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12 & 13 Primrose Hill Studios
NW1 8TR

Stage 2 – Planning Report and Basement Impact Assessment with Subterranean Construction Method Statement

Client – Barbara and Rory Campbell-Lange

engineering a better **society**

12 & 13 Primrose Hill Studios
2210445
Stage 2 – P1

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Date:	04/07/23	Signature:		Signature:	

Executive Summary

0.1

Elliott Wood Partnership has completed many residential basement projects in London, many of which are within the London Borough of Camden.

0.2

Site investigation work has been carried out by Soil Technics to confirm soil profile, contaminations levels and ground water conditions of the site.

0.3

The basement structure has been designed on the findings of Soil Technics Ground Investigation Report and Basement Impact Assessment Report.

0.4

Soil Technics found the proposed development is assessed to only have a likelihood of very slight and generally cosmetic cracking (Burland < 1) to the surrounding properties and negligible impact to the wider hydrological environment.

0.5

The development will be undertaken by qualified and experienced Contractors, following good workmanship procedures and methods. As such, the proposals do not compromise the structural stability of the existing, adjacent, or local structures.

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Our Practice

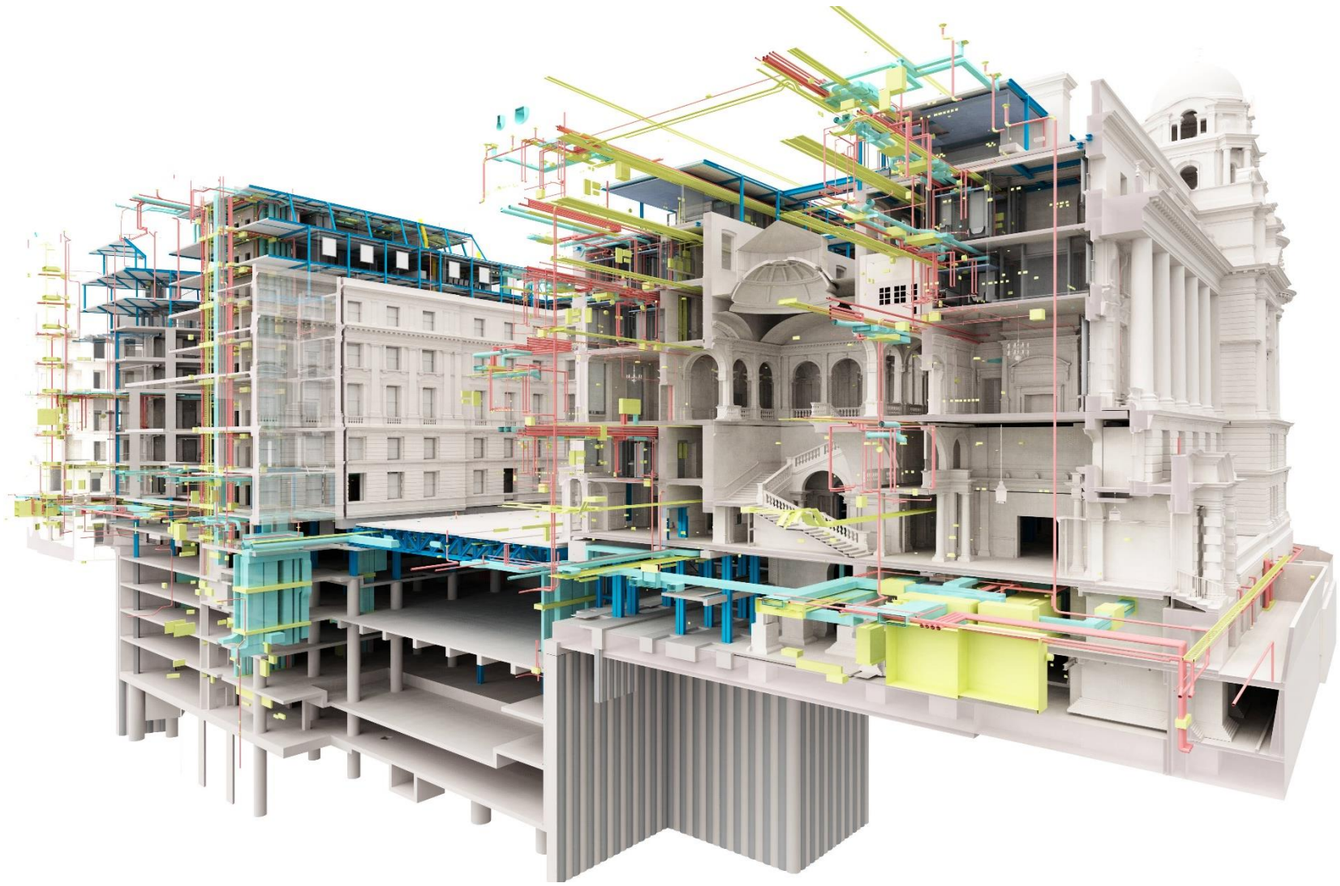
Elliott Wood work with likeminded people to engineer a better society

