13 Prince Albert Road NW1

Structural Stability Report

Brief

This document is the structural stability report carried out for the purpose of planning permission in accordance with The London Borough of Camden requirements. It should be noted that this report outlines and suggests the assumed construction at this stage. It should also be noted that, as is standard for works of this type, the main contractor will be fully responsible for the design and erection of all temporary works.

We propose to use the following headings to demonstrate compliance with the requirements of the London Borough of Camden. We have also used headings similarly required by the Royal Borough of Kensington and Chelsea and their subterranean development supplementary planning document.

Description of Proposed Basement Works

13 Prince Albert Road is a semi detached stucco villa dating from the mid 19th Century. The property consists of five storeys including a lower ground floor and is in sound structural condition with no signs of significant differential movement. The proposal is to extend the existing lower ground floor and to create a new basement level, approximately 3m below current lower ground floor level. Please refer to the following drawings produced by Hugh Cullum Architects Ltd: P500 to P517 and the existing survey drawings. The geological maps show the soil conditions to be uniform London clay to a depth of approximately 30m overlying Woolwich and Reading Beds. A geotechnical report will be carried out to confirm this and if necessary the structure will be adapted to suit the findings. The proposal is to construct a secant piled cut off wall around the site and to underpin the existing structure in a two staged concrete underpin. Temporary props will be used to prop the contiguous piled walls during construction of a permanent reinforced concrete retaining wall. This will be described in more detail throughout this report and shown on the drawings 3561-SG01B and SG02B enclosed.

Supporting the Proposed Loads

The proposal is to underpin the existing walls. Where these walls are retaining they will be designed with reinforcement to act as a retaining wall. The loading down the party wall is not expected to increase significantly from existing. The secant piled wall will be designed to support the relatively small temporary cantilever loads during the construction process, and will also be designed in the permanent state to span between the permanent basement and roof slabs. The new reinforced concrete basement and roof slabs will be supported via ground beams and piles. No additional load will be imposed on the existing party wall or existing footings. We confirm the proposed structural scheme will be sufficient to support the loads calculated.

Structural Integrity of Surrounding Structures, Roads, Pavements and Utilities

We propose to adopt around the perimeter of the excavation a propped secant piled wall, this is a relatively quiet operation and causes negligible disturbance to the adjacent ground. We understand that there are no statutory utilities, tunnels or infrastructure within the area of influence of the proposed basement works. The existing drainage and services for the house will be adapted to accommodate the proposed works.
We confirm theses works will not detrimentally affect the structure of the existing road or pavement.

Slope Instability

No battering back is proposed. A propped secant piled wall is proposed and will be designed to hold back the earth due to the excavation. We therefore confirm slope instability will not be initiated due to these works. Please refer to the proposed drawings 3561-SG01B and SG02B enclosed.

Impact on Drainage and Surface Water

We understand that there is no statutory drainage within the area of influence of the proposed basement works. With regards to surface water the majority of the proposed basement is below the existing drained paved driveway and house. However the basement does also extends out under the existing garden. The garden is to be landscaped with drained top soil throughout. Further detailed works have been carried out by GEA Ltd, please refer to their Basement Impact Assessment report.

Geological & Hydrological Concerns

The geological maps identify uniform London Clay down to approximately 30m. Further detailed works have been carried out by GEA Ltd, please refer to their Basement Impact Assessment report.

Details of the Scheme

Please refer to the proposed sketches, sketches 3561-SG01B and SG02B enclosed, for details of the scheme including proposed temporary works and method and sequence of works.

Structural Stability of the Existing Buildings

The proposed basement is to be part constructed adjacent to a party wall and below existing walls of the house. The existing party wall and external walls will be extended down and will be reinforced and will bear on strata that will provide a safe bearing with a capacity greater of that found at the existing depth. The reinforced walls are designed to resist the lateral earth pressures. The existing building does not show signs of differential movement and these works will not create any significant differential settlement or have a detrimental effect on the structural stability of the adjoining or adjacent buildings.

