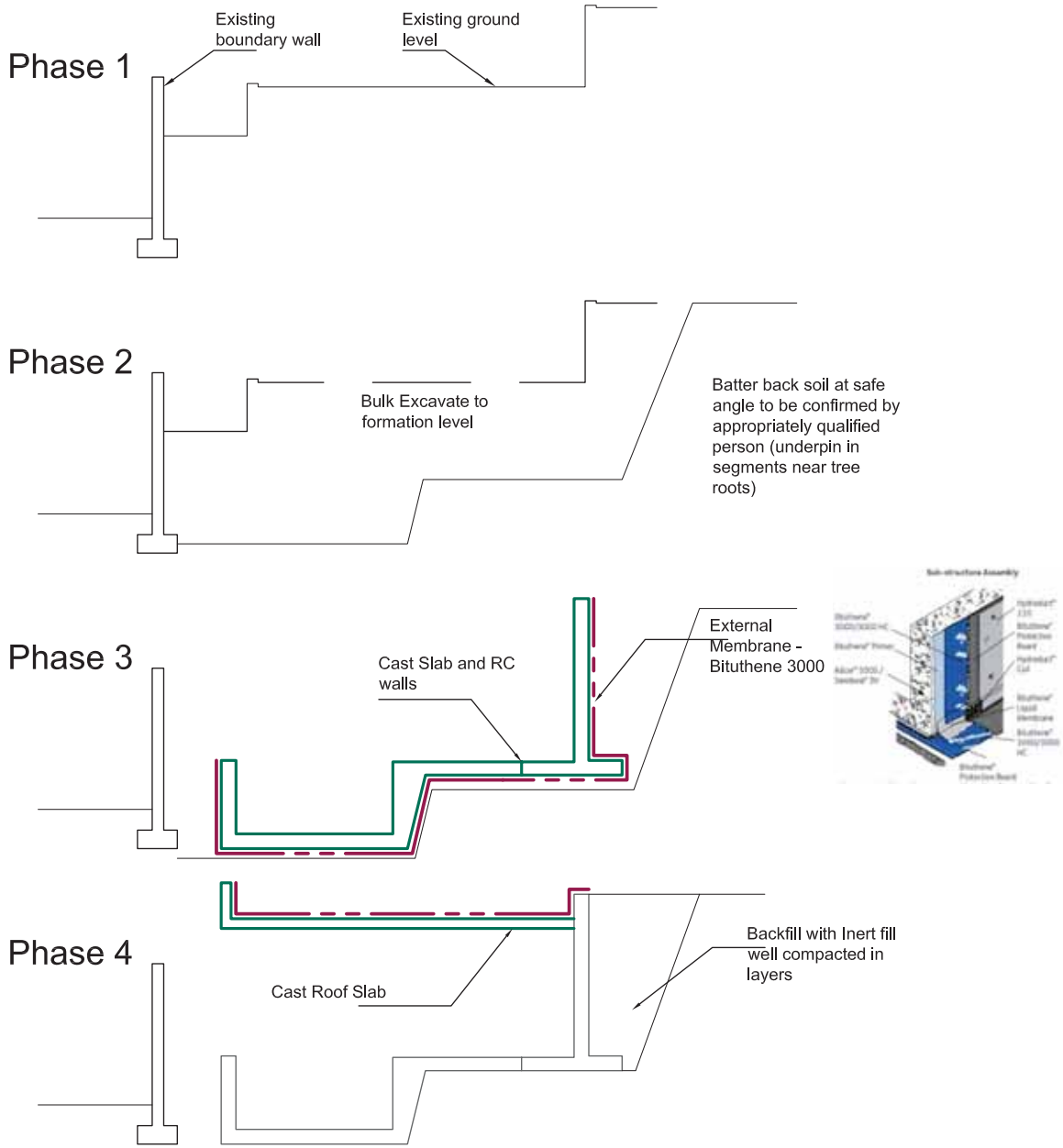


Client: Nadia Gobova

Project: 26 West Hill Park

Title : Structural Scheme Design - Sections

USE IN CONJUNCTION WITH BASEMENT CONSTRUCTION METHOD STATEMENT



Typical section showing construction sequence

(1:100)