Our portfolio is extraordinarily diverse, and we particularly enjoy those projects which provide the opportunity to engineer for the common good – from making dramatic improvements to the life of a town or city, through to nurturing a new generation of exceptional engineers in our own in-house academy.

Despite more than twenty years in practice, we continue to be curious and find ways to pass on the benefit of our collective experience. We foster enquiring minds and share ideas because we know that this knowledge can make a real difference to our clients.

Engineering is often about the unseen: much of what we do is hidden when a building is complete. But engineering is not a necessary evil – it's much cleverer than that. Our role is to demystify the invisible workings of a structure, to reveal unexpected opportunities and to make the existing engineering work harder.

We value both technical and creative thinking and are activists for a new kind of engineering profession in which our craft is pivotal to the design process. We are no ordinary engineers.



Reveal / Materialise / Impact

Engineers make a difference

We like to be involved at the start of our clients' creative and commissioning journey, because we are concerned that not enough people are realising the full potential of their buildings. They are only working with what they can see.

Our process challenges usual perceptions of the engineer's role, because we help clients to see the unseen and achieve results beyond the aspirations of the brief – and which have a positive legacy for their wider communities.

Reveal

We ask questions. With innovative thinking, we reveal the unexpected opportunities in an already ambitious brief.

Materialise

We give ideas life. Using expertise and imagination, we materialise new assets for our clients.

Impact

We make a difference. Our work not only benefits our clients, it has a positive impact on society as a whole.

One

Introduction

1.1

Elliott Wood Partnership is a firm of consulting Structural and Civil Engineers approximately 150 strong operating predominantly in central London. Residential developments of all scales have been central to the practice with many in the Greater London area. In particular Elliott Wood Partnership have been producing designs for basements to both existing and new buildings. To date this numbers approximately 500 sites many of which have been in The London Borough of Camden. Our general understanding of the development of London, its geology, and unique features together with direct experience on many sites puts us in a strong position to advise clients on works to their buildings and in particular the design and construction of their basements.

1.2

Elliott Wood have been appointed by the Client to provide Structural and Civil Engineering input for the planning submission for the proposed basement and refurbishment works at 12 & 13 Primrose Hill Studios, London, NW1 8TR.

This report is to be read in conjunction with the drawings, plans and sections, produced by Elliott Wood and alongside the architectural documentation produced by Jamie Fobert Architects. The proposals can be found in Appendix G.

1.3

The design, measures and proposed sequence of works outlined in this report will be considered in the eventual design and construction of the proposed works.

Provided the works outlined are properly carried out by suitably qualified contractors, the works can be safely undertaken and will not impact on the structural integrity and natural ability for movement of existing and surrounding structures, utilities, and infrastructure.

1.4

Elliott Wood Partnership will oversee that adequate supervision and monitoring is being undertaken throughout the works particularly during the excavation and demolition stages, if Elliott Wood are, as expected, instructed to advance the project beyond the planning stage.

1.5

This report has been created to satisfy the requirements, as interpreted by Elliott Wood, set out in Camden Planning Guidance – Basements (January 2021) and Camden Local Plan policy A5. The design has considered the impact on the surrounding environment, residents, as well as the appearance and character of the local borough, and the site's position in a local Conservation Area.