Impact on Trees

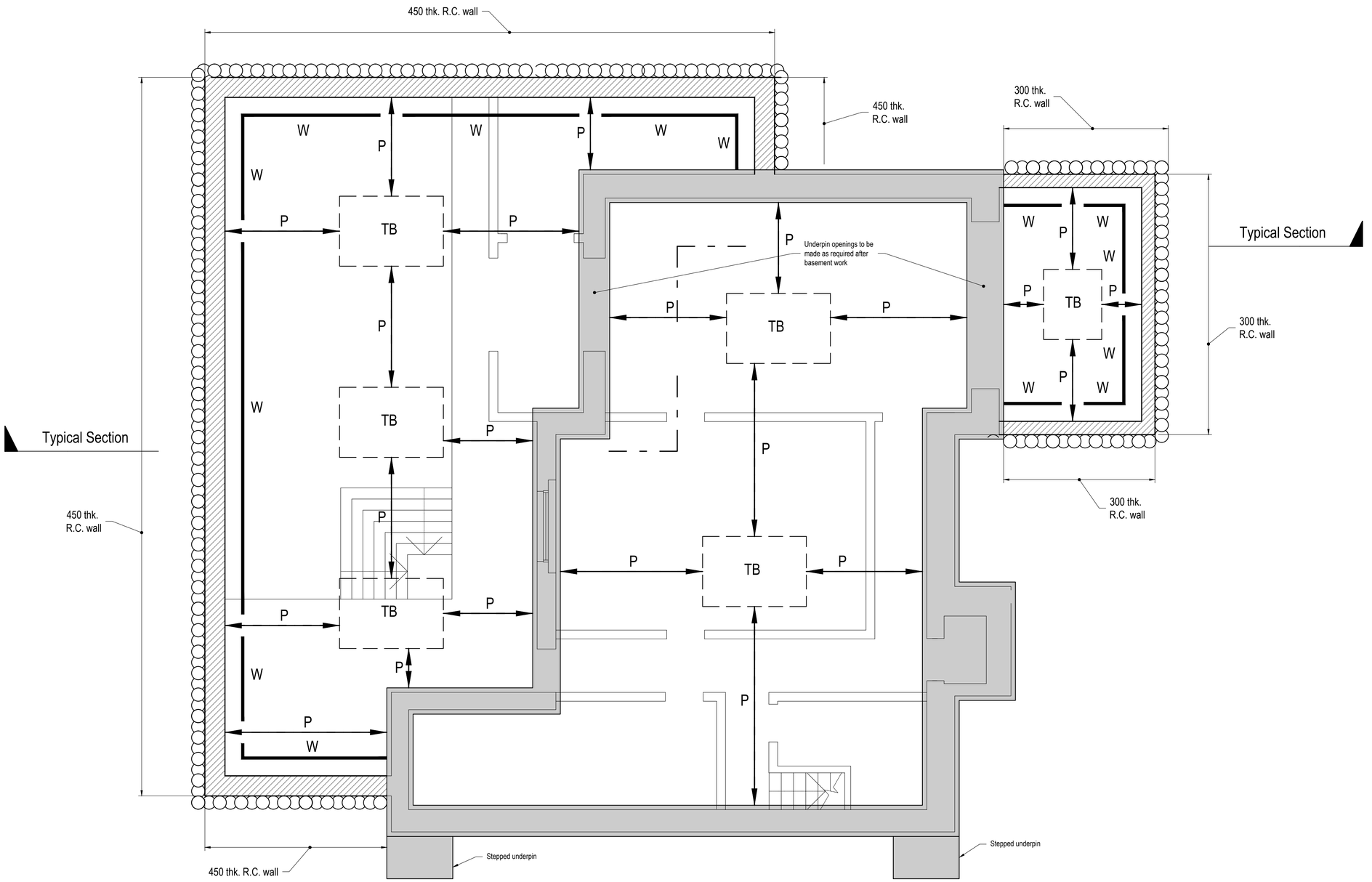
The proposed basement perimeter has been locally stepped inboard in a manner sympathetic with an existing neighbouring tree. We understand the proposed basement is not within the zone of influence of any existing trees.

Temporary Works

Please refer to the proposed sketches 3561-SG01B and SG02B enclosed, for details of the temporary works. These works have been preliminary designed in accordance with the current British Standards. When the contractor is appointed he will be fully responsible for the temporary works including the design and erection.

This report has been produced for the sole use of The London Borough of Camden and for their use only and should not be relied upon by any third party. No responsibility is undertaken to any third party without the prior written consent of Richard Tant Associates.

Richard Tant BEng(Hons) CEng MIStructE for Richard Tant Associates.



Legend:

P - Temporary horizontal prop

W - Temporary walling beam

TB - Thrust block (temporary)

- Underpinning

- R.C. wall 300/450 thick - refer to plan

All temporary works to be fully designed by Contractor.

For Suggested Method of Works refer to typical section on drg. 3561 - SK02.

Suggested Temporary Propping Basement Plan

Scale 1:50

Notes.

