CampbellReith
consulting engineers

13 Downshire Hill
London
NW3 1NR

Basement Impact Assessment
Audit

For

London Borough of Camden

Project Number: 12466-08
Revision: F1

June 2017

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Document Details

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Project Number	12466-08
Project Name	13 Downshire Hill, London, NW3 1NR
Planning Reference	2016/4511/P

Contents

Appendix

1.0 NON-TECHNICAL SUMMARY

1.1. CampbellReith was instructed by London Borough of Camden, (LBC) to carry out an audit on the Basement Impact Assessment submitted as part of the Planning Submission documentation for 13 Downshire Hill, NW3 1NR (planning reference 2016/4511/P). The basement is considered to fall within Category B as defined by the Terms of Reference.

1.2. The Audit reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development in accordance with LBC's policies and technical procedures.

1.3. CampbellReith was able to access LBC's Planning Portal and gain access to the latest revision of submitted documentation and reviewed it against an agreed audit check list.

1.4. The Basement Impact Assessment (BIA) has been carried out by those holding the required accreditation.

1.5. Originally, structural drawings and calculations were not submitted. In the revised submissions, sufficient structural detail has been provided, including construction methodology.

1.6. Both neighbouring properties have been identified as Grade II listed. However, the property itself is not listed.

1.7. The proposal consists of forming a single storey basement beneath the rear of the property that extends into the garden. An existing single storey rear extension is also to be extended towards to the rear.

1.8. Both neighbouring properties contain partial basement levels.

1.9. Appropriate site investigations have been carried out. Clarification regarding details of neighbouring foundations was requested, which has now been provided.

1.10. The site is underlain generally by the Claygate Member and London Clay Formation, with shallow Made Ground above. It is accepted that ground water flows will not be impacted.

1.11. Further details of proposals to limit surface water runoff were requested after review of the original BIA. In the revised submissions, a SUDS strategy is proposed which is accepted.

1.12. It is accepted that there are no slope stability issues.

1.13. The ground movement and damage impact assessments presented in the original BIA, in regards to neighbouring structures, were not accepted. However, in the revised submission, in

conjunction with the updated structural information, the ground movement and damage impact assessments are accepted.

1.14. A movement monitoring strategy was originally outlined, which has been updated in the revised submission. The strategy is accepted.

1.15. In the revised submission, an outline construction management plan and an outline construction programme has been provided.

1.16. Queries and matters requiring further clarification are discussed in Section 4 and summarised in Appendix 2. Assuming that the works proceed in accordance with the recommendations presented, the criteria contained in CPG4 and DP27 have been met.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 15/09/2016 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 13 Downshire Hill, London, NW3 1NR, planning reference 2016/4511/P.

2.2. The Audit was carried out in accordance with the Terms of Reference set by LBC. It reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development.

2.3. A BIA is required for all planning applications with basements in Camden in general accordance with policies and technical procedures contained within

- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- Camden Planning Guidance (CPG) 4: Basements and Lightwells.
- Camden Development Policy (DP) 27: Basements and Lightwells.
- Camden Development Policy (DP) 23: Water.

2.4. The BIA should demonstrate that schemes:

a) maintain the structural stability of the building and neighbouring properties;

b) avoid adversely affecting drainage and run off or causing other damage to the water environment;

c) avoid cumulative impacts upon structural stability or the water environment in the local area, and;

evaluate the impacts of the proposed basement considering the issues of hydrology, hydrogeology and land stability via the process described by the GSD and to make recommendations for the detailed design.

2.5. LBC's Audit Instruction described the planning proposal as "Excavation of single storey basement and erection of a single storey rear extension."

The Audit Instruction also indicated that 13 Downshire Hill does not involve, nor is a neighbour to, listed buildings. However this is incorrect as both neighbouring properties, No13a and No12, are grade II listed.

2.6. CampbellReith accessed LBC's Planning Portal on 18/10/2016 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) Parts 1 – 6, Gabriel GeoConsulting, 10th July 2016
- Ground Investigation Report, Ian Farmer Associates, 28th April 2016
- Aboricultural Report, Challice Consulting Ltd, 18th July 2016
- Planning Application Drawings consisting of the following Ne/AR Architects London General Arrangement Plans and Sections, Existing and Proposed:

0116/DH/001	Location Plan	July 2016
0016/DH/002	Site Plan & Section	July 2016
0016/DH/101	Existing Ground Floor Plan	July 2016
0016/DH/110	Proposed Basement Plan	July 2016
0016/DH/111	Proposed Ground Floor Plan	July 2016
0016/DH/200	Existing Rear Elevation	July 2016
0016/DH/201	Existing North-East Elevation	July 2016
0016/DH/202	Existing South-West Elevation	July 2016
0016/DH/210	Proposed Rear Elevation	July 2016
0016/DH/211	Proposed North-East Elevation	July 2016
0016/DH/212	Proposed South-West Elevation	July 2016
0016/DH/300	Existing Section AA	July 2016
0016/DH/310	Proposed Section AA	July 2016
0016/DH/311	Proposed Section BB	July 2016
0016/DH/312	Proposed Section CC	July 2016

- Design & Access Statement
- Planning Comments and Responses

2.6. CampbellReith were provided with a number of additional documents to review between November 2016 and May 2017, the following being relevant documents for audit purposes:

- Retaining Wall Calculations.
- Temporary Works Propping Drawing.
- Underpinning Sequence Drawing.
- Outline SUDS Drawing.
- Email 9th April 2017 from Gabriel GeoConsulting.
- Outline Construction Management Plan.
- Existing Foundations Drawing.
- Outline Construction Programme.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	The authors of the BIA have been provided and are satisfactory.
Is data required by Cl.233 of the GSD presented?	Yes	Updated in revised submissions.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	Yes. The BIA provides a description of the proposed below ground basement structure and the temporary works required for its formation.
Are suitable plan/maps included?	Yes	Suitable plans and maps are included. When maps are referenced within the BIA in the majority of cases the site location has also been indicated.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	The plans and maps show the site central to the page and it is shown in sufficient detail. Location and site plans have been provided.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Screening refers to Arup maps and to independent Groundsure reports (seen in Appendix E and F) undertaken for the site. Appropriate justification has been provided for 'No' answers as referred to in section 7.3.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Appropriate data sources have been consulted and justification is provided for all other 'No' answers.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Screening refers to the Camden SFRA and surface water flood modelling by the Environment Agency. Appropriate justification has been provided for 'No' answers as referred to in section 7.4.
Is a conceptual model presented?	Yes	A conceptual model is presented in section 10.1.

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Land stability scoping is provided in section 8.3 and is consistent with the screening outcome.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Hydrogeology scoping provided in section 8.2 is consistent with the screening outcome.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Hydrology scoping is provided in section 8.4 and is consistent with the screening outcome.
Is factual ground investigation data provided?	Yes	Factual ground investigation data is provided in 'Report on Ground Investigations' by Ian Farmer Associates.
Is monitoring data presented?	Yes	As stated in section 9.5 ground water levels were monitored on installation of the standpipes and approximately three weeks post installation.
Is the ground investigation informed by a desk study?	Yes	The ground investigation is informed by a desk study, with data provided in Appendix B, E, F and G.
Has a site walkover been undertaken?	Yes	Section 1.3 states a site walkover was undertaken in May 2016. Photographs from the walkover are shown in Appendix A.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	The presence of neighbouring basements/lower ground floors is discussed throughout the BIA.
Is a geotechnical interpretation presented?	Yes	Engineering properties of the soil have been provided in 'Report on Ground Investigations' by Ian Farmer Associates.
Does the geotechnical interpretation include information on retaining wall design?	Yes	A section discussing retaining wall design is provided in 'Report on Ground Investigations' by Ian Farmer Associates.
Are reports on other investigations required by screening and scoping presented?	Yes	An arboricultural report and heave assessment.
Are the baseline conditions described, based on the GSD?	Yes	The baseline conditions described are based on the GSD.

Item	Yes/No/NA	Comment
Do the base line conditions consider adjacent or nearby basements?	Yes	The assessment considers adjacent basements.
Is an Impact Assessment provided?	Yes	An impact assessment is provided in section 10.0.
Are estimates of ground movement and structural impact presented?	Yes	Updated in revised submissions.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	Yes	The impact of the items identified via screening and scoping have been appropriately discussed.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Updated in revised submissions.
Has the need for monitoring during construction been considered?	Yes	Outline monitoring during construction has been considered and is detailed in section 10.7. Updated in revised submissions.
Have the residual (after mitigation) impacts been clearly identified?	Yes	Section 10.9 describes mitigation measures that are to be undertaken.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	Updated in revised submissions.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	Updated in revised submissions.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	Updated in revised submissions.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	The report states the worst case damage to surrounding buildings will be of category 1. Updated in revised submissions.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1. The Basement Impact Assessment (BIA) has been carried out by an established firm of Geotechnical and Geological engineering consultants, Gabriel GeoConsulting. The accreditation and experience of those responsible for the production of the report has been confirmed as being in accordance with the requirements of CPG4.

4.2. Structural engineering input is provided by Train & Kemp. Originally, structural drawings and calculations were not submitted. In the revised submissions, sufficient structural detail has been provided, including construction methodology.

4.3. The existing building is of three storeys, likely of traditional load bearing masonry construction. A single storey extension is present to the rear that was likely constructed in the early 1990's given the timing of the planning consent.

4.4. While the audit instruction identifies that the site does not involve, or is neighbouring, listed buildings, it has been identified that both neighbouring properties, No 13a and 12, are Grade II listed.

4.5. The proposal consists of forming a single storey basement beneath the rear of the property and into the rear garden. The existing single storey rear extension is to be extended to the rear. However, the proposed basement will project further beyond this new rear wall line.

4.6. The neighbouring properties have been confirmed to contain basement levels, with No 12 detached from No 13 and separated by 2.9m, and No 13a attached to No 13. The basement to No 12 covers the full plan of the property apart from the rear bay window and orangery, with the floor level being 1.35m below the floor level to the ground floor of number 13. The basement to No 12 does not cover the full plan of the property, but will abut the proposed basement along the eastern corner.

4.7. A ground investigation has been carried out by Ian Farmer Associates comprising two boreholes; one at the front of the property and one at the rear. No information on the nature and depth of existing foundations was originally provided. However, in the revised submissions the foundation details have been confirmed.

4.8. The borehole in the front garden has identified 0.9 metres of Made Ground overlying the Claygate Member to 2.1mbgl, overlaying London Clay to depth. The borehole in the rear garden identified hardstanding overlying the Claygate Member to 3.45mbgl, overlaying London Clay to depth.

4.9. An Arboricultural report has been produced that confirms that the root protection areas of all retained trees are not adversely affected.

4.10. Due to an increase in the paved area the use of SUDs to attenuate and reduce surface water run off flows was discussed in the original BIA. The revised BIA proposes a SUDS strategy that is accepted, involving permeable surfacing. The SUDS scheme will require detailed design, including quantifying and agreeing the discharge run-off volumes with LBC and Thames Water.