Two

Description of Existing Building and Site

2.1

12 & 13 Primrose Hill Studios is suited in The London Borough of Camden, approximately 500m South of Chalk Farm tube station and 150m East of Primrose Hill Park. Primrose Hill Studios is a small residential mews comprised of similarly designed dwellings, all originally used as artists' studios. Historical information suggests that mews was constructed in the late 1880's, although several refurbishments and alterations have been undertaken since.

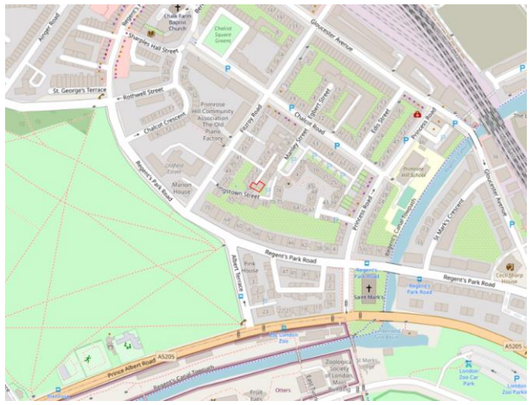


Figure 1: Site Location (OpenMaps)

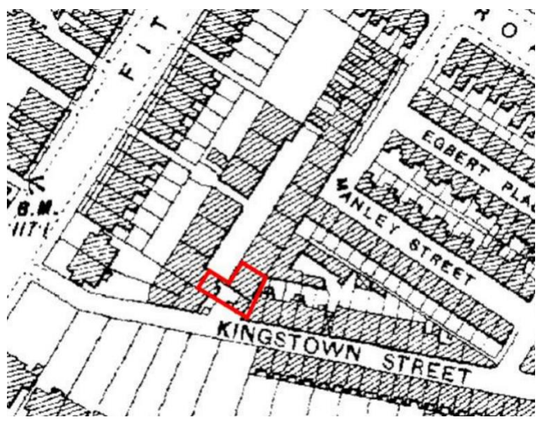


Figure 2: Site Location (OS Maps, 1890s)

2.2

The properties are Grade II listed; formed of traditional masonry walls with suspended timber floors and hipped slate timber frame roofs. Observations from our site visit suggested that the existing masonry construction used lime mortar and, in some places, had been poorly repaired with cementitious mortar by a previous owner.

2.3

The site includes two buildings, No.12 & No.13, with an accompanying courtyard and pair of recently demolished garages.

The existing layout of No.12 comprises a ground floor, with a small mezzanine in the main vaulted room. The main double height space contains a skylight, facing northeast. The roof is split between a lower flat roof area over the service spaces, and a half hip / half gable over the main vaulted space.

No. 13 comprises two stories, ground floor and first, which are over the full footprint of the building.

The construction of both buildings is load-bearing masonry walls supporting timber floors for the upper and ground floor levels.

The party walls are assumed to be solid brickwork common in the construction of buildings from this period.

The overall stability of the existing building is provided by the cellular layout of the masonry walls and diaphragm action of the timber floors at each level, and the roof.

2.4

Elliott Wood Partnership Ltd. and the Site Investigation Contractor (Soil Technics Ltd.) have a comprehensive understanding of the underlying ground conditions in the area gained from the numerous basement projects we have completed in the vicinity.

A site investigation has been carried out by Soil Technics, refer to Appendix D for the full report. The investigations consisted of 1No. borehole sample to 10m BGL and 5No. trial pits.

The ground conditions found on site were as expected comprising a layer of made ground overlying London Clay.

Ground water is not anticipated within the London Clay due to the soil's low permeability, however some water was encountered in the excavations and borehole. Water in the excavations is likely to be perched pockets within the made ground or via small fissures in the clay and not indicative of the water table / phreatic surface.

Following standpipe monitoring, Soil Technics propose a model depth for the phreatic surface of 2.96m depth, but note that this is a conservative assumption as they do not think that in reality this is the actual water table (and that it is more likely a result of perched water seeping in to the borehole). This conservative assessment has been considered and accounted for in the structural design until it can be proved otherwise.

The 5no. trial pits exposed the existing foundations construction and depth relative to the existing courtyard and internal FFL in key locations. The

existing foundations were found to mainly consist of a corbelled masonry base sat on a deep block of brick cemented fill.

