CampbellReith
consulting engineers

36 Redington Road, London, NW3 7RT

Basement Impact Assessment Audit

For

London Borough of Camden

Project Number: 12066-41
Revision: D2

December 2015

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Project Partner	E M Brown, BSc MSc CGeol FGS
Project Number	12066-41
Project Name	36 Redington Road
Planning Reference	2015/3004/P

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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 36 Redington Road, London, NW3 7RT (planning reference 2015/3004/P). The basement is considered to fall within Category C 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. It has been confirmed that the BIA has been prepared by suitably qualified individuals. The geotechnical experience of the Structural Engineer remains to be confirmed.

1.5. The BIA has confirmed that the proposed basement will be founded within the Claygate Beds a short distance above the London Clay. The structure is to be supported on piled foundations with compressible material beneath the slab to accommodate heave.

1.6. The proposed basement will not undermine the adjacent property, No 38 Redington Road, as it has a two storey basement. It is reported that No 38 is structurally independent of No 36 and founded on piles in which case it will not be affected by the construction of the adjacent basement. However, no evidence of this has been seen by CampbellReith.

1.7. Information is required to confirm that the structure of No 38 is able to accommodate the temporary loads from the RC wall until it cures, or a methodology provided to limit any such loads. Details of the separation between the two properties are required.

1.8. It is likely that the groundwater table will be encountered during basement construction and details of proposed measures to avoid the loss of fine soils into the excavation are required.

1.9. The original SER proposed a cantilever retaining wall whilst the ground movement and building damage assessment assumed a stiffly propped wall. A revised GMA has been submitted which confirms that the damage to No 7 Redington Gardens could be Burland Category 2 to 3 if a cantilever wall is adopted. The revised SER makes reference to temporary propping in the initial stage of construction. However, this is not carried through subsequent stages. There is also confusion over raking and flying props.

1.10. It is accepted that there will be no significant adverse impact on the hydrogeology. Whilst it has been suggested that a former tributary of the River Westbourne crosses the site, reference to the source data indicates that it ran beneath Redington Gardens.

1.11. It is accepted that in general the surrounding slopes are less than 7^{o} and that there will be no significant adverse impacts from or to the construction of the basement.

1.12. None of the documents seen addresses two potential impacts that were identified by the BIA, namely risk of flooding and the likely increase in surface water flows to the sewer network.

1.13. A proposal for a condition survey of No 38 Redington Road is included in the SER. However, this should be extended to No 7 Redington Gardens. Proposals for the monitoring of potentially affected properties should be provided.

1.14. Queries and requirements for further information/clarification are summarised in Appendix 2.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 11/08/2015 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 36 Redington Road, London, NW3 7RT.

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; and,

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 *"Erection of 3-storey plus basement 5-bed dwelling including car lift, front and rear lightwell and associated landscaping following demolition of existing dwelling."*

The Audit Instruction confirmed that the property is not listed, nor does it neighbour listed buildings.

2.6. CampbellReith accessed LBC's Planning Portal on 11/09/2015 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) – Stages 1 & 2
- Basement Impact Assessment Report (BIA) – Stages 3 & 4
- Structural Engineering Report/Method Statement (SER)
- Construction Method Statement (CMS)
- Planning Application Drawings consisting of
- Location Plan
- Existing Plans
- Proposed Plans and Sections
- Planning Consultation Responses

2.7. Subsequent to the issue of the initial audit, further information was submitted on behalf of the applicant on 27 October 2015. This comprised a letter and revised ground movement/building damage assessment by Southern Testing and a revised Structural Engineering Report/Method Statement prepared by Zussman Bear.

2.8. Further information was also provided to CampbellReith by a neighbour to 36 Redington Road. This comprised their original objection letter, dated 3 August 2015, with reviews of the BIA by esi and Key Geosolutions Ltd.

