

313 The Roundway and 8-12 Church Lane

Mixed Use Development

Planning Condition 40 - Discharge Report



1. INSTRUCTIONS

- 1.1. We are instructed by IPE Roundway Ltd, to visit the site and prepare a Report in support of Planning Condition No 40 which states:

Prior to the commencement of construction works, details of both foundation design and related assessment of impact on the listed western boundary wall of Bruce Castle shall be submitted to and approved in writing by the Council as local planning authority in consultation with Historic England before the foundation work is begun. Details shall include comprehensive pre-construction surveys, detailed foundation design, assessment of impact and construction monitoring plan

2. LIMITATION

- 2.1. Whilst every effort was made to fully inspect the boundary wall structure no intrusive investigations were carried out; as such the extent of the investigations was limited to a visual inspection only.
- 2.2. This report is confidential to the our client and whilst it may be shown to their professional advisors, the comments are not to be disclosed to, or made use of by any third party, without our express written consent. Without such consent we can accept no responsibility to any third party
- 2.3. John Farquharson Partners Ltd certifies that they carried out the works contained herein with due care and diligence to their best belief and knowledge based on the time and information available.
- 2.4. This report does not concern itself in any way with the question of insurance policy liability or any other aspect.

3. EXPERTISE

- 3.1 John Farquharson Partners Ltd are a multi-disciplined consultancy working in all sectors of the construction industry continuing the founding principles of the company which was established in 1922. With such a history we have detailed knowledge and expertise in historic building construction and refurbishment.
- 3.2 Recent Historic building instructions include the refurbishment of a Grade I listed building in Mansfield Street / London, the conversion and renovation of the first plastic factory in Hackney (locally listed) and the renovation and extension to a Grade II listed building in St John's Wood / London.

3. INSPECTION

- 3.1. An inspection was undertaken on the 3rd November 2023.

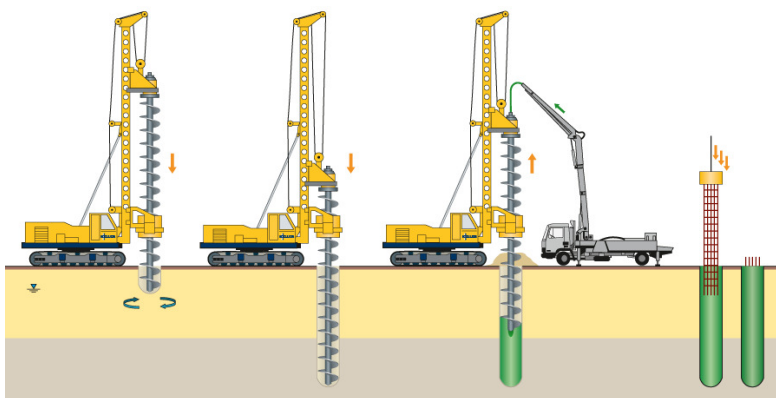
4. DESCRIPTION

- 3.1. The boundary wall in question forms part of the western boundary to the Bruce Castle complex which is a Grade I listed building under entry number 1358861; dated July 1949.
- 3.2. While the original date of construction of the house is not known, archaeological evidence suggests the current building on the site has existed since at least the 16th Century. The red brick tower located to the south west of Bruce Castle dates to the Tudor period. The house and detached tower are among the earliest uses of brick as the principal building material for an English domestic residence.
- 3.3. The boundary wall to the western elevation appears of a latter addition to the estate and may date from the time the estate was purchased by Tottenham council around 1892. The wall as a result only has a Grade II listing under entry number 1294666 dates May 1974.
- 3.4. The significance of the western boundary wall is derived from its architectural and historic interest as the historic boundary to the Bruce Castle grounds. Architectural interest in the wall is limited to the methods of its construction and its appearance as part of a historic streetscape along Church Lane. The wall has been heavily altered and extended to the north accommodate the service entrance and utility buildings. The later additions, extensions and repair, are not consistently of a material or form sympathetic to the original and have eroded the significance of the wall derived from its contribution to the streetscape
- 3.4. The wall construction is of solid red brick masonry laid in a Flemish Bond to a height of approximately 1.8m. Given the age of the construction the mortar is considered to be of lime base. The foundations to the wall are considered to be shallow spread brick foundations which were typical at that time.
- 3.5. At the time of preparation of this report the wall is in a poor condition and has been temporarily propped by scaffolding to some section where a vehicle impact may have occurred. See Photographs in Appendix A