2.5

A topographic survey has been undertaken to understand the existing site levels. The survey indicates that the site is generally flat and approximately 33m above Ordinance Datum (AOD). There is a gentle fall from west to east (circa 1V:50H) across the wider area, including Kingstown Street and adjacent properties. This gradient steepens further west as Kingstown Street rises to meet Fitzroy Road. The topographic survey has been included in Appendix E.

2.6

The results of our desk study are summarised below:

- Both properties are Grade II listed.

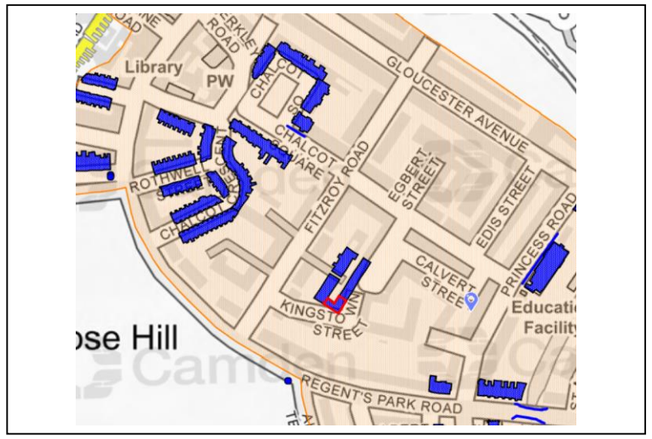


Figure 3 – London Borough of Camden, Conservation Map

- The building does not appear to be in the vicinity of any historic rivers or culverts.

Figure 4 - Lost Rivers of London (Nicholas Barton)

- A full flood risk assessment has been prepared and is included in Appendix F, along with the Below Ground Drainage Scheme. In conclusion, following a review of all relevant available information, the proposed development is considered to be at low risk of flooding from all sources and will not increase the flood risk to the surrounding area.

- The London bomb damage maps show that both No. 12 & No. 13 were “Seriously Damaged” during WW2. This suggests that a significant portion of the existing building fabric is not the original 1880s construction.

Figure 5 – The London County Council Bomb Damage Maps, 1939-45

- Records indicate that the site is not in the vicinity of any London Underground infrastructure, railway lines or other buried infrastructure, or planned infrastructure such as HS2/Crossrail.

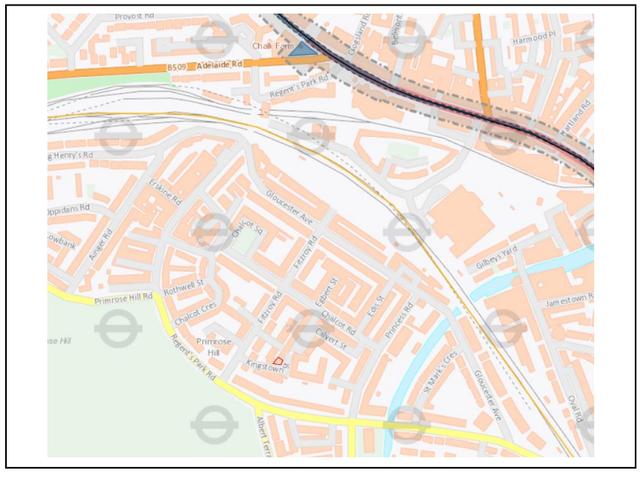


Figure 5 – TFL Asset Map

- There are existing trees/shrubs outside the corner of site. The Arboriculturist has produced a tree impact assessment which will be included in the planning submission.

Figure 6 – Photo of Existing trees/shrubs, Canopy Consultancy

Three

Proposed Structural Alterations

3.1

The proposed alterations include:

- Forming a new basement below part of No.12, and part of the courtyard space between No.12 and No.13 which previously had been covered garage space.
- Reconfiguring the internal layout of both No.12 and No.13 and reconstructing parts of the roofs to incorporate new roof lights.
- Constructing of a new L shaped staircase from No.12 which will form part of the new boundary wall with Kingstown Street and provide the internal link staircase between No.12 and the basement.

The current Structural Engineering proposals can be found in Appendix A.

3.2

As part of the proposals the majority of No.12 roof waterproofing is the be investigated and where required will be upgraded, repaired or replaced. Should evidence of rot within the roof structure be found, repair/strengthening works may be required.