- PLANNING ISSUE -
NOT FOR CONSTRUCTION

Rev	Date	Amendments
-	21.04.2017	First issue for comment

Job No. 161206	Drawn GW	Scale As shown @ A3
Dwg No. TW-10	Chk'd -	Date April 2017
	Rev. -	

Croft Structural Engineers

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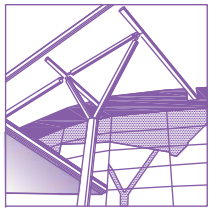


Client: Nadia Gobova

Project: 26 West Hill Park

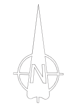
Title : Temporary Works Scheme Design

Notes:

Whilst every effort has been made to correctly identify species of trees on the site, we advise that an arborologist be consulted before any final decisions are made.

All information contained in this drawing (including digital data) should be checked and verified prior to any fabrication or construction.

Grid coordinates are based on an OS GNSS system.



Tree Schedule

Pt No	Spread	Bole	Height	Species
59	5.0	0.15	6.0	YEW
131	5.0	0.35	6.0	CHERRY
233	5.0	0.20	6.0	CYPRESS
284	1.0	0.75	1.0	SAPLING
355	13.0	0.90	15.0	OAK
435	11.0	0.40	15.0	SILVER BIRCH

Coordinate Table

Stn	Easting	Northing	Level
1	527908.461	186840.549	91.315
2	527916.867	186830.460	88.588
3	527905.921	186834.440	88.557
4	527898.156	186833.606	88.441
5	527889.600	186841.582	88.729
6	527893.296	186856.860	91.286
7	527902.906	186854.729	91.284
8	527910.689	186846.307	91.268
6A	527888.210	186861.425	90.989

Rev. Suffix	Date	Initial	Revision Details

Surveyor	MB	Verified By	MB	CAD Operator	TJH	Approved By	ARL	Date	12.10.16

Levelling GNSS Datum OSGB36

To an OS GNSS Datum

Client

Luxury Development Construction

Location

26 Westhill Park
Highgate

Drawing Title

Topographical Survey

Job No. 1609006 | Old Job No.

Drawing Number: LDC/1609006 | Revision Suffix

Scale: 1:200m (A2) | Date: October 2016

CD SURVEYS LTD
LAND, BUILDING & SITE ENGINEERING
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SUNBURY-ON-THAMES
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Fax (01932) 786419
Email: mail@cdsurveys.com
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APPENDIX C

Left: View of steps up to entrance (entrance on ground floor) with garage to the left

Right: View of rear of property (north west elevation) with swimming pool at lower ground floor level on right

Left: View of front of property (south east elevation) from front garden at lower ground floor level.

Right: View of garage building from west corner

Left: View of rear garden from lower ground floor level showing terracing and large mature trees along rear boundary with Merton Lane, including large tree in rear garden of No. 25 West Hill Park (far right)

Right: View of south east boundary with No's 23 & 25 Merton Lane from Merton Lane carriageway

APPENDIX D

1063 Wt. 22438/0384 10m 7/45 (51) F.&S.

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)
1-inch Map Registered No.
2785.8687
256

Name and Number of Shaft or Bore Holly Court School.

For Messrs. L.C.C. Education Dept.