2.9. An instruction to update the audit report in light of the revised information was received on 5 November 2015. Both the revised BIA information and the neighbour's submissions are presented in Appendix 3.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	Chartered Geologist and Chartered Engineer identified in preparation of BIA. SER prepared by Chartered Structural Engineer – no evidence of experience in engineering geology provided.
Is data required by Cl.233 of the GSD presented?	Yes	
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	BIA Stages 3 & 4
Are suitable plan/maps included?	Yes	
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Stages 1 & 2
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Stages 1 & 2
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Stages 1 & 2
Is a conceptual model presented?	Yes	BIA Stages 3 & 4

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Refer to BIA audit section 4.7
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Refer to BIA audit section 4.7
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Assessment required of increased flows off site required and potential surface water flooding.
Is factual ground investigation data provided?	Yes	BIA Stages 3 & 4
Is monitoring data presented?	Yes	BIA Stages 3 & 4
Is the ground investigation informed by a desk study?	Yes	BIA Stages 1 & 2
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	Yes	
Does the geotechnical interpretation include information on retaining wall design?	Yes	Limited generic interpretation
Are reports on other investigations required by screening and scoping presented?	No	There is the need for a Flood Risk Assessment and confirmation of the capacity of the sewer network to receive increased flows.
Are baseline conditions described, based on the GSD?	Yes	
Do the base line conditions consider adjacent or nearby basements?	Yes	

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	
Are estimates of ground movement and structural impact presented?	Yes	Supplementary GMA provided for cantilever retaining walls.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	No	Surface water flows, surface water flooding not addressed.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	
Has the need for monitoring during construction been considered?	No	
Have the residual (after mitigation) impacts been clearly identified?	No	Surface water flows, surface water flooding not addressed.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	Clarification required with respect to propping and construction of RC wall against No 38 Redington Road.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	No	Not demonstrated
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Not demonstrated
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	Yes	Revised SER refers to temporary propping to restrict ground movements, although further clarification required. Revised GMA suggests Category 2 – 3 damage without propping.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1. The Basement Impact Assessment (BIA) has been carried out by a well-known firm of geotechnical consultants, ST Consult. Supplementary information confirmed that both a Chartered Geologist and a Chartered Engineer were involved in the preparation of the report.

4.2. The Structural Engineering Report (SER) has been prepared by Zussman Bear. The author is a Chartered Structural Engineer. No proof of expertise in engineering geology has been provided as required by CPG4.

4.3. The LBC Instruction to proceed with the audit identified that neither the property, not any surrounding properties, was a listed building. It is understood that No 36 Redington Road is part of a former semi-detached property and that its neighbour, No 38 Redington Road, was recently redeveloped. It is further understood that No 38 is structurally independent of No 36, that it has a two storey basement, and has piled foundations and basement retaining walls. Whilst it was possible to verify the basement depth by reference to LBC's website, it was not possible to confirm the nature of the foundations and retaining walls. The next closest property is 7 Redington Gardens which is approximately 5m from the site. The occupants have confirmed that a small basement exists beneath the property.

4.4. The proposed basement consists of a single storey construction, approximately 3.50m deep, with three sides formed by a contiguous piled retaining wall. The fourth side, adjacent to No 38, is to comprise a reinforced concrete wall supported on a piled slab. The structural loads from the superstructure will be supported on a piled slab with a compressible medium beneath to accommodate heave. Details were requested of how the transfer of load from the RC wall on to No 38 Redington Gardens until the concrete has cured will be avoided, or confirmation that the structure of No 38 is capable of accommodating those loads. Additionally details of the proposed separator/slip membrane between the two properties were requested. These queries remain to be addressed.

4.5. The BIA has identified that the sequence of strata at the site comprises Made Ground to approximately 0.70m depth, underlain by the Claygate Beds to approximately 4.50m depth, in turn underlain by the London Clay. Standing groundwater levels were recorded at approximately 1m below ground level.

4.6. The BIA (Stages 1 & 2) identified five areas that required further investigation, namely:

- The presence of a secondary aquifer beneath the site and the possibility that the proposed and neighbouring basements could have a damming effect.
- The potential for ground movements to affect 38 Redington Road and 7 Redington Gardens.

- The potential for ground movements in relation to the highway.
- The potential for an increase in surface water flows off site.
- The potential for surface water flooding from the neighbouring highway.

4.7. Concerns raised by neighbours have included questions on the screening exercise with respect to slopes in the surrounding area and the course of a tributary of the former River Westbourne. Reference to the figures in the Over Arup Guidance on Subterranean Development and other relevant sources of information, such as *Lost Rivers of London* by N J Barton, support ST's conclusion that whilst two former tributaries of the Westbourne lie close to the site, neither is shown to cross the site. Similarly, although there are small localised areas where slope angles exceed 7^{o}, by reference to the Arup data, it is accepted that slopes in the main are less than 7^{o}.