3.3

The majority of the existing lime mortar masonry walls are to be maintained. The existing garage walls along the perimeter are to be demolished and rebuilt as cavity construction with a lime mortar masonry external leaf.

Where existing walls are being altered or adapted for new or extended openings, steel box frames on new RC foundations where contribution to global stability needs to be reinstated. Lintels will be used for openings which can be accommodated without affecting stability.

3.4

The new basement and new ground floors slabs are to be formed of a reinforced concrete (RC) box, comprising:

- RC external walls on all 4 sides, formed in an underpinning sequence.
- A RC basement slab. Heave is not anticipated to be significant for single-story construction. At detailed design, heave boards will be incorporated to mitigate heave effects where required.
- A Pynford Beam is proposed at this stage to support the existing wall section undermined by the new basement construction. The Contractor may however have a preferred alternative method using temporary works and installing the beam more conventionally.

3.5

The new L shaped staircase will be framed with a cavity wall, with a lime mortar outer leaf. The section will be stabilised by inner leaf concrete walls or steel wind posts.

3.6

The new roof structures are to be formed of steel beams with timber rafters. Any long openings adjacent to the party wall lines will have permanent waling beam support to ensure restraint to the party wall is maintained.

3.7

The existing Thames Water sewer that passes through the site is to be replaced and altered to improve the drainage to the communal courtyard within the mews and facilitate easier access for Thames Water operatives to manholes. This has been agreed by Thames Water, the Permission to Start letter can be found in Appendix F, within the Below Ground Drainage Report.

3.8

The overall stability of the building above ground is being maintained by limiting alterations to the existing masonry walls and maintaining the existing timber floor diaphragm action. Where significant new openings are being proposed steel box frames will transfer horizontal loads to new foundations.

3.9

The lowest point of the basement excavation is expected to be up to a maximum of 5m below the existing ground level. The geological investigation suggests that this would not go below the ground water level, however local pockets of perched water are expected. Based upon the Site Investigation carried out by Soil Technics, ground water flows are anticipated to be low and therefore expected to be easily dealt with locally via pumping. The need for pumping will be raised with the Contractor upon appointment.

3.10

A perforated drain is to be installed below the basement construction, to alleviate any possible ground water uplift and reduce long term heave impacts. This has been accepted in principle by Thames Water. The accidental load case of a locally raised water table due to a burst water main is considered unnecessary from an uplift perspective, due to the position of the main away from the basement structure, and the impermeable nature of the existing soil. This will however, be taken into account in the retaining wall case, as a conservative approach.

3.11

In co-ordination with Jamie Fobert Architecture's details, the proposed basement will be designed to achieve a Grade 3 level of waterproofing protection in accordance with BS 8102:2009.

This is intended to be provided by using waterproof concrete with hydrophilic strips for the basement underpin and slab construction in combinations with an internal cavity drain system, designed by others.

3.12

The surface water drainage strategy is explained and discussed in a separate Elliott Wood document and included in Appendix F - Flood Risk Assessment and Drainage Strategy.

3.13

As part of the Clients' desires for a sustainable construction approach to their development, the design team has endeavoured to maintain much of the existing structure. Where masonry is to be demolished or timber joists removed as part of the build, it is proposed that they are stored, inspected, and cleaned to be put back or used as part of a new construction element.

Our specifications will also indicate that where possible recycled steelwork should be used and appropriate alternatives to Portland Cement within the concrete mix sort. Recycled aggregates will also be considered.

Four

Party wall matters

4.1

The proposed works fall within the scope of the Party Wall etc Act 1996. Procedures under the Act will be dealt with in full by the Employer's Party Wall Surveyor. The Party Wall Surveyor will prepare and serve necessary notices under the provisions of the Act and Agreed Party Wall awards. The Contractor will be required to provide the Party Wall Surveyor with appropriate drawings, method statements and other relevant information covering the works that are notable under the Act. The resolution of matters under the Act and provisions of the Party Wall Awards will protect the interests of the building and adjoining owners.

4.2

The proposed works will be developed so as not to inhibit any works on the adjoining properties. This will be verified by the Surveyors as part of the process under the Act.

Five

Ground Movement Assessment Summary

5.1

A Ground Moment Assessment (GMA) has been completed by Soil Technics which considers the short and long-term effects of the proposed basement on the supported and adjacent structures. Details of the analysis can be found in Soil Technics' Basement Impact Assessment Report included in Appendix C.