4.11. Water level monitoring was undertaken in both boreholes, with a return monitoring visit measuring a rise of the water level to 1.30mbgl and 2.33mblg in the front and rear boreholes respectively. Groundwater within the Claygate Member will need to be controlled during construction, and appropriate outline de-watering measures are described.

4.12. It has been determined that there will be no cumulative damming effect to ground water flows caused by the proposed basement in conjunction with existing neighbouring basements. This is due to limited flows within the Claygate member, a 2.9m gap from the basement to No 12, and the assumed existing damming effect by the rear extension foundations not causing any issues. This is accepted subject to additional monitoring prior to construction to ensure that the site conditions are compatible with this conclusion.

4.13. In the revised BIA submissions, structural drawings and calculations have been provided that adequately demonstrate that stability will be maintained. The construction will be stiffly propped in both the temporary and permanent cases. Sequencing and methodology are appropriate, and works should be undertaken by suitable experienced contractors.

4.14. It has been determined that the ground slope is less than 7°, and therefore slope stability is not an issue. Figure 16 in the GSD indicates that slopes of between 7° and 10° are present to the front of the property and in Downshire Hill. However it is accepted that the development is to the rear of the property and will be remote of these sloped areas.

4.15. The ground movement and damage impact assessments presented in the original BIA, in regards to neighbouring structures, were not accepted. However, in the revised submission, in conjunction with the updated structural information, the ground movement and damage impact assessments are accepted. Damage impacts are restricted to Category 1 (Very Slight) in accordance with the Burland Scale.

4.16. A movement monitoring strategy has been proposed that incorporates the closest elements of the neighbouring buildings. In the revised BIA submissions, monitoring in conjunction with visual condition surveys at appropriate intervals are proposed, which is accepted.

4.17. Appropriate mitigation measures have been discussed in the BIA. These are agreed with and should be implemented in the construction stage.

4.18. A construction management plan (CMP) is required due to the proximity to listed buildings. An outline CMP has been provided. The Contractor should update this and provide additional detail in advance of construction.

4.19. The original BIA recommended identifying adjacent utilities and underground infrastructure, in line with LBC requirements. This has now been undertaken, and the Contractor should satisfy themselves that any local, domestic utility routes on site are clearly identified and protected or re-routed during the works.

5.0 CONCLUSIONS

5.1. The Basement Impact Assessment (BIA) has been carried out by those holding the required accreditation from the requirements of CPG4.

5.2. The proposal consists of forming a single storey basement beneath the rear of the property that extends into the garden. An existing single storey rear extension is also to be extended towards to the rear.

5.3. In the revised submissions, sufficient structural detail has been provided, including construction methodology and outline temporary works plans. Existing foundation details have been confirmed.

5.4. Both neighbouring properties have been identified as Grade II listed and contain partial basement levels.

5.5. The site investigations confirmed London Clay overlain by the Claygate Member and Made Ground. There should be no appreciable impact to groundwater flow. Additional monitoring prior to construction should be undertaken to confirm this assessment.

5.6. In the revised submissions, a SUDS strategy is proposed which is accepted.

5.7. It is accepted that there are no slope stability issues.

5.8. The revised ground movement and damage impact assessment is accepted, in conjunction with the structural details provided.

5.9. An appropriate outline monitoring strategy is proposed.

5.10. In the revised submission, an outline construction management plan and an outline construction programme has been provided

5.11. Queries and matters that required further clarification are summarised in Appendix 2. Assuming that the works proceed in accordance with the recommendations presented, the criteria contained in CPG4 and DP27 have been met.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Joel	Not provided	02/10/16	Potential damage to 13A	GMA / damage impact assessment indicate that works will cause a maximum of Category 1 damage.
Joel	Not provided	02/10/16	Property already contains a basement level	The ground floor level is level at the front of the property, and is no more than half a storey below ground level at the rear of the property. This would not usually be considered as an existing basement level.
Joel	Not provided	02/10/16	'Reinforcement of basement not considered' with respect of seasonal ground movements.	Heave and ground movements have been considered in the BIA. Outline structural proposals provided.
Joel	Not provided	02/10/16	Insufficient details of waterproofing.	Details of waterproofing are not required under the CPG4.
Joel	Not provided	02/10/16	Tree damage and retention of consultants during the works.	There is no requirement to retain the services of consultants during construction under CPG4. The tree protection measures proposed are adequate.
Sufit	32 Pilgrims Lane	12/10/16	Impact on surface water run off	SUDS strategy accepted, pending detailed design and approval by LBC / Thames Water.
Sufit	32 Pilgrims Lane	12/10/16	Stability of nearby tree	An appropriate Arboricultural report has been produced that confirms that all retained trees will not be adversely affected by the proposal.
Bace	21 Keats Grove	24/09/16	Cause subsidence in the surround area	GMA / damage impact assessment indicate that works will cause a maximum of Category 1 damage.

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Stability	Structural drawings and calculations are required for the proposed basement structure, along with any retaining walls required in the rear garden. These details should also indicate an outline of temporary works that are required.	Closed	June 2017
2	Stability	Please provide evidence for the assumptions made regarding the ground movement assessment in section 10.6.1.	Closed	June 2017
3	Surface water	Details of SUDs that are to be incorporated into the proposal are required.	Closed	June 2017
4	Stability	The movement monitoring strategy is required to be updated to incorporate trigger levels linked with those calculated by the ground movement assessment.	Closed	June 2017
5	Construction	A construction management plan is required due to the proximity to listed buildings.	Closed	June 2017
6	Stability	Trial pits are required in order to determine the depth and type of foundations that are to be underpinned	Closed	June 2017
7	Construction	An outline construction programme is required	Closed	June 2017
8	Desk Study	A services search must be carried out, as mentioned in sections 8.5 and 10.1.3, and the appropriate assessment made based on the findings.	Closed	June 2017

Appendix 3: Supplementary Supporting Documents

Retaining Wall Calculations

Temporary Works Propping Drawing

Underpinning Sequence Drawing

Outline SUDS Drawing

Email 9th April 2017 from Gabriel GeoConsulting

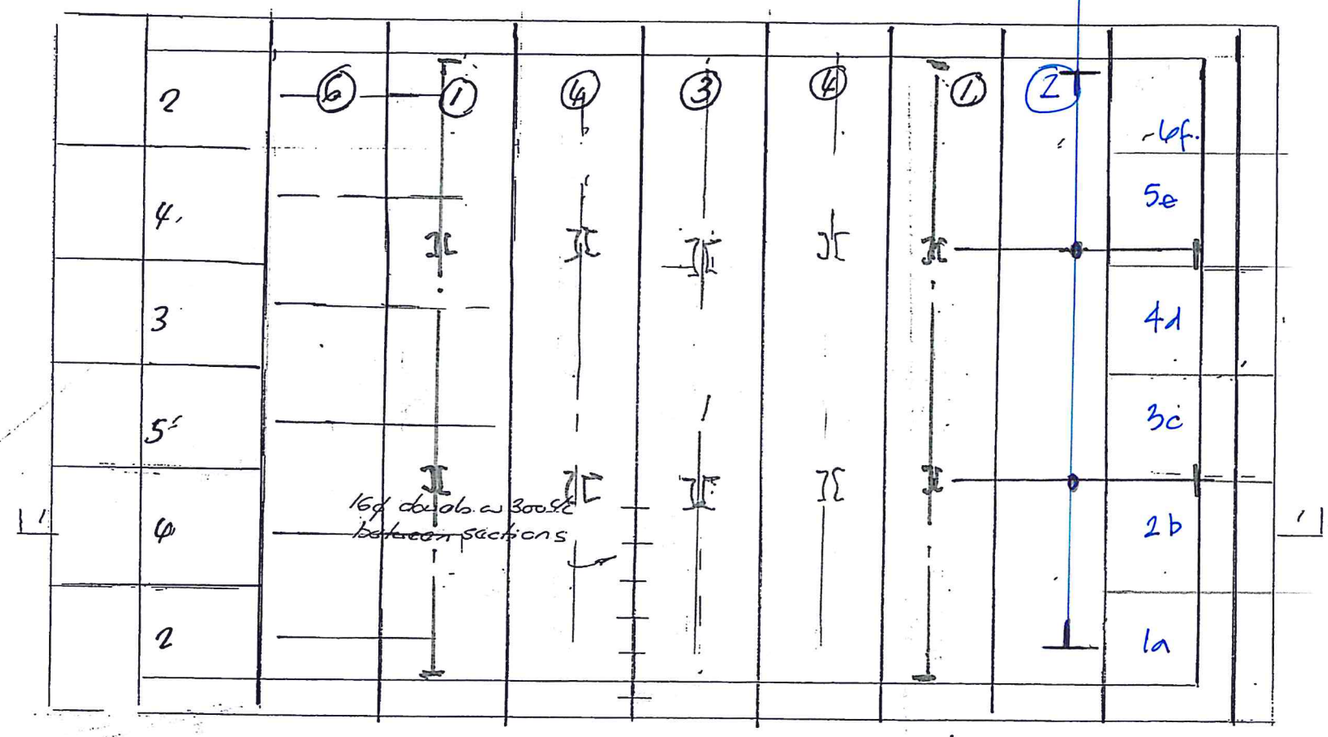
Outline Construction Management Plan

Existing Foundations Drawing

Outline Construction Programme

PROPS TO BE EQUALLY SPACED. ALONG REAR WALL. TO BE DESIGNED BY CONTRACTOR.

RC walls constructed in 1000 max sections in sequence.

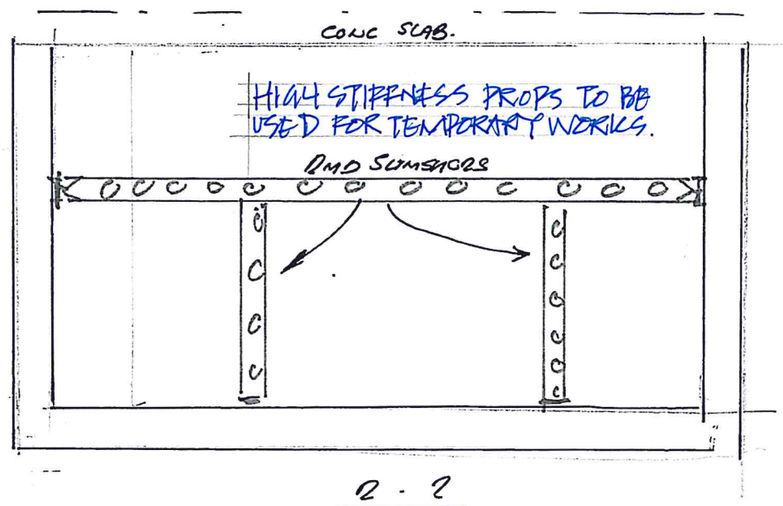


PLAN ON BASEMENT

SUGGESTED SEQUENCE TBC CONTRACTOR

PROPPING IN SEQUENCE.