5. **PROPOSED WORKS.**

- 5.1. As part of the proposed development of the adjoining site into flats; 3 - 4 storey concrete framed structures are to be constructed. These building will need robust / durable foundations providing little to no ground movement in the short and long term
- 5.2. Site investigations have confirmed that the underlying strata consists of Made Ground to 1.8m overlying London Clay to depth (See Appendix B). Given the anticipated building loads and depth of made ground encountered Piled Foundations are considered to be the most appropriate form of construction.
- 5.3. Based on the sub-soil conditions, proximity of adjoining buildings and infrastructure Continuous Flight Auger (CFA) piling has been chosen for the foundation construction for the following reasons:-
- Drilling operations are reasonably quiet and are virtually vibration free. Making it the most suitable method for urban and environmentally sensitive locations
 - CFA methods results in no ground movement / displacement both during and after the works as the displaced soil is replaced with concrete as drilling works proceed; it is therefore suitable for piling close to existing structures and buried infrastructure.
 - Piles can be installed close to existing buildings, drains and buried services.
 - Piles can be formed in water bearing strata without the need for casing.
 - The duration for pile operations is reduced.

Generic CFA piling installation method. (Cite: Keller Holding : 2018)



- 5.4. As mentioned above the chosen method of construction is virtually vibration free making is particularly suitable for works in close proximity to sensitive structures such as the Western Boundary wall. However some vibrations can be anticipated when heavy machinery is tracked across the site and this needs to be managed at site level. Once such measure is via the use of a crushed aggregate piling platform which acts to absorb some of these disturbances.
- 5.5. Based on the building footprint the closest pile to the listed Boundary wall is 12m away.

6. CONCLUSION.

- 9.1. Based on the form of construction observed, method of foundations proposed and physical distance between the foundations and the listed Boundary Wall we would conclude there is little to no risk of damage being caused by the proposed construction works.
- 9.2. CFA piling techniques are particularly suited to urban environments as they exhibit no ground movement and no vibrations during installation.
- 9.3. However as a precaution movement monitoring is recommended in the form of fixed laser targets which should be monitored on a weekly basis during the 6 week anticipated piling programme.

We trust that the foregoing is of a and we will be pleased to discuss further any points you may wish to raise in connection with this project.

Raj Saund

Raj Saund B.Eng (hons) IMIStructE

Director

APPENDIX A - Existing Photo's



View Showing Scaffold Erected (by others) and Proposed Movement monitoring targets



View Showing Newly Constructed Section of Wall (by other) in Yellow Brick

APPENDIX B - Bore Hole Detail (BH1 closest to Listed Wall)