REV.	AMENDMENTS	BY	DATE	CHECKED
B	Updated to Architect's drawings.	AR	17.11.2011	RT
A	Various.	AR	10.08.2011	RT

PROJECT
13 Pince Albert Road
London NW1 7SR

TITLE
Suggested Temporary Works

ARCHITECTS
Hugh Cullum Architects

DRAWING No.
3561-SG01B

DATE	27-08-2010
SCALE	As shown @ A1
DRAWN	AR
CHECKED	RT
REVIEWED	-

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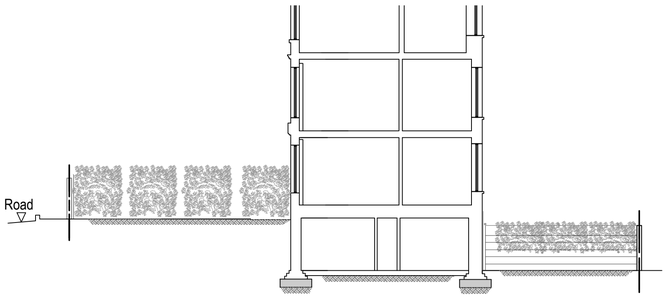
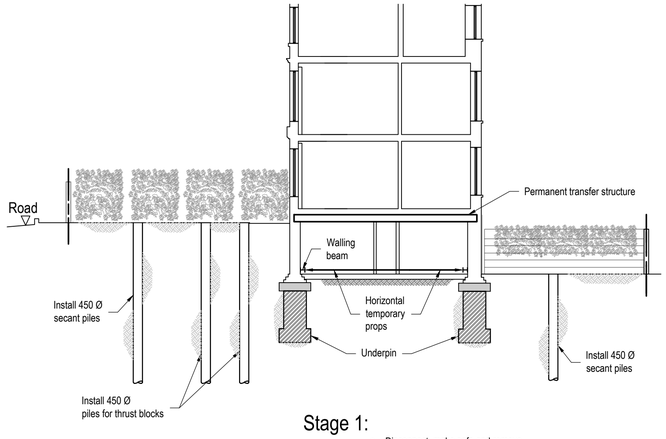
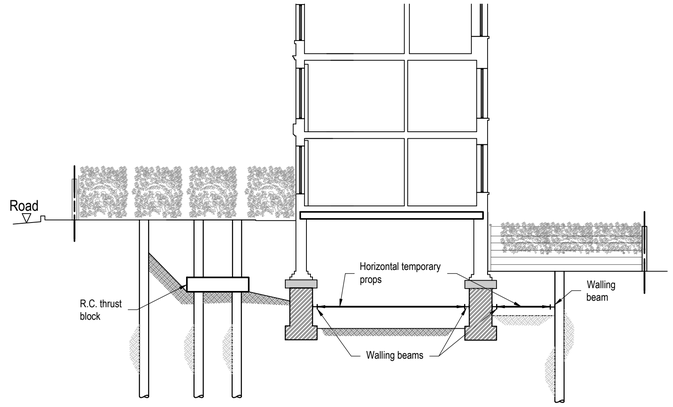


Existing Typical Section



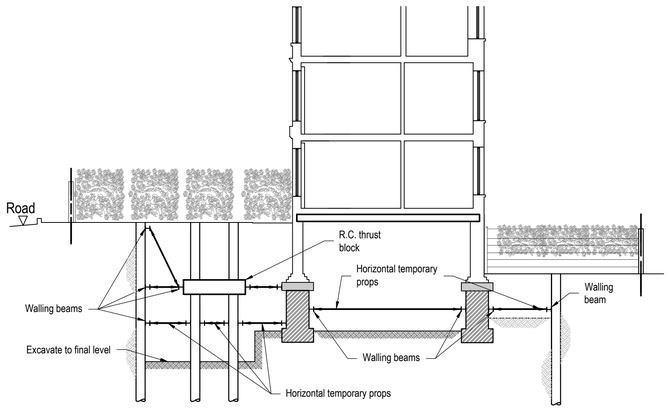
Stage 1:

- Disconnect, make safe and remove any underground services.
- Installation of piles.
- Fit permanent transfer structure.
- Underpin.
- Install props.



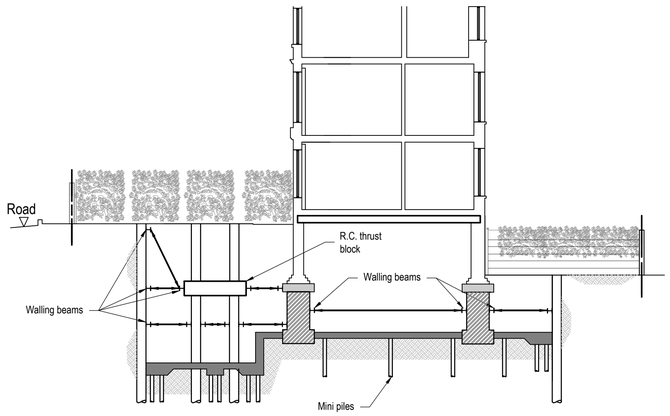
Stage 2:

- Demolish and remove existing internal basement walls including foundations after transfer structure has achieved design strength.
- Excavate as shown and cast R.C. thrust block, install struts, props and walling beams.



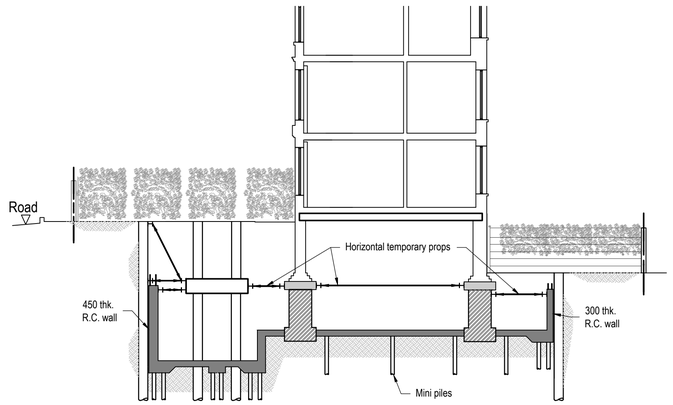
Stage 3 - Final Excavation.

- Continue excavating, install struts, props and walling beams.
- Props as shown.



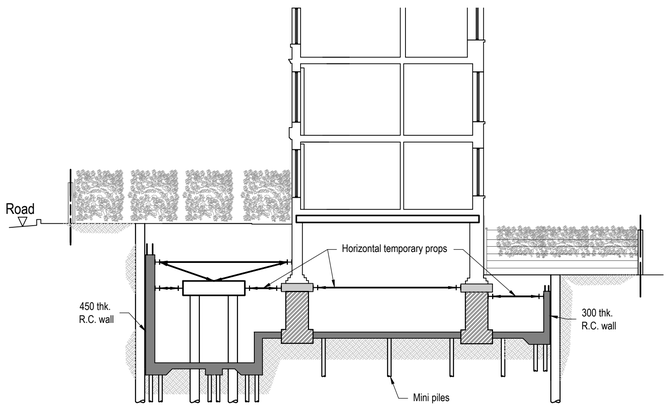
Stage 4 :

- Install mini piles & cast base R.C. slab.



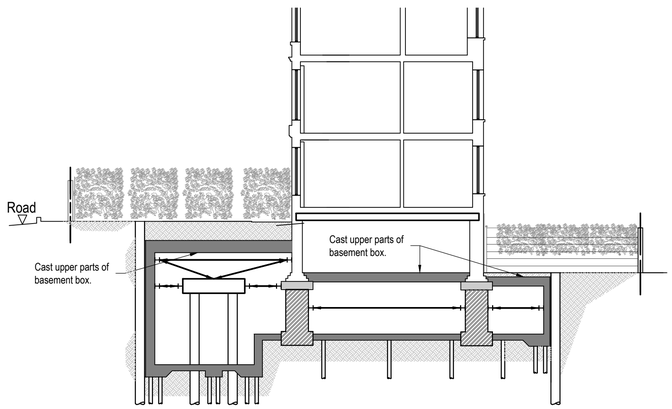
Stage 5 :

- Cast R.C. walls after reposition struts, props and walling beams



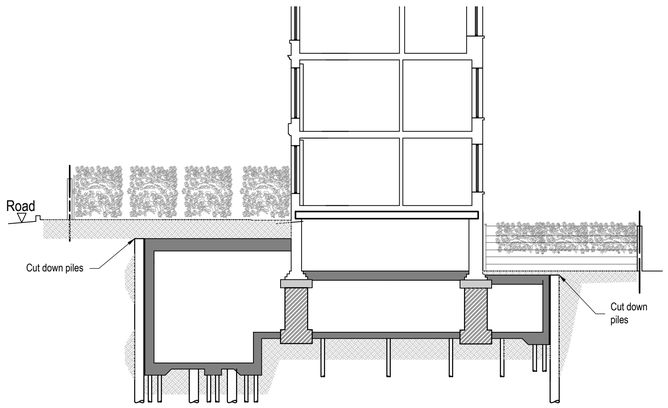
Stage 6 :

- Cast upper part of R.C. walls
- Remove piles above R.C. thrust block



Stage 7 - Final Phase of Basement Box Construction.

- Cast remaining structure.



Stage 8:

- After concrete has cured remove temporary works.
- Remove R.C. thrust block & piles below.
- Create openings to suit requirements through underpins.
- Install finishes: insulation, waterproofing etc.
  - refer to Architects details.
- Cut down piles.

Suggested Method of Works

This suggested method is a suggestion only and the contractor may submit alternative proposals. The method of works and all temporary works including design and erection are to be the full responsibility of the main contractor.

Notes.

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B	Updated to Architect's drawings.	AR	17.11.2011	RT
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TITLE
Suggested Method of Works

ARCHITECTS
Hugh Cullum Architects

DRAWING No.
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DATE	27-08-2010
SCALE	N.T.S.
DRAWN	AR
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REVIEWED	-

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