Town or Village

County Six-inch quarter sheet

6-inch Map Registered No. TQ28 NE/42

Exact site Merton Lane, St Pancras

Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made

Level at which shaft bore commenced relative to O.D. State if shaft bore is up, down, horizontal or inclined; in latter cases give angle of inclination and direction

Made by

Information from Date of Sinking

Specimens

Additional Notes in Space Overleaf

For Survey use only) Geological Classification	Nature of Strata	Thickness		Depth	
	No. 1.				
	Topsoil	4	6	4	6
	Stiff brown mottled sandy clay. CB	14	-	18	6
	Stiff blue London Clay. LC.	1	6	20	-
	No. 2.				
	Stiff brown mottled sandy clay.	15	-	15	-
	No. 3.				
	Stiff brown mottled sandy clay.	15	-	15	-
	No. 4.				
	Topsoil.	2	-	2	-
	Stiff brown mottled sandy clay.	13	-	15	-
	No. 5.				
	Stiff brown mottled sandy clay.	15	-	15	-

Historical Light

Parliament Hill

Continued Overleaf

Geological Survey and Museum, South Kensington, London, S.W.7.	Date received	Correspondence File No.	1" N.S. Map No.	1" O.S. Map No.	Site marked (use symbol) on 1" Map	on 6" Map

RECORD OF BOREHOLE NO.1

1Q28NE/150

N6A

Ground level: 213.3ft above O.D. Dia. of boring: 8in to 49ft

Method of boring: Sheil and Auger Lining tubes: 8in to 9ft

Daily progress	Samples: Depth	Samples: Type	Change of Strata: Legend	Change of Strata: Depth	Change of Strata: O.D. Level	Description of Strata
26 2 68						FILL (brick and ash)
	8'6"	D		8'6"	204.8	
	9'6" - 11'0"	U(4)				Stiff fissured mottled brown and grey silty CLAY with occasional gypsum crystals
	11'0"	D				
	12'6" - 14'0"	U(4)				
	14'0"	D				
	16'0"	D				
	17'6" - 19'0"	U(4)				
	19'0"	D		21'0"	192.3	
	21'0"	D				Very stiff fissured brown silty CLAY
	22'6" - 24'0"	U(4)				
	24'0"	D				
	26'0"	D				
	27'6" - 29'0"	U(4)				
	29'0"	D				
	31'0"	D				
	32'6" - 34'0"	U(4)		34'0"	179.3	
	34'0"	D				Very stiff fissured grey silty CLAY
	36'0"	D				
	37'6" - 39'0"	U(4)				
	39'0"	D				
	41'0"	D				
	42'6" - 44'0"	U(4)				
	44'0"	D				
	46'0"	D				
27 2 68	47'6" - 49'0"	U(4)		49'0"	164.3	
	49'0"	D				

Key to type of sample:

- U (4) — 4 in dia undisturbed sample.
- U (1½) — 1½ in. dia. " "
- D — disturbed sample.
- BD — bulk disturbed sample.
- V — vane test.
- S ( ) — standard penetration test.
- C ( ) — dynamic cone penetration test.

( ) Figure in brackets is No. of blows for penetration given in depth column (see Notes page 1)

Remarks: (Observations on ground-water, etc.)

No ground-water was encountered during boring. The borehole was grouted from 16ft 6in to 8ft 6in on completion.

TQ28/262

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

INFORMATION MANAGEMENT PROGRAMME

BH1

A SITE DETAILS

Borehole drilled for: WITANHURST CONSTRUCTION LTD

Location: 41 WEST HILL, HIGHGATE, N6 6LS

NGR (8 figures): TQ 28083 87303

Ground Level (if known): Please attach site plan

Drilling Company: NICHOLLS BOREHOLES

Date of Drilling: Commenced 13 / 01 / 2014 Completed 19 / 02 / 2014

B CONSTRUCTION DETAILS

Borehole Datum (if not ground level) _____ above / m below GL

(point from which all measurements of depth are taken e.g. flange, edge of chamber, etc.)