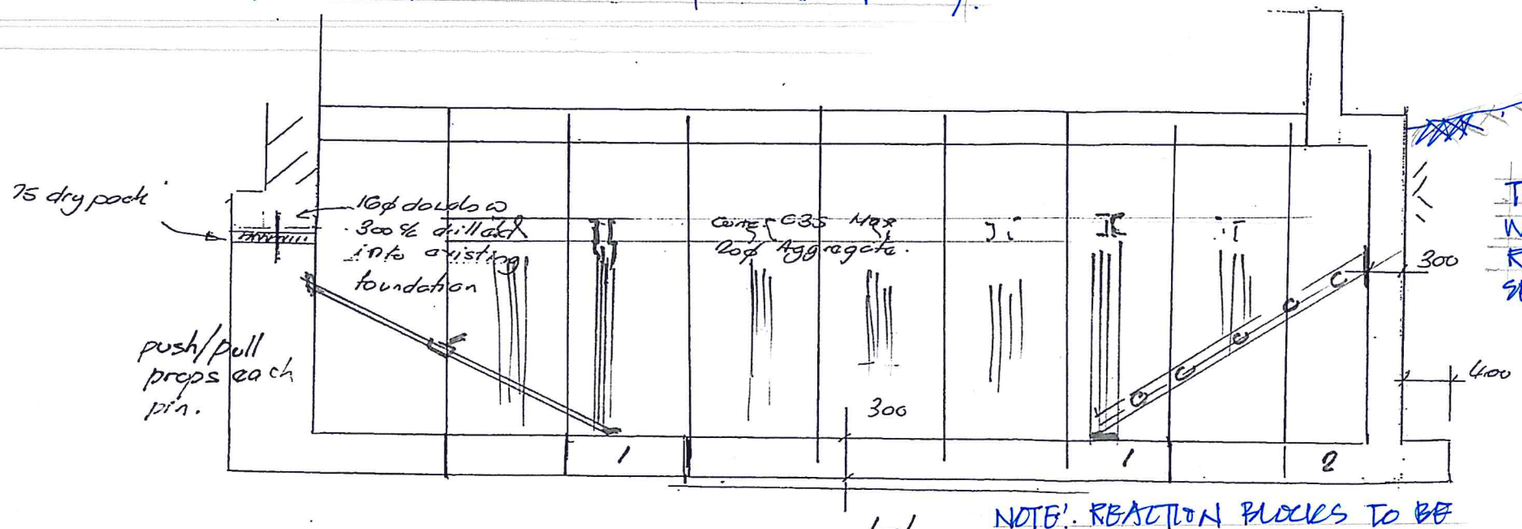
a/ CONSTRUCT SECTIONS ① WITH CROSS PROPS
b/ USE ① TO PROP UNDERPINS & ②
c/ CONSTRUCT REMAINING SECTIONS WITH CROS PROPS AS ①
d. PROPPING TO REMAIN UNTIL GROUND SLAB COMPLETE.
f. PINS 1a TO 6f TO BE COMPLETED AFTER ALL OTHER PINS HAVE BEEN CAST AND REACHED THEIR DESIGN STRENGTH.



2 - 2

GENERAL NOTES.

1.0 · The excavation and construction of the basement to be carried out during the summer/Autumn months when ground water pressures are at their lowest.
2.0 Only 1 No pin to be excavated at any one time to rear wall.
3.0. Contractor to allow for full face support to the underpin excavations. with substantial propping for those in the rear wall of the basement The props to be designed using residual shear parameters for clay.



NOTE: REACTION BLOCKS TO BE INSTALLED UNDER SLAB TO RESIST DESIGN LOADS.

TEMPORARY & PERMANENT WORKS TO BE DESIGNED FOR REAR SLOPE SEE SI FOR PERAMETERS.

C. General notes added 18/5/17
B.
A. Propping Added.
Rev. | Description | By | Chkd. | Date

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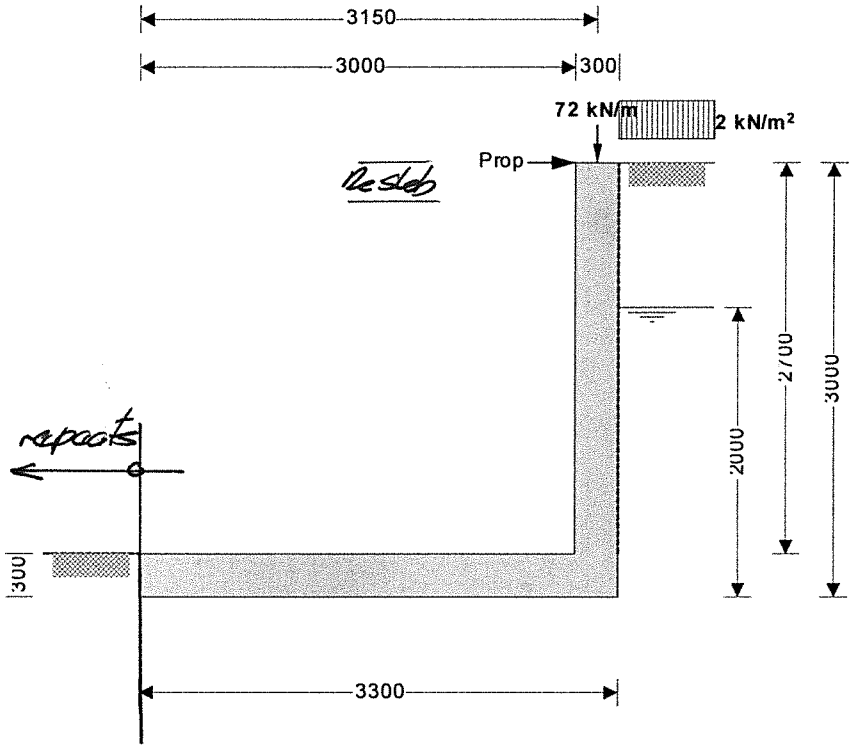
Client: ANDREW HEALE
Project: 13 DOWNSHIRE HILL
Title: SUGGESTED CONSTRUCTION
Drawing Status: PRELIMINARY
Date: NOV 16 | Drawing No. 13526/TW.1 | Rev. C
Scale: NTS
Drawn: GP

TEKLA Tedds	Project				Job no.	
Train and Kemp 10 Kennington Park Place London SE11 4AS	13 Downshire Hill				13524	
	Calcs for				Start page no./Revision	
	New Basement				NC	
	Calcs by	Calcs date	Checked by	Checked date	Approved by	Approved date
	BL	24/04/2017				

RETAINING WALL ANALYSIS (BS 8002:1994)

TEDDS calculation version 1.2.01.06



Wall details

Retaining wall type	**Cantilever**		
Height of wall stem	h_{stem} = **2700** mm	Wall stem thickness	t_{wall} = **300** mm
Length of toe	l_{toe} = **3000** mm	Length of heel	l_{heel} = **0** mm
Overall length of base	l_{base} = **3300** mm	Base thickness	t_{base} = **300** mm
Height of retaining wall	h_{wall} = **3000** mm		
Depth of downstand	d_{ds} = **0** mm	Thickness of downstand	t_{ds} = **300** mm
Position of downstand	l_{ds} = **1900** mm		
Depth of cover in front of wall	d_{cover} = **0** mm	Unplanned excavation depth	d_{exc} = **0** mm
Height of ground water	h_{water} = **2000** mm	Density of water	γ_{water} = 9.81 kN/m³
Density of wall construction	γ_{wall} = **23.6** kN/m³	Density of base construction	γ_{base} = **23.6** kN/m³
Angle of soil surface	β = **0.0** deg	Effective height at back of wall	h_{eff} = **3000** mm
Mobilisation factor	M = **1.5**		
Moist density	γ_m = **18.0** kN/m³	Saturated density	γ_s = **21.0** kN/m³
Design shear strength	ϕ' = **24.2** deg	Angle of wall friction	δ = **0.0** deg
Design shear strength	ϕ'_b = **24.2** deg	Design base friction	δ_b = **18.6** deg
Moist density	γ_{mb} = **18.0** kN/m³	Allowable bearing	$P_{bearing}$ = **150** kN/m²

Using Rankine theory

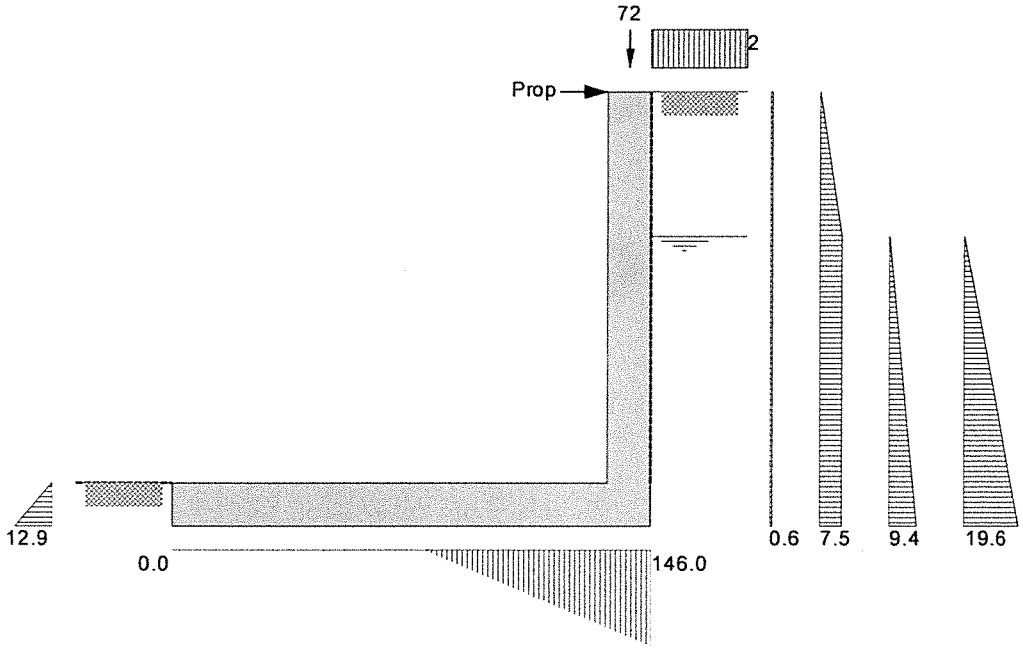
Active pressure	K_a = **0.419**	Passive pressure	K_p = **2.389**
At-rest pressure	K_0 = **0.590**		

Loading details

Surcharge load	Surcharge = **1.5** kN/m²		
Vertical dead load	W_{dead} = **61.0** kN/m	Vertical live load	W_{live} = **10.5** kN/m
Horizontal dead load	F_{dead} = **0.0** kN/m	Horizontal live load	F_{live} = **0.0** kN/m

TEKLA Tedds Train and Kemp 10 Kennington Park Place London SE11 4AS	Project 13 Downshire Hill				Job no. 13524	
	Calcs for New Basement				Start page no./Revision 12c	
	Calcs by BL	Calcs date 24/04/2017	Checked by	Checked date	Approved by	Approved date

Position of vertical load l_{load} = **3150** mm Height of horizontal load h_{load} = **0** mm



Loads shown in kN/m, pressures shown in kN/m²

Calculate propping force

Propping force F_{prop} = **12.9** kN/m

Check bearing pressure

Total vertical reaction R = **114.0** kN/m Distance to reaction x_{bar} = **2780** mm

Eccentricity of reaction e = **1130** mm

Reaction acts outside middle third of base

Bearing pressure at toe p_{toe} = **0.0** kN/m² Bearing pressure at heel p_{heel} = **146.0** kN/m²

PASS - Maximum bearing pressure is less than allowable bearing pressure

TEKLA Tedds Train and Kemp 10 Kennington Park Place London SE11 4AS	Project 13 Downshire Hill				Job no. 13324	
	Calcs for New Basement				Start page no./Revision 13c	
	Calcs by BL	Calcs date 24/04/2017	Checked by	Checked date	Approved by	Approved date

RETAINING WALL DESIGN (BS 8002:1994)

TEDDS calculation version 1.2.01.06

Ultimate limit state load factors

Dead load factor γ_{f_d} = **1.4** Live load factor γ_{f_l} = **1.6**

Earth pressure factor γ_{f_e} = **1.4**

Calculate propping force

Propping force F_{prop} = **12.9** kN/m

Design of reinforced concrete retaining wall toe (BS 8002:1994)

Material properties

Strength of concrete f_{cu} = **40** N/mm^2 Strength of reinforcement f_y = **500** N/mm^2

Base details

Minimum reinforcement k = **0.13** % Cover in toe c_{toe} = **30** mm

As the moment is negative the design of the retaining wall toe is beyond the scope of this calculation

Design of reinforced concrete retaining wall stem (BS 8002:1994)

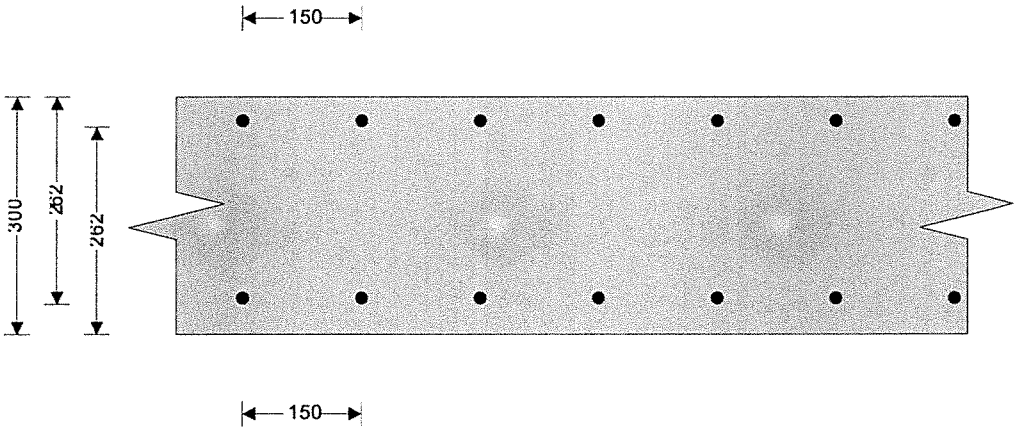
Material properties

Strength of concrete f_{cu} = **40** N/mm^2 Strength of reinforcement f_y = **500** N/mm^2

Wall details

Minimum reinforcement k = **0.13** %

Cover in stem c_{stem} = **30** mm Cover in wall c_{wall} = **30** mm



Design of retaining wall stem

Shear at base of stem V_{stem} = **55.9** kN/m Moment at base of stem M_{stem} = **26.1** kNm/m

Compression reinforcement is not required

Check wall stem in bending

Reinforcement provided **16 mm dia.bars @ 150 mm centres**

Area required $A_{s\_stem\_req}$ = **390.0** mm^2/m Area provided $A_{s\_stem\_prov}$ = **1340** mm^2/m

PASS - Reinforcement provided at the retaining wall stem is adequate

Check shear resistance at wall stem

Design shear stress v_{stem} = **0.213** N/mm^2 Allowable shear stress v_{adm} = **5.000** N/mm^2

PASS - Design shear stress is less than maximum shear stress

Concrete shear stress v_{c_stem} = **0.657** N/mm^2

v_{stem} < v_{c_stem} - No shear reinforcement required

TEKLA Tedds	Project: 13 DONNSHIRE HILL				Job no.: 13524	
Train and Kemp 10 Kennington Park Place London SE11 4AS	Calcs for: NEW BASEMENT				Start page no./Revision: 14C	
	Calcs by: BL	Calcs date: 24/04/2017	Checked by:	Checked date:	Approved by:	Approved date:

Design of retaining wall at mid height

Moment at mid height M_{wall} = **12.5** kNm/m

Compression reinforcement is not required

Reinforcement provided **16 mm dia.bars @ 150 mm centres**

Area required $A_{s\_wall\_req}$ = **390.0** mm²/m Area provided $A_{s\_wall\_prov}$ = **1340** mm²/m

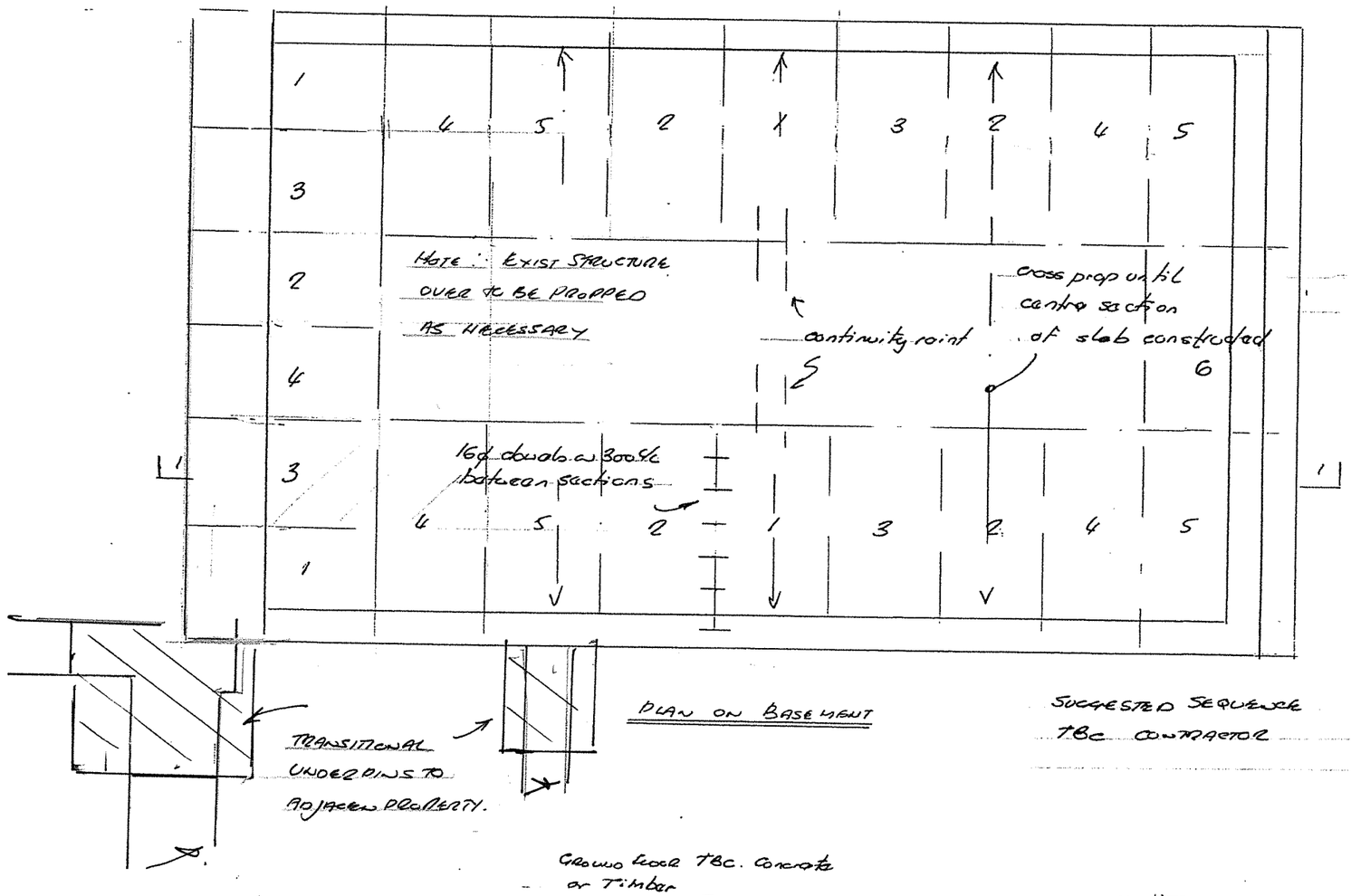
PASS - Reinforcement provided to the retaining wall at mid height is adequate

Check retaining wall deflection

Max span/depth ratio $ratio_{max}$ = **40.00** Actual span/depth ratio $ratio_{act}$ = **10.31**

PASS - Span to depth ratio is acceptable

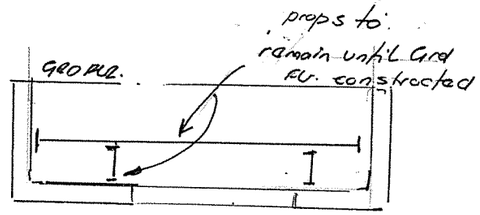
RC walls constructed in 1000 max sections in sequence.