4.8. The presence of the aquifer and shallow groundwater table are considered in Stages 3 and 4 of the BIA and modelling has been carried out to determine the possible damming effect of the basements at 36 and 38 Redington Road. It is accepted that due to the low hydraulic gradient and the low permeability of the Claygate Beds, the change to groundwater levels will be negligible.

4.9. Stages 3 and 4 of the BIA also consider likely ground movements at 7 Redington Gardens arising from the construction of the basement. The approach, which follows CIRIA C580 and also includes a consideration of heave, was accepted, as were the conclusions (Burland Category 0 damage). However, it was noted that the assumed construction methodology comprised a stiff retaining wall with stiff high level props. The original SER referred to the retaining wall being designed as a cantilever; this would result in greater ground movements. Southern Testing submitted a revised GMA in which they considered a cantilever retaining wall. The predicted ground movements suggest damage in Categories 2 and 3 (slight and moderate) for 7 Redington Gardens. CPG4 requires mitigation measures where predicted damage exceeds Category 1 (very slight). It is noted that No 7 Redington Gardens is reported to contain a small area of basement and that the GMA predicts ground movements at the ground surface. However, it is considered that this is conservative as deeper foundations are generally less affected by ground movement.

4.10. The revised Zussman Bear SER makes reference to propping in the temporary case to control ground movements and restrict damage. However, there is confusion in the document over raking and flying shores. Additionally, temporary props are referred to only in Stage 2 of the construction sequence, with the remainder of the stages continuing to refer to cantilever walls.

4.11. The BIA does not consider No 38 Redington Road, or the adjacent highway. The SER reports that No 38 is structurally independent of No 36 and indicates that it is supported on piled foundations. The SER states that a condition survey will be undertaken. In light of the deep basement to No 38, if it can be confirmed that No 38 does not rely on No 36 for stability and it

is on piled foundations, it is accepted that it is unlikely to be adversely affected by the construction of a basement to No 36. Despite being recommended in the BIA, no monitoring of either 38 Redington Road or 7 Redington Gardens is proposed and it is recommended that this is undertaken together with a condition survey of the Redington Gardens property. Details should be provided.

4.12. The SER states that the works will have no effect on any roadway. However, the revised ground movement assessment has confirmed the likely need for remedial works to the highway if a cantilever retaining wall is adopted.

4.13. The SER describes the basement being formed inside a contiguous retaining wall and states that the site investigation confirms "the presence of groundwater will not be very significant". Whilst the BIA concurs that pumping from sumps will be sufficient to deal with water ingress, it also warns that, due to the high water table, this method carries the risk of the migration of sandy materials into the excavation. Should that happen, there is the risk of significant settlement outside the excavation. The BIA recommends a secant wall, or mitigation measures such as sprayed concrete should a contiguous piled wall be adopted. This is not addressed in the SER.

4.14. None of the documents seen by CampbellReith address the potential risk of flooding or the likely increase in surface water flows to the sewer network. A site specific flood risk assessment is recommended in the BIA.

4.15. The CMS prepared by Archtype Ltd deals mainly with minimising the impact of construction in terms of nuisance. It is noted that it is prepared for Abbey Properties Ltd whilst the BIA was prepared for Mill Hill Properties Ltd. It is also noted that the CMS incorrectly refers to the site being located on Stuart Avenue. Archtype's drawings, together with the SER, incorrectly give the postcode as N4 2ED. These should be rectified.

4.16. As noted above, queries on the BIA and the development have been raised by two neighbours and these are detailed and addressed in Appendix 1.

5.0 CONCLUSIONS

5.1. It has been confirmed that the BIA has been prepared by suitably qualified individuals. The geotechnical experience of the Structural Engineer remains to be confirmed.

5.2. The BIA has confirmed that the proposed basement will be founded within the Claygate Beds a short distance above the London Clay. The structure is to be supported on piled foundations with compressible material beneath the slab to accommodate heave.

5.3. The proposed basement will not undermine the adjacent property, No 38 Redington Road, as it has a two storey basement. It is reported that No 38 is structurally independent of No 36 and founded on piles in which case it will not be affected by the construction of the adjacent basement. However, no evidence of this has been seen by CampbellReith.

5.4. Information is required to confirm that the structure of No 38 is able to accommodate the temporary loads from the RC wall until it cures, or a methodology provided to limit any such loads. Details of the separation between the two properties are required.

5.5. It is likely that the groundwater table will be encountered during basement construction and details of proposed measures to avoid the loss of fine soils into the excavation are required.

5.6. The original SER proposed a cantilever retaining wall whilst the ground movement and building damage assessment assumed a stiffly propped wall. A revised GMA has been submitted which confirms that the damage to No 7 Redington Gardens could be Burland Category 2 to 3 if a cantilever wall is adopted. The revised SER makes reference to temporary propping in the initial stage of construction. However, this is not carried through subsequent stages. There is also confusion over raking and flying props.

5.7. It is accepted that there will be no significant adverse impact on the hydrogeology. Whilst it has been suggested that a former tributary of the River Westbourne crosses the site, reference to the source data indicates that it ran beneath Redington Gardens.

5.8. It is accepted that in general the surrounding slopes are less than 7^{o} and that there will be no significant adverse impacts from or to the construction of the basement.

5.9. None of the documents seen addresses two potential impacts that were identified by the BIA, namely risk of flooding and the likely increase in surface water flows to the sewer network.

5.10. A proposal for a condition survey of No 38 Redington Road is included in the SER. However, this should be extended to No 7 Redington Gardens. Proposals for the monitoring of potentially affected properties should be provided.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Heath & Hampstead Society	PO Box 38214, London NW3 1XD	18/07/2015	BIA not complete. Anticipated ground movements could damage neighbouring structure	See sections 4.9 and 4.10
Beckman	7 Redington Gardens, London NW3 7RU	03/08/2015	Slope stability and hydrogeology incorrectly assessed. Risk of flooding not addressed.	See sections 4.7 – 4.11, 4.13 and 4.14 Report by esi suggests that further groundwater monitoring is required. However, presence of shallow water (c1m below ground level) is acknowledged in temporary and permanent condition. Further clarification required with respect to loss of fines into basement excavation.

Appendix 2: Audit Query Tracker

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Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Qualifications	No evidence of experience in engineering geology of structural engineer.	Open	
2	Stability	Structural form of No 38 Redington Road, including foundations, to be confirmed.	Open	
3	Stability	Ground movement assessment for 7 Redington Gardens to be revised for proposed construction methodology. Need to GMAs for 38 Redington Gardens and highway to be reviewed.	Revised GMA provided. Revised SER makes reference to propping, although further clarification required.	
4	Stability	Construction methodology for RC wall adjacent to No 38 Redington Road required.	Open	
5	Stability	Confirmation of movement monitoring proposals and condition surveys for potentially affected structures required.	Open	
6	Stability	Confirmation of measures to prevent soil and water ingress into excavation.	Open	
7	Surface water	Risk of flooding identified in BIA – not addressed	Open	
8	Surface water	Potential for increased surface water flows off site – not addressed.	Open	

Appendix 3: Supplementary Supporting Documents

Appendix 3a:

Supplementary information provided by applicant

FW: 36 Redington Road - 2015/3004/P

Peres Da Costa , David to: LizBrown@campbellreith.com 27/10/2015 15:02

2 attachments

Campbell Reith Audit Reply Letter.pdf 2. ZB - IMPACT ASESSMENT - B.PDF

Dear Liz,

The agent has provided the engineers' formal reply to the points raised in the audit (see attached).

> *I herewith attach the Engineers' formal reply to the points raised by Campell Reth . They have rerun the GMA for an unpropped wall- results attached as an addendum to their stage 3 & 4 report. Our structure engineer has also added temporary propping to the head of the piles.*
>
> *I should be pleased if you would forward their comments to Campell Reth so that we can expedite the process whilst we are preparing the revised proposal, as it will only concerns the roof and will not have any impact on their assessment of the report. I am conscious of the limited time left to the end of November deadline and hopefully Campell Reth can respond quickly this time round.*

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 16:50
To: Peres Da Costa, David
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David

Further to your E-mail and our subsequent telephone conversation, I am having another attempt at reducing the bulk of the upper part of the proposed new building and issue them before Ms Bond return to office next week.

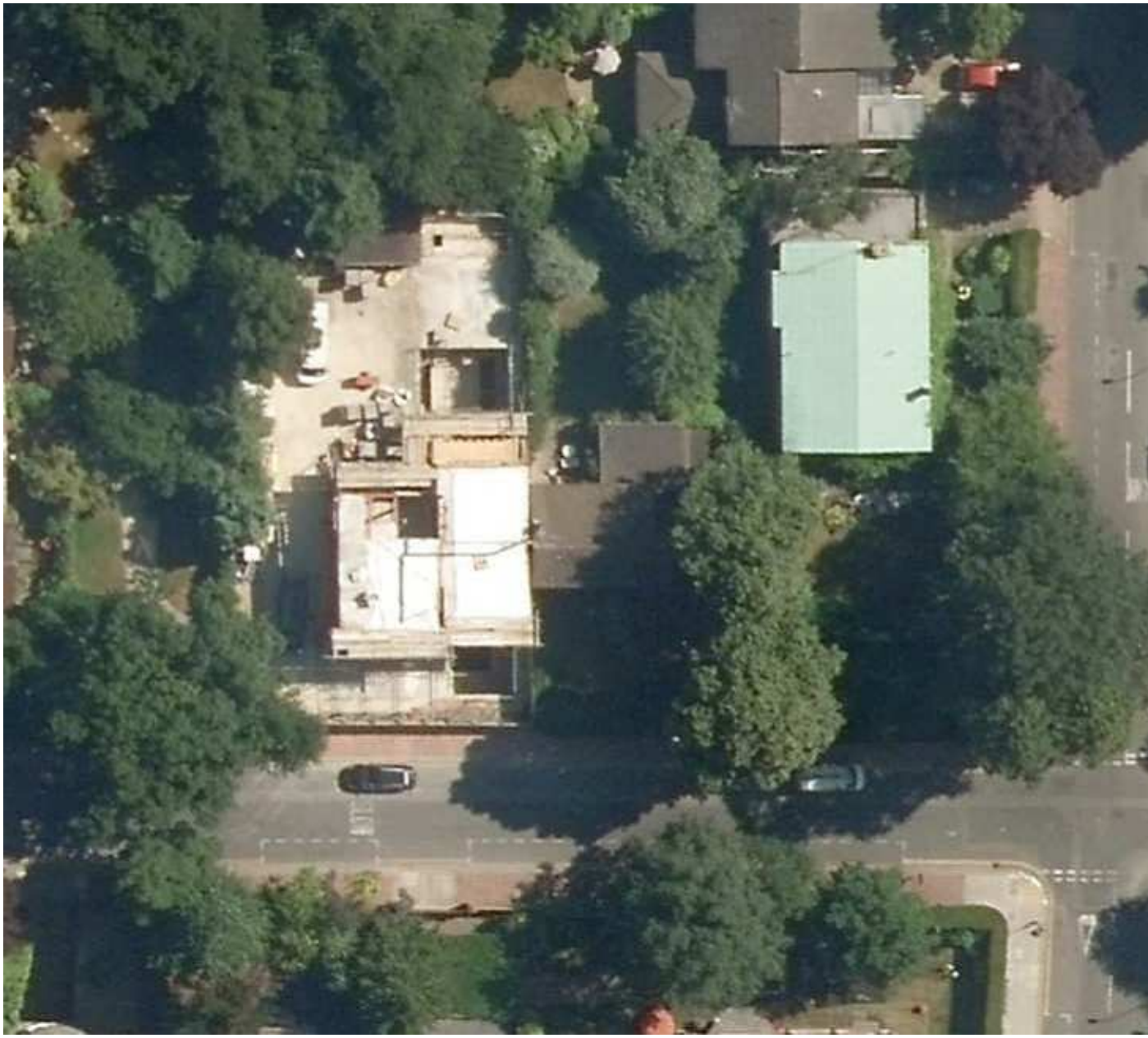
I understand that your main concern is the size of the roof and not so much the basement and ground level. Hence we will remove the mansard roof and revert back to lowered flat roof in our revised scheme. We will try not to exceed the existing building's ridge height.

In the meantime, I herewith attach the Engineers' formal reply to the points raised by Campell Reth . They have rerun the GMA for an unpropped wall- results attached as an addendum to their stage 3 & 4 report. Our structure engineer has also added temporary propping to the head of the piles.

I should be pleased if you would forward their comments to Campell Reth so that we can expedite the process whilst we are preparing the revised proposal, as it will only concerns the roof and will not have any impact on their assessment of the report. I am conscious of the limited time left to the end of November deadline and hopefully Campell Reth can respond quickly this time round.