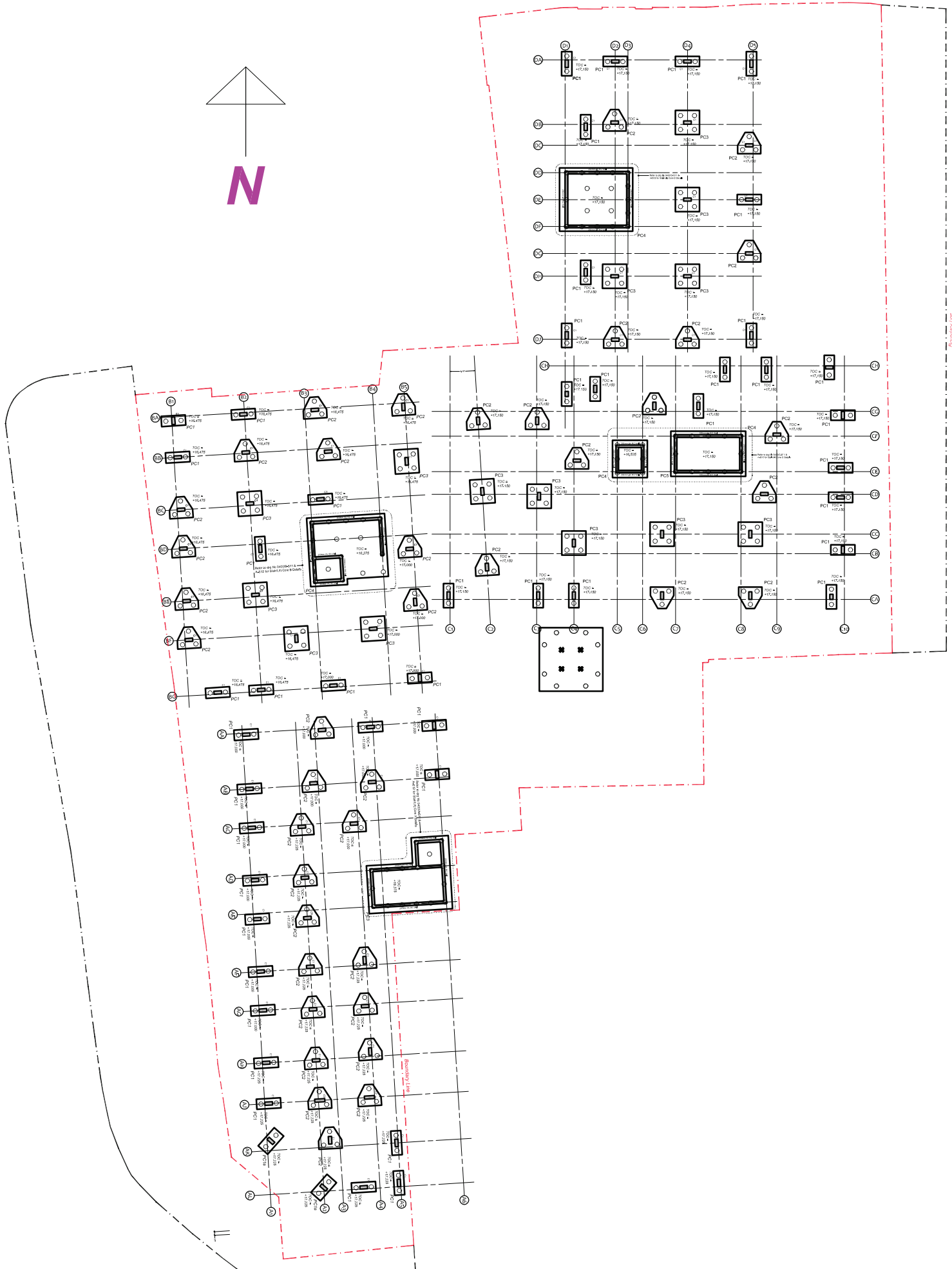


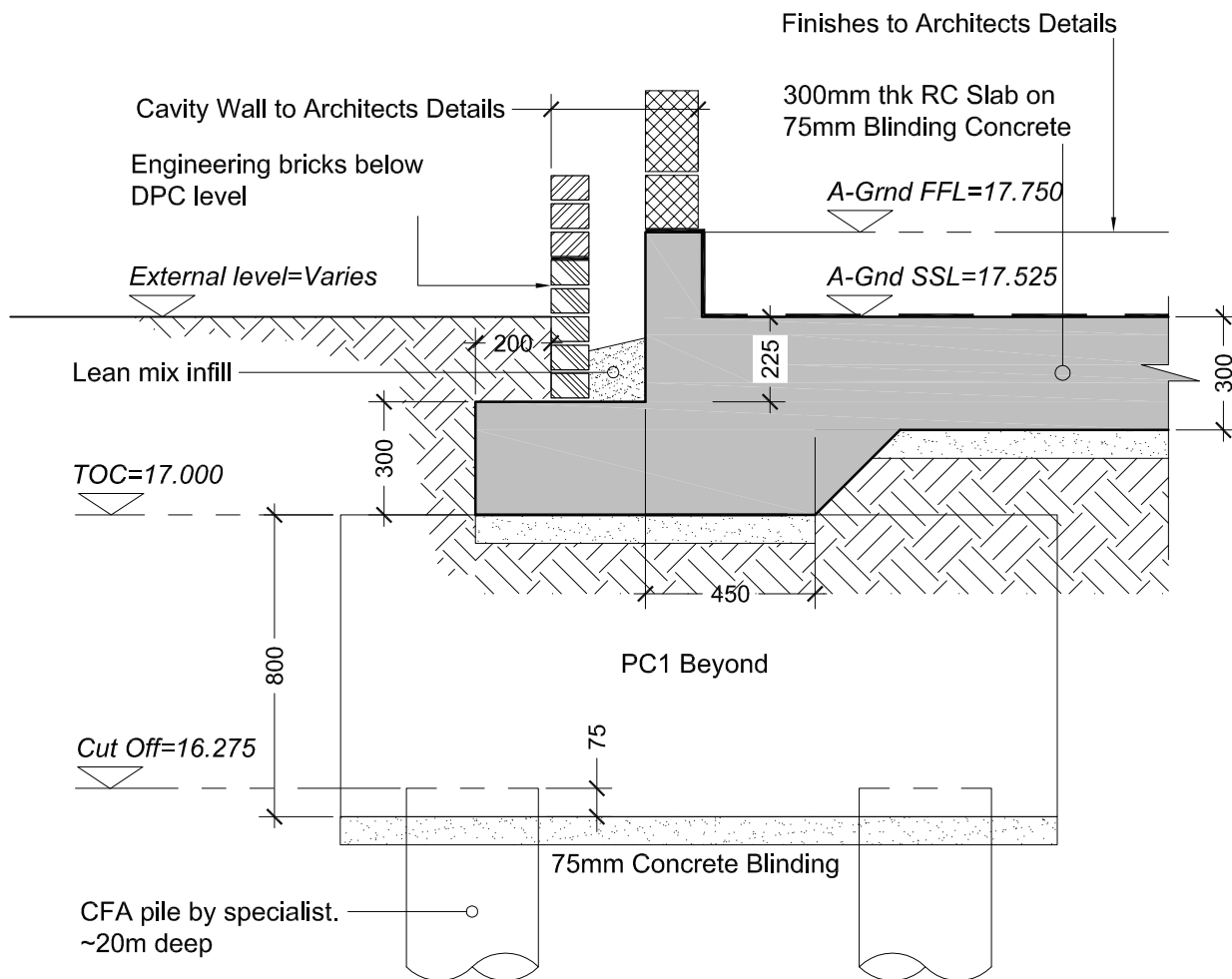
CABLE PERCUSSION BOREHOLE RECORD													
Exploratory Hole No:					BH1								
Site Address:	313-315 The Roundway and 8-12 Church Lane, London N17 7AB				Project No:	PS14132799							
Client:	SPE Roundway Ltd				Ground Level:	17.53							
Logged By:	RAY				Date Commenced:	18/05/2023							
Checked By:	CLP				Date Completed:	18/05/2023							
Type and diameter of equipment:	Cable Percussive Rig				Sheet No:	2 OF 4							
Water levels recorded during boring, m													
Date:													
Hole depth:													
Casing depth:													
Level water on strike:													
Water Level after 20mins:													
Remarks													
1: Groundwater was not observed.													
2: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature.													
3:													
4:													
Sample or Tests								Strata		Strata Description	Installation		
Type	Depth (mbgl)	Result						Legend	Depth (mbgl)			Water Strikes (mbgl)	
U	5.00	75	75	75	75	75	75	75	5.00			Firm consistency** brownish grey sandy CLAY. (LONDON CLAY FORMATION).	
	60 blows for 100% recovery												
S	6.50	3	4	4	3	4	5	16	6.50			Stiff to very stiff consistency** grey CLAY with occasional CLAYSTONES. (LONDON CLAY FORMATION).	
D	7.00								7.20				
S	8.00	3	5	7	8	10	11	36	8.00				
D	8.50								8.50				
U	9.00								9.00				
	60 blows for 100% recovery								9.50				
									10.00				

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample
 Jomas Associates Ltd - Lakeside House, 1 Furzegrund Way, Stockley Park, UB11 1BD
 T: 0843 209 2187 E: info@jomasassociates.com W: www.jomasassociates.com

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Proposed Foundation Plan





Proposed Foundation Section

scale 1:20