5.2

The assessment concluded that the basement construction is expected to cause as a worst case only small cosmetic cracking to surrounding structures (Burland Category 1). This is within the limits as prescribed by Camden Policy A5, which has been set to protect neighbourly properties. This is provided that appropriate consideration is given to the detailed design and good workmanship and practise is adhered to through the construction phase.

The restraint from return walls and the contribution of the perforated drain will further mitigate ground movements beyond what has been concluded from the assessment.

5.3

Early movement monitoring of the boundary walls to the neighbouring buildings with set trigger levels are proposed to protect the neighbouring properties as a precautionary measure. A monitoring specification is to be agreed with the Contractor prior to commencement of construction as part of the Party Wall Award.

5.4

Soil Technics' Basement Impact Assessment also highlighted that the unloading of the excavation is expected to result in 15 – 25mm of heave. Heave protection measures below the slab are to be developed as part of the detailed design to accommodate this.

Six

Hydrological Statement Summary

6.1

Soil Technics have provided a statement that the proposed development will have a negligible impact on the wider hydrological environment and will not increase the likelihood of surface water or sewer flooding. The full statement and comments can be found in Appendix C.

6.2

Soil Technics' statement has been reviewed by Chord Environmental Ltd, the confirmation of which is included in Soil Technics Basement Impact Assessment, Appendix C.

Seven

Construction Method Statement

Some of the issues that affect the sequence of works on the project are:

- Maintaining stability of the existing structures.
- Maintaining stability of adjoining/adjacent structures.
- Minimise disruption to the neighbouring residents.
- Providing a safe working environment.

The proposed works include the construction of a new single storey basement beneath a portion of the existing No.12 property and beneath where previous garages stood. It is expected that the works will be completed as a 'bottom up' construction process.

The Contractor will be entirely responsible for maintaining the stability of all existing buildings, adjoining buildings, and all of the works from the date of possession of the site until practical completion of the works.

The following outlines the construction methodology for the works and should be read in conjunction with the suggested sequence of works drawings in Appendix B of this document. A full set of temporary works drawings and supporting calculations will be provided by the Contractor and will be reviewed by Elliott Wood prior to work commencing on site.

7.1 Stage 1

Erect a fully enclosed painted plywood site hoarding as required around the site perimeter. The hoarding should not impede pedestrian use of Kingstown Street unless explicit agreement with Camden is made.

It is expected that the Contractor will use No.13 as site office and accommodation facility during the works to No.12 before "swapping" properties once the main works to No.12 are complete.

All services within the site should be identified and isolated as necessary. All below ground obstructions should be removed to allow the works to progress.

All internal finishes and furnishings are to be removed from site along except for those items which are being retained.

A full temporary works strategy for the project will be developed and schemed by the Contractor and reviewed by Elliott Wood during the enabling period.

Carefully break out or remove No.12 ground floor joists, courtyard slab and remaining garage walls.

7.2 Stage 2

Install temporary restraint props to retained masonry walls at low and high level with braced corners.

The new basement retaining walls shall be formed in an underpinning sequence around the full perimeter of the proposed basement. Given the nature of the soil strata (predominately clay and made ground) the basement is to be formed in trench shoring and props will likely be required to form the underpin shafts.

The Contractor should allow for small quantities of perched water seeping into the excavation and provide a suitable temporary sump and pump as required.

Once formed, the retaining walls will be propped off the soil mass within the zone of the proposed basement. The retaining walls will be formed in two under pin lifts. Form 1st lift with temporary toe in hit / miss sequence. Only once concrete and drypack has cured to sufficient strength should adjacent underpins be formed.

7.3 Stage 3

Form 2nd lift of underpinning within deeper shoring down to basement formation level. Temporary toe to 1st lift is to be cut off. 2nd lift is to be also propped back against central soil mass. Similarliy to the 1st lift, underpinning is to be done in a hit / miss sequence with sufficient time for concrete to cure prior to excavating the adjacent underpins.

7.4 Stage 4

A Pynford beam is to be formed under the wall separating the painting room from the servicing rooms. This is to be temporarily supported off the existing foundations and soil mass before coming to strength and being supporting by the retaining wall underpins. An alternative means of installing a beam at this point may be suggested by the Contractor with the use of plunge columns and needles.