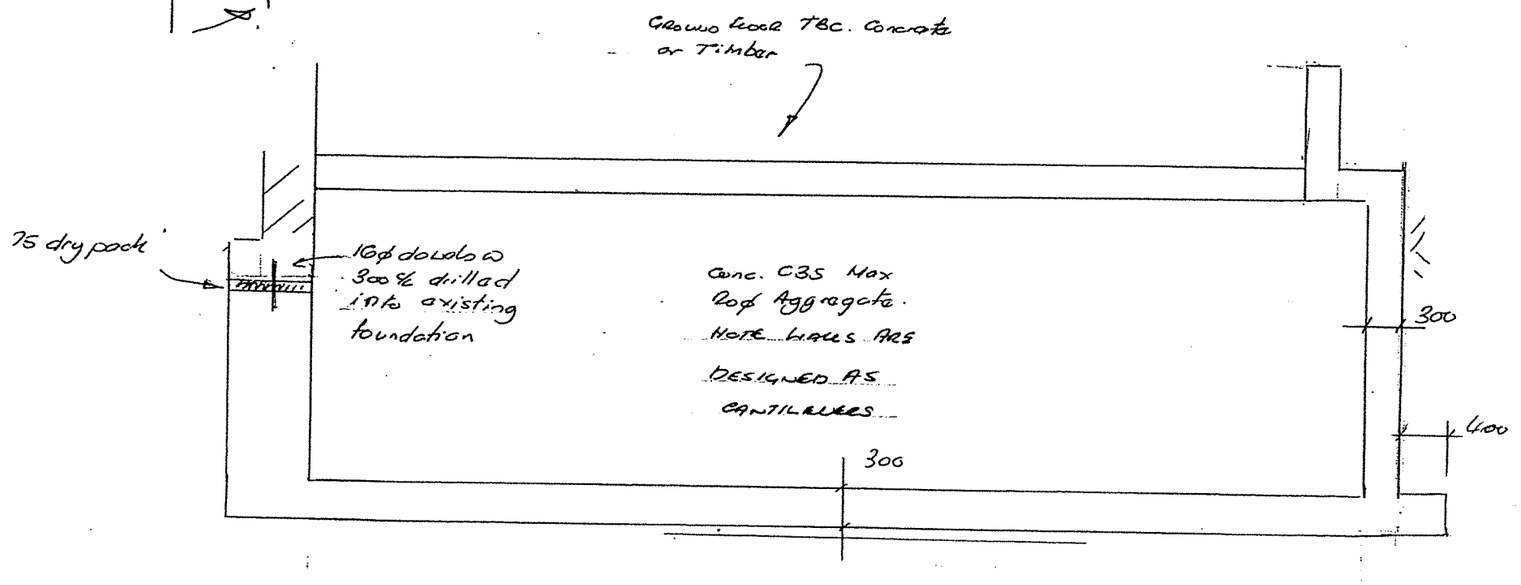
PLAN ON BASEMENT

SUGGESTED SEQUENCE TBC CONTRACTOR

Use batter or trench sheet excavations



CROSS SECTION PROPPING



Rev.	Description	By	Chkd.	Date
A	Amended	RD	AL	Feb 17

TRAIN AND KEMP
ENGINEERING BUSINESS SOLUTIONS

10 Kennington Park Place Kennington London SE11 4AS
Tel: +44 (0) 20 7582 1276 Fax: +44 (0) 20 7582 5728
mail@trainandkemp.co.uk www.trainandkemp.co.uk

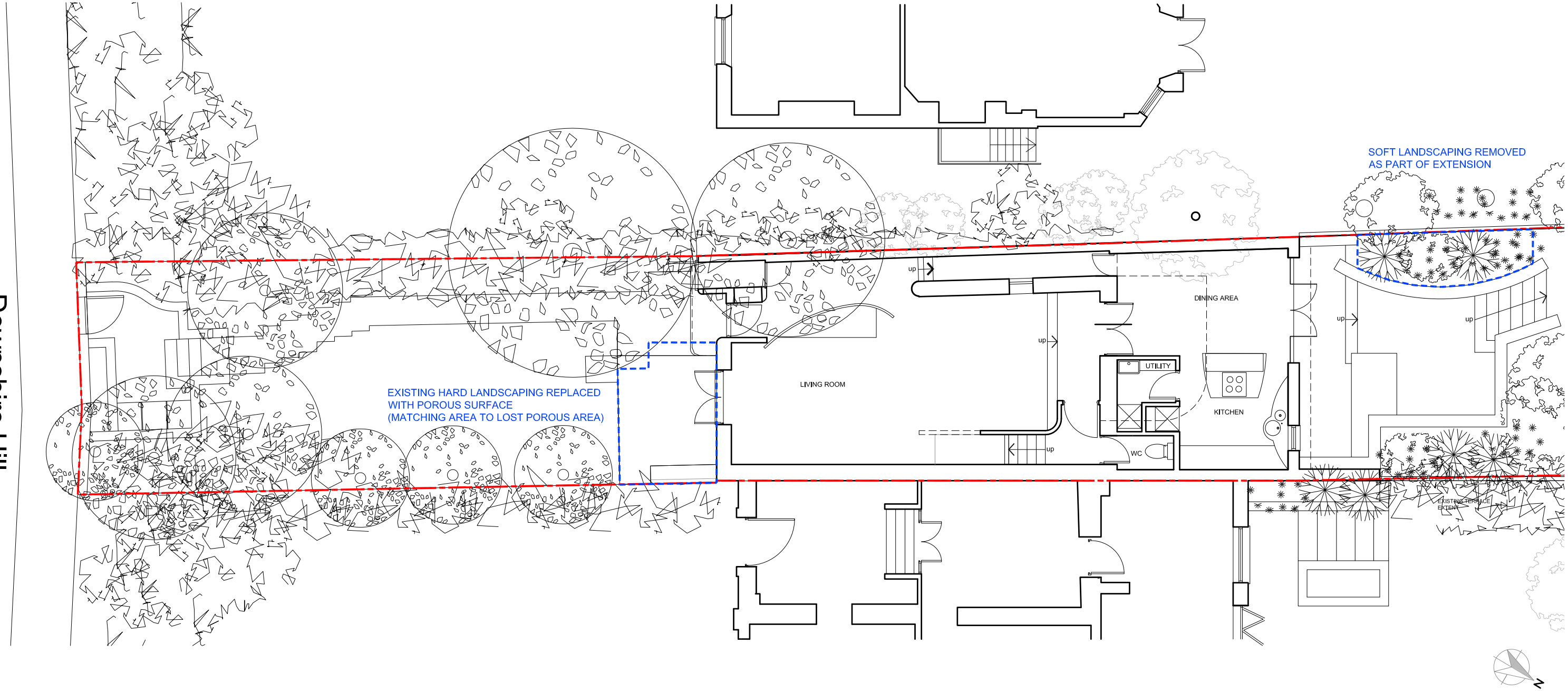
Client: ANDREW HEALE

Project: 13 DOWNSHIRE HILL

Title: SUGGESTED CONSTRUCTION

Drawing Status: PRELIMINARY

Date	NOV 16	Drawing No.	Rev.
Scale	NTS	13526/TN.1	A
Drawn	RD		
Chkd	AL		



13 DOWNSHIRE HILL

Ne/AR Architects
· L O N D O N ·

SUDS ARRANGEMENT PLAN

DATE : NOVEMBER 2016
SCALE : 1:100 @ A3

0116/DH/005

13 Downshire Hill - Monitoring
Keith Gabriel
to:
GrahamKite@campbellreith.com, Parisagajjar@campbellreith.com
09/04/2017 11:32
Cc:
Andrew Neale, "LizBrown@campbellreith.com", Tessa Craig,
"'gavin.sexton@camden.gov.uk'"
Hide Details
From: Keith Gabriel <keithg@gabrielgeo.co.uk>
To: "GrahamKite@campbellreith.com" <GrahamKite@campbellreith.com>,
"Parisagajjar@campbellreith.com" <Parisagajjar@campbellreith.com>
Cc: Andrew Neale <andrewdneale@gmail.com>, "LizBrown@campbellreith.com"
<LizBrown@campbellreith.com>, Tessa Craig <Tessa.Craig@camden.gov.uk>,
"'gavin.sexton@camden.gov.uk'" <gavin.sexton@camden.gov.uk>

Graham, Parisa

Thank you for this response. Following last week's meeting I now submit revised versions of paragraphs 10.7.3 and 10.7.4 which concern the monitoring exercise and trigger levels. All other aspects of the additional information required are, I understand, being handled by Train & Kemp.

10.7.3
The wall movements detected by the monitoring exercise may be caused by rotation, flexing without cracking (especially for walls built using lime mortar) or lateral movements transverse to the plane of the wall. Movements such as these which occur without cracking would all fall within Burland's Category 0, so a twin-track approach to the monitoring will be required, combining both the target monitoring as proposed above and visual observations. Daily inspections of the subject property and the external walls of the adjoining and immediately adjacent buildings should be made and recorded by a member of the contractor's staff. If any new structural cracks appear in the main loadbearing walls, then the appointed structural engineer should be informed and those cracks should be monitored using the Demec system (or similar) on the same frequency as the target monitoring. Additional targets might also need to be installed, at the engineer's discretion, depending on the location of the cracks. It will be important to ensure that any pre-existing cracks in affected load-bearing walls which have weakened their structural integrity should be fully repaired in accordance with recommendations from the appointed structural engineer before any underpinning is carried out (as recommended in paragraph 10.4.5).

10.7.4
While monitoring readings from this system are typically presented to the nearest 0.1mm, the accuracy (repeatability) is usually quoted as +/- 2mm or +/-1.5mm. Thus, if recorded movements in either direction reach 5mm (amber trigger level), then the frequency of readings should be increased as appropriate to the severity of the movement, and consideration should be given to installing additional targets. If the recorded movements in either direction reach 8mm (red trigger level), then work should stop until new method statements have been prepared and approved by the appointed structural engineer. Local temporary backfilling of the excavation adjacent to the movement of concern might also be required.

Best wishes

Keith

Keith Gabriel
UK Registered Ground Engineering Adviser
Gabriel GeoConsulting Ltd
GabrielGeo Consulting
Mob: 07793 213847

Tel: 01580 241044
email: KeithG@gabrielgeo.co.uk
Web: [Suspicious URL detected]
Henwood Pavilion, Henwood, Ashford, TN24 8DH
Company No. 6455714, registered in England and Wales. Registered office: Highfield House, TN17 4EH.

Construction Management Plan

pro forma v2.1

Camden

Contents

Camden

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by

Additional sheets

Please note – the review process will be quicker if these are submitted as Word documents or searchable PDFs.

Date	Version	Produced by

Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts, and relates to both on site activity and the transport arrangements for vehicles servicing the site.

It is intended to be a live document whereby different stages will be completed and submitted for application as the development progresses.

The completed and signed CMP must address the way in which any impacts associated with the proposed works, and any **cumulative impacts of other nearby construction sites**, will be mitigated and managed. The level of detail required in a CMP will depend on the scale and kind of development. Further policy guidance is set out in Camden Planning Guidance **(CPG)** 6: Amenity and **(CPG)** 8: Planning Obligations.

This CMP follows the best practice guidelines as described in Transport for London's (TfL's Standard for Construction Logistics and Cyclist Safety (**CLOCS**) scheme) and Camden's Minimum Requirements for Building Construction **(CMRBC)**.

The approved contents of this CMP must be complied with unless otherwise agreed with the Council in writing. The project manager shall work with the Council to review this CMP if problems arise in relation to the construction of the development. Any future revised plan must also be approved by the Council and complied with thereafter.

It should be noted that any agreed CMP does not prejudice or override the need to obtain any separate consents or approvals such as for road closures or hoarding licences.

If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

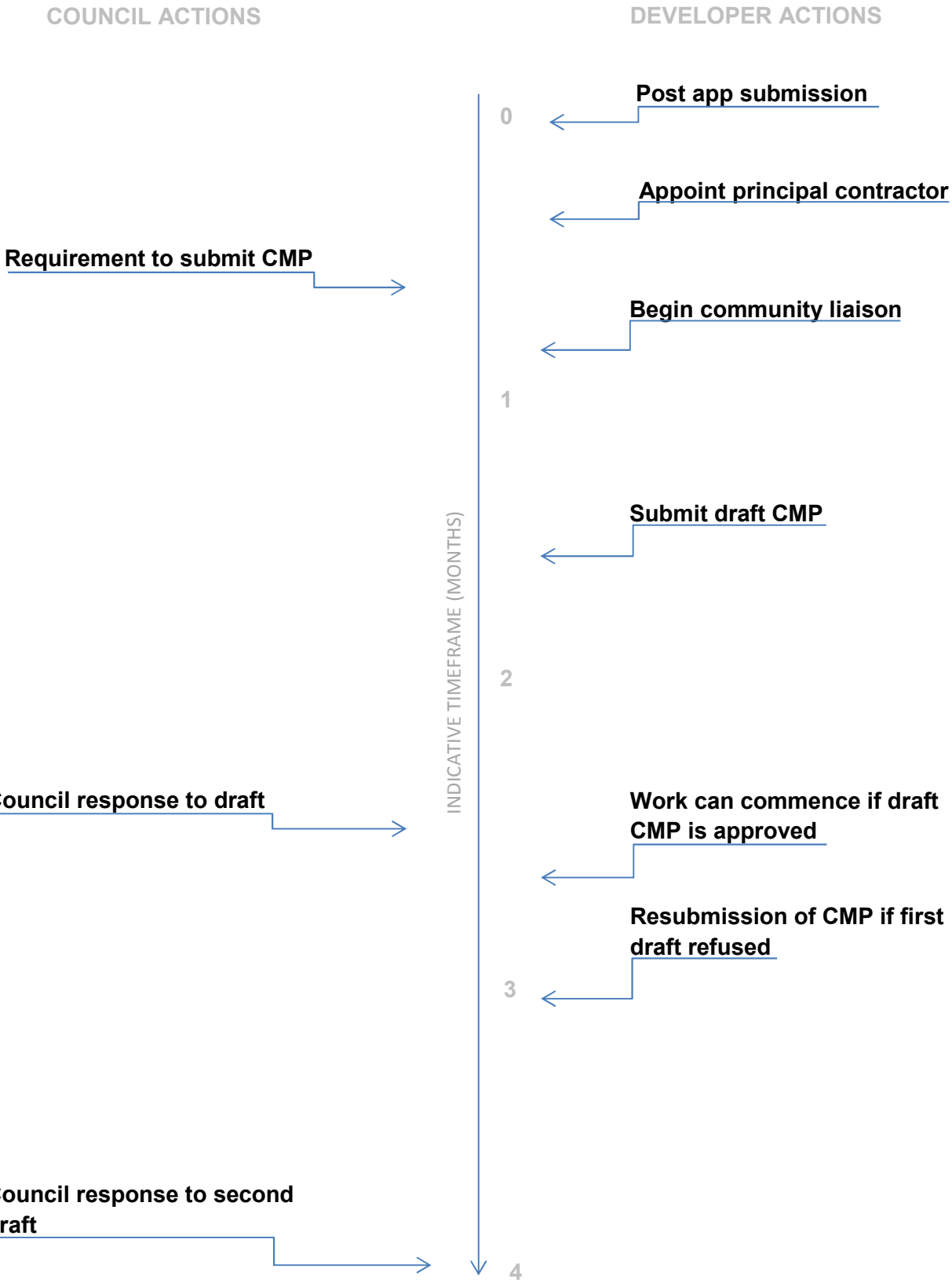
Please complete the questions below with additional sheets, drawings and plans as required. The boxes will expand to accommodate the information provided, so please provide as much information as is necessary. **It is preferable if this document, and all additional documents, are completed electronically and submitted as Word files to allow comments to be easily documented. These should be clearly referenced/linked to from the CMP.**

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately **3 months from completion.**

(Note the term 'vehicles' used in this document refers to all vehicles associated with the implementation of the development, e.g. demolition, site clearance, delivery of plant & materials, construction, etc.)

Revisions to this document may take place periodically.

Timeframe


COUNCIL ACTIONS
DEVELOPER ACTIONS
Post app submission
0
Appoint principal contractor
Requirement to submit CMP
Begin community liaison
1
Submit draft CMP
INDICATIVE TIMEFRAME (MONTHS)
2
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft refused
3
Council response to second draft
4

Contact

1. Please provide the full postal address of the site and the planning reference relating to the construction works.

Address: 13 Downshire Hill

Planning ref: 2016/4511

Type of CMP - Section 106 planning obligation/Major sites framework:

2. Please provide contact details for the person responsible for submitting the CMP.

Name: Marc Stone

Address:Train and Kemp 10 Kennington Park Place London SE11 4AS

Email:marcstone@trainandkemp.co.uk

Phone:0207-582-1276

3. Please provide full contact details of the site project manager responsible for day-to-day management of the works and dealing with any complaints from local residents and businesses.

Name: Not yet Known

Address:

Email:

Phone:

4. Please provide full contact details of the person responsible for community liaison and dealing with any complaints from local residents and businesses if different from question 3. In the case of **Community Investment Programme (CIP)**, please provide contact details of the Camden officer responsible.

Name:Not yet known

Address:

Email:

Phone:

5. Please provide full contact details including the address where the main contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

Name: Not yet Known

Address:

Email:

Phone:

Site

6. Please provide a site location plan and a brief description of the site, surrounding area and development proposals for which the CMP applies.

7. Please provide a very brief description of the construction works including the size and nature of the development and details of the main issues and challenges (e.g. narrow streets, close proximity to residential dwellings etc).

Minor ground floor extension plus single beasement under rear extension.

As with all new baseemnts constructed in location as above, party wall awards will ba agreed with neigbours with for any works that may affect building close to the works.

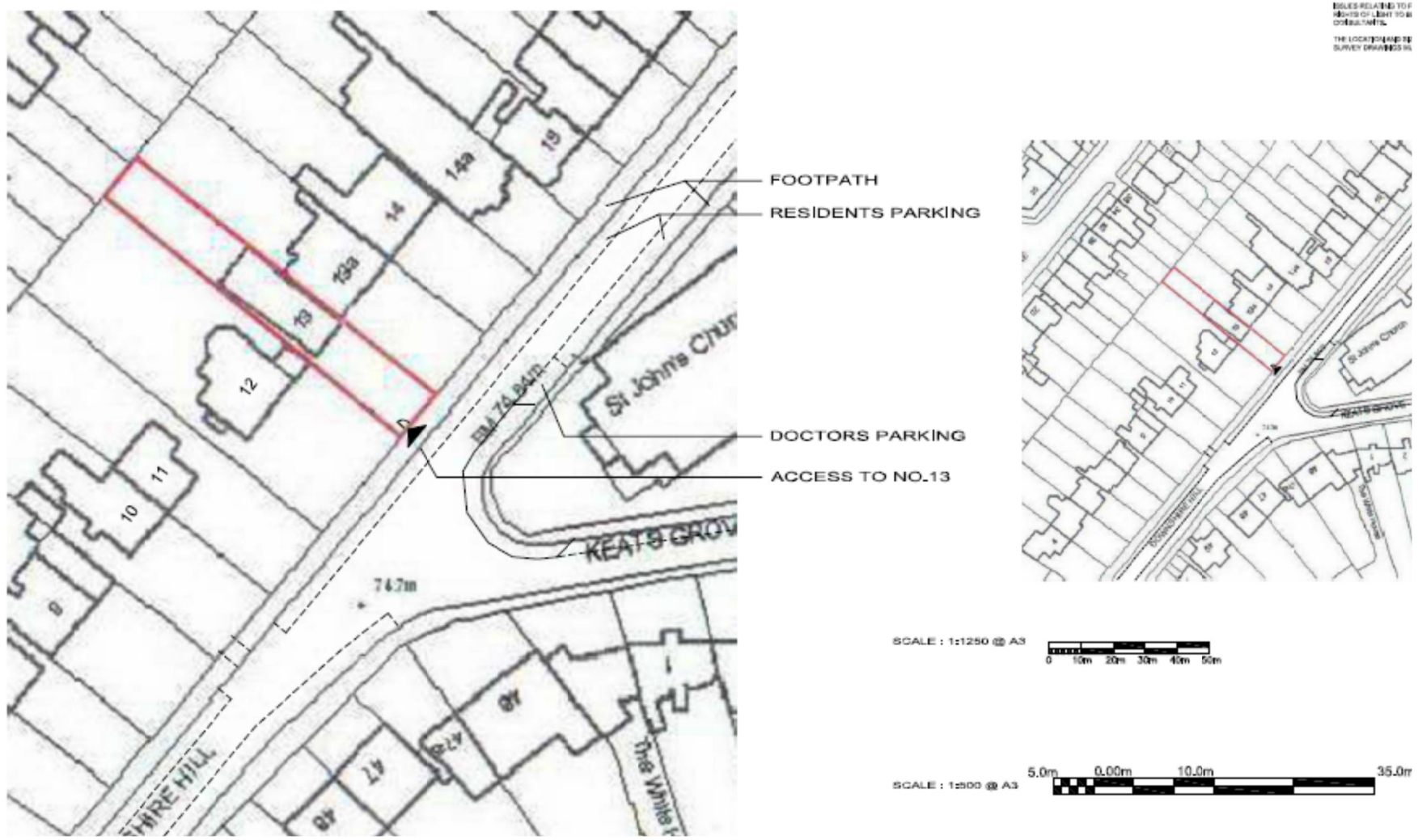
The new basement will not be immediately adjacent to the fabric of the orginsal listed

8. Please identify the nearest potential receptors (dwellings, business, etc.) likely to be affected by the activities on site (i.e. noise, vibration, dust, fumes, lighting etc.).

No 12 and 13a Downshire Hill

26 Pilgrims Lane

9. Please provide a scaled plan detailing the local highway network layout in the vicinity of the site. This should include details of on-street parking bay locations, cycle lanes, footway extents and proposed site access locations.


N
FOOTPATH
RESIDENTS PARKING
DOCTORS PARKING
ACCESS TO NO.13
St John's Church
KEATS GROVE
74.7m
HIRE HILL
SCALE : 1:1250 @ A3
0 10m 20m 30m 40m 50m
SCALE : 1:500 @ A3
5.0m 0.00m 10.0m 35.0m

10. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale. (A Gantt chart with key tasks, durations and milestones would be ideal).

Not yet known

11. Please confirm the standard working hours for the site, noting that the standard working hours for construction sites in Camden are as follows:

- 8.00am to 6pm on Monday to Friday
- 8.00am to 1.00pm on Saturdays
- No working on Sundays or Public Holidays

We confirm that the standard working hours for the sie will be as noted above

12. Please indicate if any changes to services are proposed to be carried out that would be linked to the site during the works (i.e. connections to public utilities and/or statutory undertakers' plant). Larger developments may require new utility services. If so, a strategy and programme for coordinating the connection of services will be required. If new utility services are required, please confirm which utility companies have been contacted (e.g. Thames Water, National Grid, EDF Energy, BT etc.) You must explore options for the utility companies to share the same excavations and traffic management proposals. Please supply details of your discussions.

Not yet undertaken

Community Liaison

A neighbourhood consultation process must have been undertaken prior to submission of the CMP first draft. This consultation must relate to construction impacts, and should take place following the grant of planning permission in the lead up to the submission of the CMP. A consultation process specifically relating to construction impacts must take place regardless of any prior consultations relating to planning matters. This consultation must include all of those individuals that stand to be affected by the proposed construction works. These individuals should be provided with a copy of the draft CMP, or a link to an online document. They should be given adequate time with which to respond to the draft CMP, and any subsequent amended drafts. Contact details which include a phone number and email address of the site manager should also be provided.

Significant time savings can be made by running an effective neighbourhood consultation process. This must be undertaken in the spirit of cooperation rather than one that is dictatorial and unsympathetic to the wellbeing of local residents and businesses.

These are most effective when initiated as early as possible and conducted in a manner that involves the local community. Involving locals in the discussion and decision making process helps with their understanding of what is being proposed in terms of the development process. **The consultation and discussion process should have already started, with the results incorporated into the CMP first draft submitted to the Council for discussion and sign off.** This communication should then be ongoing during the works, with neighbours and any community liaison groups being regularly updated with programmed works and any changes that may occur due to unforeseen circumstances through newsletters, emails and meetings.

Please note that for larger sites, details of a construction working group may be required as a separate S106 obligation. If this is necessary, it will be set out in the S106 Agreement as a separate requirement on the developer.

Cumulative impact

Sites located within high concentrations of construction activity that will attract large numbers of vehicle movements should consider establishing contact with other sites in the vicinity in order to manage traffic routeing and volumes. Developers in the Tottenham Court Road area have done this to great effect.

The Council can advise on this if necessary.

13. Consultation

The Council expects meaningful consultation. For large sites, this may mean two or more meetings with local residents **prior to submission of the first draft CMP**.

Evidence of who was consulted, how the consultation was conducted and a summary of the comments received in response to the consultation. Details of meetings including minutes, lists of attendees etc. must be included.

In response to the comments received, the CMP should then be amended where appropriate and, where not appropriate, a reason should be given. The revised CMP should also include a list of all the comments received. Developers are advised to check proposed approaches to consultation with the Council before carrying them out. If your site is on the boundary between boroughs then we would recommend contacting the relevant neighbouring planning authority.

Please provide details of consultation of draft CMP with local residents, businesses, local groups (e.g. residents/tenants and business associations) and Ward Councillors.

Contact made with

- Residents association(no objections)
- 11 Downshire Hill (no objections)
- 13 Downshire Hill (engineer to engineer communication being set up ahead of construction
- 32 Pilgrims Lane (Objection with regards to stability concerns. Further advice and information will be afforded.

14. Construction Working Group

Please provide details of community liaison proposals including any Construction Working Group that will be set up, addressing the concerns of the community affected by the works, the way in which the contact details of the person responsible for community liaison will be advertised to the local community, and how the community will be updated on the upcoming works i.e. in the form of a newsletter/letter drop, or weekly drop in sessions for residents.

To be completed by the contractor

15. Schemes

Please provide details of any schemes such as the 'Considerate Constructors Scheme', such details should form part of the consultation and be notified to the Council. Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

Contractor not yet appointed

16. Neighbouring sites

Please provide a plan of existing or anticipated construction sites in the local area and please state how your CMP takes into consideration and mitigates the cumulative impacts of construction in the vicinity of the site. The council can advise on this if necessary.

When the start date of the works are agreed the CMP wilbe undpated to include the information required

Transport

This section must be completed in conjunction with your principal contractor. If one is not yet assigned, please leave the relevant sections blank until such time when one has been appointed.

Camden is a CLOCS Champion, and is committed to maximising road safety for Vulnerable Road Users (VRUs) as well as minimising negative environmental impacts created by motorised road traffic. As such, all vehicles and their drivers servicing construction sites within the borough are bound by the conditions laid out in the CLOCS Standard.

This section requires details of the way in which you intend to manage traffic servicing your site, including your road safety obligations with regard to VRU safety. It is your responsibility to ensure that your principal contractor is fully compliant with the terms laid out in the CLOCS Standard. It is your principal contractor's responsibility to ensure that all contractors and sub-contractors attending site are compliant with the terms laid out in the CLOCS Standard.

Checks of the proposed measures will be carried out by the council to ensure compliance. Please refer to the CLOCS Standard when completing this section. Guidance material which details CLOCS requirements can be accessed here, details of the monitoring process are available here.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Please refer to the CLOCS Overview and Monitoring Overview documents referenced above which give a breakdown of requirements.

CLOCS Considerations

17. Name of Principal contractor:

Not yet Known

18. Please submit the proposed method for checking operational, vehicle and driver compliance with the CLOCS Standard throughout the duration of the contract (please refer to our CLOCS Overview document and Q18 example response).

To be advised by the contractor

19. Please confirm that you as the client/developer and your principal contractor have read and understood the CLOCS Standard and included it in your contracts. Please sign-up to join the CLOCS Community to receive up to date information on the standard by expressing an interest online.

I confirm that I have included the requirement to abide by the CLOCS Standard in my contracts to my contractors and suppliers:

The CLOCS standard to be included in future contract.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Site Traffic

Sections below shown in blue directly reference the CLOCS Standard requirements. The CLOCS Standard should be read in conjunction with this section.

20. Traffic routing: *"Clients shall ensure that a suitable, risk assessed vehicle route to the site is specified and that the route is communicated to all contractors and drivers. Clients shall make contractors and any other service suppliers aware that they are to use these routes at all times unless unavoidable diversions occur."* (P19, 3.4.5)

Routes should be carefully considered and risk assessed, taking into account the need to avoid where possible any major cycle routes and trip generators such as schools, offices, public buildings, museums etc. Where appropriate, on routes that use high risk junctions (i.e. those that attract high volumes of cycling traffic) installing Trixi mirrors to aid driver visibility should be considered.

Consideration should also be given to weight restrictions, low bridges and cumulative impacts of construction (including neighbouring construction sites) on the public highway network. The route(s) to and from the site should be suitable for the size of vehicles that are to be used.

a. Please indicate routes on a drawing or diagram showing the public highway network in the vicinity of the site including details of links to the Transport for London Road Network (TLRN).

To be completed by the contractor

b. Please confirm how contractors, delivery companies and visitors will be made aware of the route (to and from the site) and of any on-site restrictions, prior to undertaking journeys.

To be completed by the contractor

21. Control of site traffic, particularly at peak hours: "*Clients shall consider other options to plan and control vehicles and reduce peak hour deliveries"* (P20, 3.4.6)

Construction vehicle movements are generally acceptable between 9.30am to 4.30pm on weekdays and between 8.00am and 1.00pm on Saturdays). If there is a school in the vicinity of the site or on the proposed access and/or egress routes, then deliveries must be restricted to between 9.30am and 3pm on weekdays during term time. (Refer to the *Guide for Contractors Working in Camden*).

A delivery plan should ensure that deliveries arrive at the correct part of site at the correct time. Instructions explaining such a plan should be sent to all suppliers and contractors**.** Consideration should be given to the location of any necessary holding areas for large sites with high volumes of traffic. Vehicles must not wait or circulate on the public highway. Whilst deliveries should be given set times to arrive, dwell and depart, no undue time pressures should be placed upon the driver at any time.

a. Please provide details of the typical sizes of all vehicles and the approximate frequency and times of day when they will need access to the site, for each phase of construction. You should estimate the average daily number of vehicles during each major phase of the work, including their dwell time at the site. High numbers of vehicles per day and/or long dwell times may require vehicle holding procedures.

To be completed by the contractor

b. Please provide details of other developments in the local area or on the route.

To be completed by the contractor

c. Please outline the system that is to be used to ensure that the correct vehicle attends the correct part of site at the correct time.

To be completed by the contractor

d. Please identify the locations of any off-site holding areas (an appropriate location outside the borough may need to be identified, particularly if a large number of delivery vehicles are expected) and any measures that will be taken to ensure the prompt admission of vehicles to site in light of time required for any vehicle/driver compliance checks. Please refer to question 24 if any parking bay suspensions will be required for the holding area.

To be completed by the contractor

e. Please provide details of any other measures designed to reduce the impact of associated traffic (such as the use of construction material consolidation centres).

To be completed by the contractor

22. Site access and egress: *"Clients shall ensure that access to and egress from the site is appropriately managed, clearly marked, understood and clear of obstacles."* (P18, 3.4.3)

Vehicles entering and leaving the site should be carefully managed, using gates that are clearly marked and free from obstacles. Traffic Marshalls must ensure the safe passage of pedestrians, cyclists and other traffic when vehicles are entering and leaving site, particularly if reversing.

a. Please detail the proposed access and egress routes to and from the site

To be completed by the contractor

b. Please describe how the access and egress arrangements for construction vehicles will be managed.

To be completed by the contractor

c. Please provide swept path drawings for any tight manoeuvres on vehicle routes to and from the site including proposed access and egress arrangements at the site boundary (if necessary).

To be completed by the contractor

d. Provision of wheel washing facilities should be considered if necessary. If so, please provide details of how this will be managed and any run-off controlled.

To be completed by the contractor

23. Vehicle loading and unloading: *"Clients shall ensure that vehicles are loaded and unloaded on-site as far as is practicable."* (P19, 3.4.4)

If this is not possible, Traffic Marshalls must ensure the safe passage of pedestrians, cyclists and motor traffic in the street when vehicles are being loaded or unloaded.

Please provide details of the parking and loading arrangements for construction vehicles with regard to servicing and deliveries associated with the site (e.g. delivery of materials and plant, removal of excavated material). This is required as a scaled site plan, showing all points of access and where materials, skips and plant will be stored, and how vehicles will access and egress the site. If loading is to take place off site, please identify where this is due to take place and outline the measures you will take to ensure that loading/unloading is carried out safely. Please outline in question 24 if any parking bay suspensions will be required.

To be completed by the contractor

Highway interventions

Please note that Temporary Traffic Orders (TTOs) and hoarding/scaffolding licenses may be applied for prior to CMP submission but won't be granted until the CMP is signed-off.

- **24. Parking bay suspensions and temporary traffic orders**

Please note, parking bay suspensions should only be requested where absolutely necessary. Parking bay suspensions are permitted for a maximum of 6 months, requirement of exclusive access to a bay for longer than 6 months you will be required to obtain Temporary Traffic Order (TTO) for which there is a separate cost.

Please provide details of any proposed parking bay suspensions and TTO's which would be required to facilitate construction. **Building materials and equipment must not cause obstructions on the highway as per your Considerate Contractors obligations unless the requisite permissions are secured.**

Information regarding parking suspensions can be found here.

To be completed by the contractor

25. Scaled drawings of highway works

Please note that use of the public highway for storage, site accommodation or welfare facilities is at the discretion of the Council and is generally not permitted. If you propose such use you must supply full justification, setting out why it is impossible to allocate space on-site. You must submit a detailed (to-scale) plan showing the impact on the public highway that includes the extent of any hoarding, pedestrian routes, parking bay suspensions and remaining road width for vehicle movements. We prefer not to close footways but if this is unavoidable, you should submit a scaled plan of the proposed diversion route showing key dimensions.

- a. Please provide accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses).

To be completed by the contractor

b. Please provide details of all safety signage, barriers and accessibility measures such as ramps and lighting etc.

To be completed by the contractor

26. Diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period (alternatively a plan may be submitted).

To be completed by the contractor

27. VRU and pedestrian diversions, scaffolding and hoarding

Pedestrians and/or cyclist safety must be maintained if diversions are put in place. Vulnerable footway users should also be considered. These include wheelchair users, the elderly, those with walking difficulties, young children, those with prams, the blind and partially sighted. Appropriate ramping must be used if cables, hoses, etc. are run across the footway.

Any work above ground floor level may require a covered walkway adjacent to the site. A licence must be obtained for scaffolding and gantries. The adjoining public highway must be kept clean and free from obstructions. Lighting and signage should be used on temporary structures/skips/hoardings etc.

A secure hoarding will generally be required at the site boundary with a lockable access.

a. Please provide details describing how pedestrian and cyclist safety will be maintained, including any proposed alternative routes (if necessary), and any Traffic Marshall arrangements.

To be completed by the contractor

b. Please provide details of any temporary structures which would overhang the public highway (e.g. scaffolding, gantries, cranes etc.) and details of hoarding requirements or any other occupation of the public highway.

To be completed by the contractor

SYMBOL IS FOR INTERNAL USE

Environment

To answer these sections please refer to the relevant sections of **Camden's Minimum Requirements for Building Construction (CMRBC).**

28. Please list all noisy operations and the construction method used, and provide details of the times that each of these are due to be carried out.

To be completed by the contractor

29. Please confirm when the most recent noise survey was carried out (before any works were carried out) and provide a copy. If a noise survey has not taken place please indicate the date (before any works are being carried out) that the noise survey will be taking place, and agree to provide a copy.

To be completed by the contractor

30. Please provide predictions for noise and vibration levels throughout the proposed works.

To be completed by the contractor

31. Please provide details describing mitigation measures to be incorporated during the construction/demolition works to prevent noise and vibration disturbances from the

activities on the site, including the actions to be taken in cases where these exceed the predicted levels.

To be completed by the contractor

32. Please provide evidence that staff have been trained on BS 5228:2009

To be completed by the contractor

33. Please provide details on how dust nuisance arising from dusty activities, on site, will be prevented.

To be completed by the contractor

34. Please provide details describing how any significant amounts of dirt or dust that may be spread onto the public highway will be prevented and/or cleaned.

To be completed by the contractor

35. Please provide details describing arrangements for monitoring of noise, vibration and dust levels.

To be completed by the contractor

36. Please confirm that a Risk Assessment has been undertaken at planning application stage in line with the GLA policy. The Control of Dust and Emissions During Demolition and Construction 2104 (SPG), that the risk level that has been identified, and that the appropriate measures within the GLA mitigation measures checklist have been applied. Please attach the risk assessment and mitigation checklist as an appendix.

To be completed by the contractor

37. Please confirm that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of risk identified in question 36 have been addressed by completing the GLA mitigation measures checklist.

To be completed by the contractor

38. If the site is a 'High Risk Site', 4 real time dust monitors will be required. If the site is a 'Medium Risk Site', 2 real time dust monitors will be required. The risk assessment must take account of proximity to sensitive receptors (e.g. schools, care homes etc), as detailed in the SPG. Please confirm the location, number and specification of the monitors in line with the SPG and confirm that these will be installed 3 months prior to the commencement of works, and that real time data and quarterly reports will be provided to the Council detailing any exceedances of the threshold and measures that were implemented to address these.

To be completed by the contractor

39. Please provide details about how rodents, including rats, will be prevented from spreading out from the site. You are required to provide information about site inspections carried out and present copies of receipts (if work undertaken).

To be completed by the contractor

40. Please confirm when an asbestos survey was carried out at the site and include the key findings.

41. Complaints often arise from the conduct of builders in an area. Please confirm steps being taken to minimise this e.g. provision of a suitable smoking area, tackling bad language and unnecessary shouting.

To be completed by the contractor

42. If you will be using non-road mobile machinery (NRMM) on site with net power between 37kW and 560kW it will be required to meet the standards set out below. The standards are applicable to both variable and constant speed engines and apply for both PM and NOx emissions.

From 1st September 2015

(i) Major Development Sites – NRMM used on the site of any major development will be required to meet Stage IIIA of EU Directive 97/68/EC

(ii) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IIIB of EU Directive 97/68/EC

From 1st September 2020

(iii) Any development site - NRMM used on any site within Greater London will be required to meet Stage IIIB of EU Directive 97/68/EC

(iv) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IV of EU Directive 97/68/EC

Please provide evidence demonstrating the above requirements will be met by answering the following questions:

a) Construction time period (mm/yy - mm/yy):

b) Is the development within the CAZ? (Y/N):

c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above? (Y/N):

d) Please provide evidence to demonstrate that all relevant machinery will be registered on the NRMM Register, including the site name under which it has been registered:

e) Please confirm that an inventory of all NRMM will be kept on site and that all machinery will be regularly serviced and service logs kept on site for inspection:

f) Please confirm that records will be kept on site which details proof of emission limits, including legible photographs of individual engine plates for all equipment, and that this documentation will be made available to local authority officers as required:

SYMBOL IS FOR INTERNAL USE

Agreement

The agreed contents of this Construction Management Plan must be complied with unless otherwise agreed in writing by the Council. This may require the CMP to be revised by the Developer and reapproved by the Council. The project manager shall work with the Council to review this Construction Management Plan if problems arise in relation to the construction of the development. Any future revised plan must be approved by the Council in writing and complied with thereafter.

It should be noted that any agreed Construction Management Plan does not prejudice further agreements that may be required such as road closures or hoarding licences.

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately 3 months from completion.

Signed: .....  .....

Date: 29 December 2016

Print Name: Marc Stone

Position: Partner

Please submit to: planningobligations@camden.gov.uk

End of form.

{In Archive} 13 Downshire Hill

Andrew Neale to: Parisa Gajjar
Cc: Tessa Craig, Keith Gabriel, Bruce Leggett, Norman Train

09/11/2016 09:41

History: This message has been forwarded.

Archive: This message is being viewed in an archive.

1 attachment

13 Downshire Hill - 300 - Existing Section AA.pdf

Dear Parisa

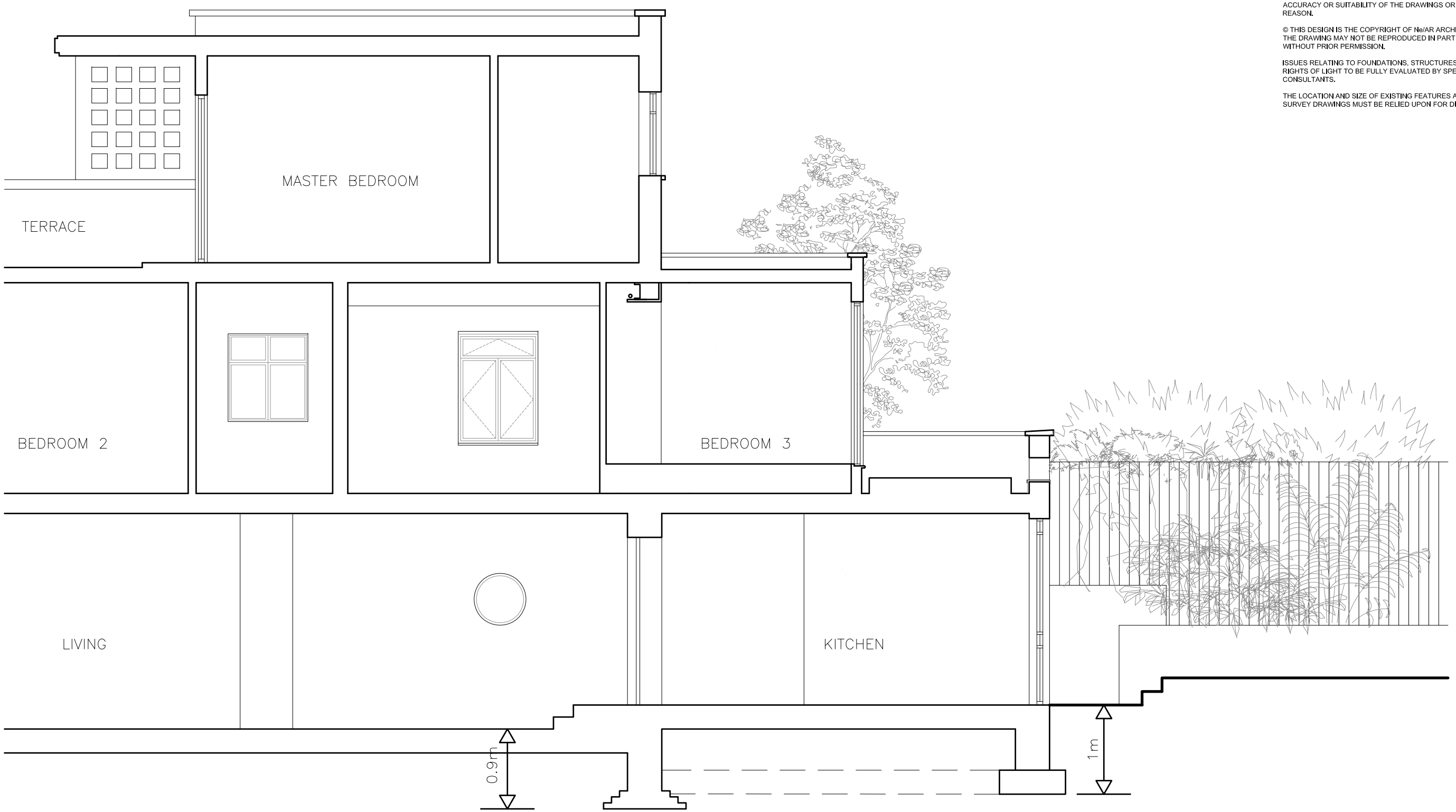
Please see attached drawing showing the known existing foundations established at the time of the construction of the rear extension.

Regards

Andrew Neale

Ne/AR Architects

07771550082



ORIGINAL/EXISTING FOUNDATION TO HOUSE – DEPTH NOT LESS THAN 900mm BELOW GROUND

FOUNDATION BUILT IN ACCORDANCE WITH CAMDEN BUILDING CONTROL REQUIREMENTS OF MIN. 1m DEPTH TO FLANK & END WALLS OF EXTENSION

0.50m 0.00m 1.0m 2.0m 3.0m

13 DOWNSHIRE HILL

Ne/AR Architects
· LONDON ·

EXISTING SECTION AA

DATE : JULY 2016
SCALE : 1:50 @ A3

0116/DH/300

13 Downshire Hill. Basement and Extension Works

Outline Construction Programme

Phase 1

Piling and basement box, including ground floor completed as a shell with temporary covers to basement openings.

Phase 2

Ground floor extension and overall fit out .

It is envisaged the overall works will take approximately 8 -9 months in total with with phase 1 taking circa 4-5 months and phase 2 taking circa 3 months.

Phase 1

Site Set Up etc.	2 weeks
Groundworks & Ground Floor.	16-18 weeks

(8 weeks underpinning and piling ,circa 4 weeks excavation and circa 4 weeks concrete box)

Phase 2

Rear Extension Envelope	4 weeks
Fit Out to ground and basement	10 weeks
Total.	32- 36 weeks

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