Borehole drilled diameter	300	mm from	0	to 153	m/depth
	200	mm from	153	to 204	m/depth
		mm from		to	m/depth
SURFACE Casing material STEEL diameter and type (e.g. if plain steel, plastic slotted)	310	mm from	0	to 2	m/depth
Casing material STEEL diameter	219	mm from	0	to 153	m/depth
Casing material SOLID UPVC diameter	140	mm from	0	to 141	m/depth
Casing material SLOTTED UPVC diameter	140	mm from	141	to 198	m/depth
Grouting details 78 BAGS SHINGLE TO 10M, 6 BAGS MIKOLIT TO SURFACE					
Water struck at	N/A	m (depth below datum - mbd)			
	MUD DRILLED	m (depth below datum - mbd)			
Rest water level on completion	146	mbd			

C TEST PUMPING SUMMARY (Please supply full details on Forms WR-39)

Test Pumping Datum (if different from borehole datum)	_____ m	above / below borehole datum (mbd)
Pump Suction depth	_____ mbd	
Water Level (Start of Test)	_____ mbd	
Water Level (End of Test)	_____ mbd	
Pumping rate	_____ m^3/d:l/s	
for	_____ days/hours	
Recovery to (from end of pumping)	_____ mbd in _____ mins: hrs: days	
Date(s) of measurements	_____	

Please supply chemical Analysis if available

D STRATA LOG

Geological Classification (BGS only)	Description of strata	Thickness m	Depth m
	MADE UP GROUND	1	0 - 1
	LONDON CLAY	128	1 - 129
	THANET SANDS	18	129 - 147
	CHALK WITH FLINTS	57	147 - 204
	(continue on separate page if necessary)		

Other comments (e.g. gas encountered, saline water intercepted, etc.)

FOR OFFICIAL USE ONLY

FILE	CONSENT NO	NGS REF NO:
LIC NO:	PURPOSE:	EA REF NO:
DATE REC:	COPY TO:	ENTERED BY:

7928 /263

British Geological Survey

INFORMATION MANAGEMENT PROGRAMME

BH2

A SITE DETAILS

Borehole drilled for: WITANHURST CONSTRUCTION LTD

Location: 41 WEST HILL, HIGHGATE, N6 6LS

NGR (8 figures): TQ 28022 87127

Ground Level (if known): Please attach site plan

Drilling Company: NICHOLLS BOREHOLES

Date of Drilling: Commenced 31 / 01 / 2014 Completed 21 / 02 / 2014

B CONSTRUCTION DETAILS

Borehole Datum (if not ground level) above / m below GL

(point from which all measurements of depth are taken e.g. flange, edge of chamber, etc.)

Borehole drilled diameter	300	mm from	0	to 151	m/depth
	200	mm from	151	to 206	m/depth
		mm from		to	m/depth
SURFACE Casing material STEEL diameter and type (e.g. if plain steel, plastic slotted)	218	mm from	0	to 2	m/depth
Casing material STEEL diameter	219	mm from	0	to 151	m/depth
Casing material SOLID UPVC diameter	140	mm from	0	to 149	m/depth
Casing material SLOTTED UPVC diameter	140	mm from	149	to 206	m/depth

Grouting details 92 BAGS SHINGLE TO 8M. 5 BAGS MIKOLIT TO SURFACE

Water struck at N/A m (depth below datum - mbd)

MUD DRILLED m (depth below datum - mbd)

Rest water level on completion 138 mbd

C TEST PUMPING SUMMARY (Please supply full details on Forms WR-39)

Test Pumping Datum (if different from borehole datum) _____ m above / below borehole datum (mbd)

Pump Suction depth _____ mbd

Water Level (Start of Test) _____ mbd

Water Level (End of Test) _____ mbd

Pumping rate _____ $m^3/d:l/s$

for _____ days/hours

Recovery to (from end of pumping) _____ mbd in _____ mins: hrs: days

Date(s) of measurements _____

Please supply chemical Analysis if available

D STRATA LOG

Geological Classification (BGS only)	Description of strata	Thickness m	Depth m
	MADE UP GROUND	1	0-1
	LONDON CLAY	126	1-127
	THANET SANDS	17	127-144
	CHALK WITH FLINTS	62	144-206
	(continue on separate page if necessary)		

Other comments (e.g. gas encountered, saline water intercepted, etc.)

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FILE	CONSENT NO	NGS REF NO:
LIC NO:	PURPOSE:	EA REF NO:
DATE REC:	COPY TO:	ENTERED BY: