December 2014, revised October 2015

CONSTRUCTION METHOD STATEMENT:

Prepared by Evan Ferguson, architect, for James Youngman
DRAFT – to be confirmed following further site investigation + contractor's appointment.

Alterations made in October 2015 are highlighted in blue.

re. works at:
Flat 1, 41 Howitt Road, London NW3 4LU.

1. Introduction

1.1. This method statement is intended to explain the likely sequence and pattern of construction work (including property protection, personal safety and security) relating to the alteration and extension of a single residence (a 2-bed flat) to create a home for a larger single family to modern standards, with a focus on the basement extension. The final methods used will be subject to confirmation and input of further details by the successful building contractor, but should be informed by the constraints listed in this document

1.2. This document should be read in conjunction with the following documents from the architect, engineer, arboricultural consultant, site investigation team and LB Camden:

Drawings nos. 1308.10.A - Location + Block Plans. 1.1250 + 1.200 at A2
1308.14.A - Existing Plans
1308.15.A - Existing Sections AA and BB
1308.16.A - Existing Section CC, Rear Elevation and Photos
1308.17.A - Existing Front Elevation and Photos
1308.18.A - Proposed Plans
1308.19.A - Proposed Sections AA and BB
1308.20.A - Proposed Section CC and Rear Elevation
1308.21.A - Proposed Front Elevation

Arboricultural Impact Statement.
Basement Impact Assessment + Preliminary Engineer's Details.
Site Investigation Report.
Pre-Application Advice from Camden Planning.

1.3. Howitt Road is in Belsize Park Conservation Area.

2. Site + Building Description

2.1. The subject of this application is a two-bed flat occupying the ground floor and part-basement of a mid-terrace, 3-storey Edwardian terraced house at 41 Howitt Road. The original house was converted into three flats in 1987, with the ground floor/basement flat being given all of the original garden apart from shared areas on the access path to the front door and the bin area (see existing plans). The ground floor flat has a single storey rear extension (with a smaller first floor extension to the flat above) and a rear conservatory. Since 1987, the loft space in no. 41 has been converted to extend Flat 3.

2.2. Howitt Road slopes gently downwards from east to west and the terraced houses step down gently in response. The street elevations of nos. 39 to 43 Howitt Road are mostly original, including all windows surrounds (as is the case for much of the terrace to the west) with no visible movement cracks, though some decorative plasterwork has been lost just below the eaves of the main (mansard) roof to no. 41 and different details have been lost on

other buildings. To the east, nos. 31-35 inclusive have been completely rebuilt following bomb damage during WW2 and no. 37 has been substantially rebuilt.

2.3. The front area to no.41 still has much of its original low masonry wall and piers, with a 1987 opening in the wall leading directly from the pavement to the bin area. There is a tree nearby, on the street side of the pavement and on the property boundary between nos. 39 and 41. Next door, no. 43 has a recent lightwell to the front area, serving a new basement extension, with a white steel grille at ground level. No. 43 also has a tree nearby, on the pavement between nos. 43 and 45. Between nos. 41 and 43 are matching area steps leading down to the existing basements of both original houses.

2.4. There are 2 metre-high timber fences between the rear gardens of no.41 and the adjoining properties at nos. 39 and 43. There are no trees in no.41's rear garden, though there is an existing, mature, pollarded tree close to the rear brick wall. Our client has already taken arboricultural advice on the nearby trees – to front and rear – and established that the proposed works will not adversely affect them.

2.5. There is great variety in the height, depth and pattern of rear extensions to neighbouring and more distant buildings in the same road – and many nearby houses have existing basement extensions (as shown on the Location Plan). There are no visible signs of distress in no.41 or in the immediately adjoining houses though, as noted above, nos. 31-37 have been entirely or substantially rebuilt in the past following bomb damage.

3. Prior to Commencement on Site

3.1. Once Planning Approval has been granted by LB Camden, full structural, waterproofing, drainage and other constructional details will be prepared by the design team and submitted to Camden's Building Control department for assessment. (These details are subject to qualification by investigative work that can only be completed once work has begun, especially with regards to the existing basement extension to no.43 and the existing underpinning of the Party Wall between nos. 41 and 43.) Work on site will only begin once a Full Plans Building Regulations application has been approved by the local authority.

3.2. Party Wall Awards are to be agreed in association with all adjoining owners and a full inspection and record taken of the condition of Party and adjoining walls prior to any work being done on this site, with photographs taken where appropriate and/or permitted. A photographic record is also to be taken of the front and rear elevation and visible external details of no.41 Howitt Road and adjoining buildings so that any changes that might occur during building works can be identified and put right at no cost to neighbours. Inspection shall include the common areas (access path, porch, internal hallway and stairs) of no. 41.

3.3. Only construction firms with significant experience and success in the excavation and construction of basements – and suitable insurance in place – will be invited to tender for this project and the status and extent of the experience and Professional Indemnity Insurances held by all of the design and engineering team will be confirmed.

3.4. The sequence of work and methods of construction are to be agreed in detail by all of the design team and contractor, having particular regard to reducing the potential for vibration, noise and dust arising from the underpinning and other structural works.

3.5. A detailed method statement for means of access to and from the site for personnel and material will be proposed by the main contractor, to include vehicle movements and spoil removal, with Working Zones agreed in advance with the local authority and Highways.

3.6. Records of existing services will be obtained and made available on site and diversion agreements (if required) and/or temporary supplies will be agreed in advance with utility companies and included in Party Wall Awards (if necessary).

4. Access, Hoarding + Spoil Conveyor

4.1. It is assumed that all site access for materials (and for the removal of spoil) will be from the street directly through existing and new openings in the front bay of Flat 1 and not through the common hallway, which will be used only by personnel. Protective sheeting will be laid to preserve the floors, walls + doors of the access, entrance porch and common hallway before any other work is done, including the hoarding.

4.2. A plywood hoarding, with vertical posts anchored to the ground, will be constructed to screen the front area of Flat 1 from the adjoining pavement and common areas, to completely enclose all the works and to protect passers-by, with a lockable door for security and to a height and colour approved by the local authority.

4.3. The spoil conveyor will be located and installed in accordance with any local authority restrictions, fully supported by a temporary scaffold and secured to the plywood hoarding. A plywood bulkhead will be constructed where any spoil conveyor extends over the public footpath so that no spoil can fall on the path, with night lights and safety notices as required.

4.4. The public footpath will be kept clear of any obstruction at all times. When delivering, receiving, loading or unloading any materials associated with this project, the contractor shall post lookouts and take every precaution to protect members of the public and vehicles that might be passing or standing in the vicinity.

4.5. Item 2.1.2 of the Updated Independent Assessment of this project prepared by Chelmers and dated July 2015 suggests that a separate entrance be provided for construction operatives through the bay window. Our observation is that this could not be made safe (for the operatives themselves) in the space available and would result in unnecessary destruction of the brickwork, cills and window frames of the ground floor bay, which would then have to be, in part, replaced rather than reinstated. Proper management of the site by an experienced contractor would ensure clean and clear access for the occupiers of Flats 2 and 3, but a separate access can be provided – subject to the proviso above - if made a Condition of planning approval by LB Camden.

5. Sequence of Works

5.1. As indicated by the Site Investigation Report, excavation to sufficient depth for the construction of this basement will result in a formation level in stiff London Clay which, from the evidence provided by other excavations on this road, is likely to extend across the whole site. Significant groundwater inflows are not expected during the basement excavation, though some slight water removal may be required. A number of further trial excavations may be conducted – as close to full basement depth as possible – to confirm the presence of clay and the absence of groundwater prior to construction.

5.2. Excavation will start from the front of the building, with the front lightwell created first to provide access to the new basement and allow the removal of soil by conveyor. The side walls to the bay will be underpinned first, with a temporary support to the central section of the bay window above. The underpins are designed to be self-supporting once cured, to avoid the need for temporary propping to the retaining walls, though this will be confirmed in the final structural design.

5.3. Excavation will progress backwards from the front bay and lightwell with removal of the partial concrete ground floor to Flat 1 to allow the insertion of steels to support the

loadbearing spine and hallway walls and the hall floor. These steels will serve as temporary support (with propping as required) and, as the excavation and underpinning works proceed, as permanent support for these loadbearing walls. The ground floor to Flat 1 will later be reinstated as timber joists, supported by these steels and by the existing, underpinned walls.

5.4. Partial excavation will proceed along the centre of the house, extending to the full depth necessary for the construction of individual pins locally to the sides, each pin being a maximum of one metre wide and constructed according to the traditional 1, 3, 5, 2 and 4 sequence to ensure that no more than 20% of the existing walls are unsupported at any time and to ensure that no adjacent pins are constructed within a 48 hour period.

5.5. Each section of underpinning is joined by overlapping reinforcement to its neighbours to form one reinforced concrete retaining wall. It is the opinion of the author, based on experience gained by working on basement projects with structural engineers in several London Boroughs, that this construction method is known to be suitable for this application and should lessen any impact on this or adjoining structures. Further consideration is provided in the accompanying documentation, and particularly in the Basement Impact Assessment. (An additional surcharge is allowed for in the design of the front retaining wall to ensure that it has sufficient capacity to support the public highway in front of the house.) Any temporary propping (if required) will only be removed – carefully and in the prescribed order – once the reinforced concrete retaining walls have achieved their full 28 day strength.

5.6. Upon completion of the underpinning works, any permanent support required for the new supporting structure above that is not already in place – e.g. columns – will be installed, including ground-level works to the remodelled rear extension, which replaces the existing conservatory with three glazed bays of equal area opening into a large kitchen/diner. (This is more conventional building work and is not considered in detail in this statement.)

5.7. Once the underpinning and supporting structure is complete, new below-slab drainage for foul and ground water will be installed. Information from the owner indicates that this will flow by gravity into a new manhole in the front lightwell, which will discharge by gravity into the existing sewer within Howitt Road to the front of the property. (This is subject to further investigation and sumps and/or pumps will be incorporated if required.) This basement extension is within the footprint of the existing building and the amount of impervious paving to the rear is to be reduced, so no surcharging of the existing drains is expected.

5.8. Once the drainage is complete and tested, the new reinforced concrete basement slab will be cast (which will provide further stiffening to the reinforced cage of the basement), followed by installation of all waterproofing, insulation and finishes to the architect's details and according to the client's requirements.

6. Conclusion

In theory, the expected level of movement that might be caused by this basement work in no. 41 Howitt Road or in adjoining structures is zero if the work is conducted by an experienced contractor who executes the work using accepted good practice, in accordance with the structural design and following all agreed method statements. In practice, some settlement is possible, but any damage is likely to be minor (with mitigation and preventive measures as outlined in the Basement Impact Assessment prepared by David Dexter Associates) and may be accommodated within the elasticity of these traditional buildings.

Refer also to the Basement Impact Assessment prepared by David Dexter Associates.