Before excavation of the soil mass begins temporary waling beams and props should be installed to ensure stability of the retaining walls until the new basement slab and basement cap slabs are installed. This may require the formation of shored trenches within the soil mass to allow for threading of props within the soil mass prior to excavation.

Excavate soil mass.

7.5 Stage 5

Install below ground drainage and heave boards (if required).

Formation surface is to be checked and soft spots in the subgrade clay are to be removed and infilled with compacted hardcore.

Basement slab is to be cast, bound to the underpin toes, taking propping loads. Allow for slab to cure to sufficient strength before casting of ground floor slab.

7.6 Stage 6

Install formwork for new ground floor slab.

Install ground floor slab, with positive fixing to retaining walls. If required, pin back from underpin to slab should be via by RC stem, recessed partially within existing masonry wall up to the required height.

Allow for ground floor slab to cure to appropriate strength before removing of temporary propping to basement construction.

7.7 Superstructure

The remaining superstructure construction can commence once the basement works are complete.

Demolition of further structure not being retained including the roof to No.13, walls and floors should be carried out top down to lower ground floor level. Temporary propping shall be provided at roof level and each floor level as demolition progresses to maintain lateral restraint to the retained walls in the temporary case.

7.8 Summary

In order to reduce the programme duration some of the works described above may be able to overlap given the size of the site the Contractor will

need to demonstrate that this can be done safely with no risk to site operatives or members of the public whilst ensure stability of the structure is maintained at all times.

The sequence of construction detailed above has been assumed in the preparation of the structural design. The final construction sequence and construction management plan will be determined by the Contractor. Using good working practices and an appropriate sequence of works, a Contractor competent in this type of construction should be capable of completing the structural works without detriment to the adjoining properties.

Eight

Dust, Noise & Vibration Mitigation

8.1

The Camden Planning Policy A5 and associated guidance on basement works indicates that appropriate measures are taken to ensure that construction impacts such as noise, vibration and dust are kept to acceptable levels during the works.

The most disruptive aspects of the proposed works include the demolition of the existing courtyard slab, excavation and construction of the basement and the disassembly and reconstruction of the roof to No.13.

This section describes mitigations measures that are proposed and will be proposed to the tendering contractors for these works.

8.2 Demolition

The breaking out of existing structures is suggested to be out by diamond saw cutting and hydraulic bursting where practicable to minimise noise and vibration to the adjacent properties. All demolition and excavation work will be undertaken in a carefully controlled sequence, considering the requirement to minimise vibration and noise. The Contractor will be advised to utilise non-percussive breaking techniques where practicable, and to consider the timing and duration of noisy works.

As the property is in close proximity to others, careful consideration needs to be given to minimise noise and vibration transfer to the adjoining property. The Contractor will consider that where any slab is adjacent to the boundary the concrete slab should be diamond saw cut first along the boundary to isolate the slab from any adjoining structures.

Dust suppression equipment should be considered during the demolition process to limit airborne dust. Where practical, concrete should also be wetted down prior to and during breakout to further inhibit airborne dust.

8.3 Underpinning

The underpin shafts is suggested to be excavated using hand tools where possible. At the base of the underpin shaft it may be found that compressed air tools are required due to the compaction of the ground.

Care should be taken in selecting a suitable air compressor that keeps noise to a minimum. The air compressor should be located within the site and behind a hoarding to minimise noise transfer to the adjoining properties.

The spoil could be removed from the excavation using an electrically powered conveyor or by hand. The Contractor will need to ensure that this is regularly serviced and inspected to reduce noise. In order to minimise dust, skips and conveyors should be covered.

8.4 Excavation

Due to the size of the basement, it is likely that some mechanical plant will be required to complete the bulk excavation. The Contractor should ensure that any mechanical plant is switched off when not in use and is subject to regular maintenance checks and servicing.

8.5 Construction

The Contractor should ensure that any concrete pours are completed within the permitted hours for noise generating works. The Contractor should allow for a contingency period to ensure that concrete pours can be completed within these hours regardless of unforeseen circumstances such as batching plant delays and traffic congestion. The fabrication and cutting of steelwork for the reinforced concrete walls and underpins should take place off site. If any rebar needs to be trimmed on site, we suggest that it be completed using hydraulic or pneumatic tools instead of angle grinders. It is anticipated that the concrete for the underpins will be batched onsite.

8.6 Dust Control

In order to reduce the amount of dust generated from the site, the Contractor should ensure that any cutting, grinding and sawing should be completed off site where practicable. If cutting, grinding and sawing is being carried out on site, surfaces are to be wetted down prior to and during these types of work whenever possible. Any equipment used on site should be fitted with dust suppression or a dust collection facility.

The Contractor will be responsible for ensuring good practice with regards to dust and should adopt regular sweeping, cleaning, and washing down of the hoardings and scaffolding to ensure that the site is kept within good order. The Contractor selected either be a member of (or instructed to follow the principles of) the Considerate Contractors Scheme or at least agree to follow the principles as set out in the scheme. Contact details of the Contractor who will be responsible for containing dust and emissions within the site will be displayed on the site boundary so that the local residents can contact the Contractor to raise any concerns regarding noise and dust.

Stockpiles of sand or dust-generating materials should be covered and container of cement, fine aggregates, sand and other fine powders should be sealed after use.

Nine

Movement Monitoring Proposals

9.1

The Contractor is to provide monitoring to all structures adjacent to the basement excavation during excavation and construction. The extent of this is to be agreed with the Party Wall surveyors.

9.2 Proposed Monitoring Regime

- Monitoring is to start one month prior to starting structural works, including any demolition works, to establish a base reading.
- Once works commence a reading should be taken and the start and end of every shift during the excavation and construction of the basement and maintained until the basement concrete is up to strength.
- After the completion of notifiable works monitoring is to continue for six months to confirm the performance of the construction.
- The frequency of readings is to be agreed as part of the party wall awards.

9.3 Trigger Values

The final trigger values are to be agreed as part of the party wall awards, however a preliminary set of limits are proposed based on our experience of working on similar scale and types of projects within Camden, which had to adhere to not exceeding Burland Category 1 damage to party walls and neighbouring properties.

As part of the works, notwithstanding party wall agreements, the Contractor will be responsible for the reviewing of the movement monitoring results and provide immediate advice and remedial works should it be proved necessary. This review process could be undertaken by a separate appointment under the Contractor.

Below are stated suggested Amber and Red trigger points for this work.

Code Amber Trigger

Settlement = +/- 8mm Lateral Displacement = +/- 8mm

All interested parties, including the Adjoining Owner's Surveyor and their Engineer should be informed and further actions immediately agreed.

Should these trigger values be reached the Contractor and their Engineer must provide all interested parties with their plan for emergency works.

The Contractor must have ready emergency access suitable temporary props, needles and concrete should this event arise.

Code Red Trigger

Settlement = +/- 12mm Lateral Displacement = +/- 12mm

As above and all works will be stopped to ensure that the site is safe with emergency measures later as per Code Amber.

The Contractor will need to confirm that following the emergency works the movement has halted.

The requirements of the Party Wall Act will then ensure that, Surveyors and their advising Engineers enter an addendum Award, setting out whether the Building Owner's works can re-commence and when.

Additional precautions or modifications to the proposals prior to re-commencement may be required.

Ten

Conclusions

- The proposed development includes a single storey RC basement below part of No.12 and modifications to the existing superstructure of No.12 and No.13. New structure includes the reforming of roofs, floors, and openings.

- Elliott Wood have developed the structural design so that a suitably experienced and qualified Contractor can carry them out without posing a significant threat to the structural stability or condition of the existing, adjacent and local buildings.

- The proposal is expected to have a negligible effect on the local hydrology.

- The development is at low risk of flooding and does not increase the flood risk to the local area.

- Elliott Wood are to have an on-going role in seeing that works are generally carried out in accordance with the detailed design drawings and specifications.

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Appendices

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A Proposed Structural Drawings

B Suggested Sequence of Works

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C Soil Technics – Ground Investigation Report

D Soil Technics – Basement Impact Report

E Topographic Survey

F Flood Risk Assessment and Drainage Strategy

Where Appendices would otherwise be duplicated in this document, they have been removed for clarity.

G Jamie Fobert Architects – Planning Proposals

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