With regards to the bulk of the building please note the extent of the existing building in relation to the adjoining building, which is longer and encroaching on the boundary line as shown on the aerial picture of the site.

I should have the revised scheme with you within the next few days.



regards

Masoud Parvardin Mphil RIBA

ARCHETYPE

Archetype Associates Ltd
121 Gloucester place
London W1U 6JY
Tel: +44 (0)20 7486 3666

Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 14:43
To: Masoud Parvardin
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The conservation officer is not in the office this week. However, the revised designs do not fully respond to the points raised in my previous email. The proposed house appears excessively bulky both from the street (Redington Road) and from the rear gardens of Redington Gardens.

It is unlikely that the application can be supported without significant revisions. Please call me if you wish to discuss.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 14:22
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

Please find our amended drawings Rev B, as requested.

Masoud Parvardin Mphil RIBA

ARCHETYPE

Archetype Associates Ltd
121 Gloucester place
London W1U 6JY
Tel: +44 (0)20 7486 3666
Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 13:26
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Are you able to send the revised drawings of the elevations in the meantime?

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 11:41
To: Peres Da Costa, David
Cc: Michelle Sweeney
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David,

We have redesigned the upper part of the building in line with the recommendations made by your design officer and the BIA is also amended to incorporate some of the points made by your independent engineers. I am currently waiting for our structure engineer to amend his design before forwarding you the revised package, which is expected either later today or tomorrow.

In the meantime, I have no objection to extend the period for deciding our application until 30th November 2015

Best regards

Masoud Parvardin Mphil RIBA

ARCHETYPE

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London W1U 6JY
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Fax: +44 (0)20 7486 3888
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From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 08:58
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

I don't think I've had a response to the my previous email. Please update me.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Peres Da Costa, David
Sent: 09 October 2015 14:59
To: 'Masoud Parvardin'
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The building appears excessively bulky especially when viewed from the side (south), both from the street (Redington Road) and from the rear gardens of Redington Gardens. According to the approved plans, the neighbouring building, 38 Redington Road is 12.4m deep (front to rear) at ground floor level, 10.75m at 2nd floor level, and 10m at roof level. Whereas your proposal would be 13m at ground, first and roof level. It is also noted that 38 Redington Road has a stepped profile and that the northern part of the property is 9.75m deep (front to rear) above ground floor level.

The neighbouring property (38 Redington Road) was originally approved as a detached property (planning ref: 2003/2685/P granted permission 29/03/2004 and ref: 2006/1733/P granted permission 02/06/2006). The approved plans for the implemented permission 2009/5829/P (dated 29/10/2010) show 36 and 38 abutting at ground floor level but the roof is set back from 36 and the roof is slightly angled away from this property. It is noted that 38 Redington Road has not been built according to the approved plans and there is an ongoing enforcement investigation in to this matter.

The impact of the sizeable depth of your building combined with excessive bulk, presents an overbearing façade as seen from 7 Redington Gardens, so a reduction in this depth is also recommended.

Although you have pulled the roof away from the neighbouring building it still has an uncomfortable relationship with 38 Redington Road. A possible option would be for more separation between the two properties above ground floor level, so that they read as two separate properties. The aim would be to achieve a less bulky appearance of 36 and 38 when they are viewed together and would result in a better relationship. The proposed 1.3m gap between 36 and 7 Redington Gardens should be maintained and the upper part of the property should be reduced in width to allow an appropriate separation between the properties.

The detailed design with pitched roofs is unconvincing and a reversion to a more contemporary approach may be appropriate provided the bulk is significantly reduced. However additional time for consultation on the revised design would be required.

I will be on annual leave next week but if you send any revisions to Catherine.bond@camden.gov.uk, they may be able to provide you with comments (if they have time). **Please copy me into a correspondence**.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 08 October 2015 18:34
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

I have the response from our soil engineer waiting for formal response from our structural engineer before submitting the full package on Monday. I will check the scale bar and send you any amendment necessary with the formal response. It would be good if your design officers comments about the roof could also be incorporated in our amended set.

In the meantime, I noticed a new development further up the road on Redington which is a mixture of old and new style. I wonder if the same design officer was also responsible for that development. Pictures attached for your attention when you meet up with the design officer.

Masoud Parvardin Mphil RIBA

ARCHETYPE

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Fax: +44 (0)20 7486 3888
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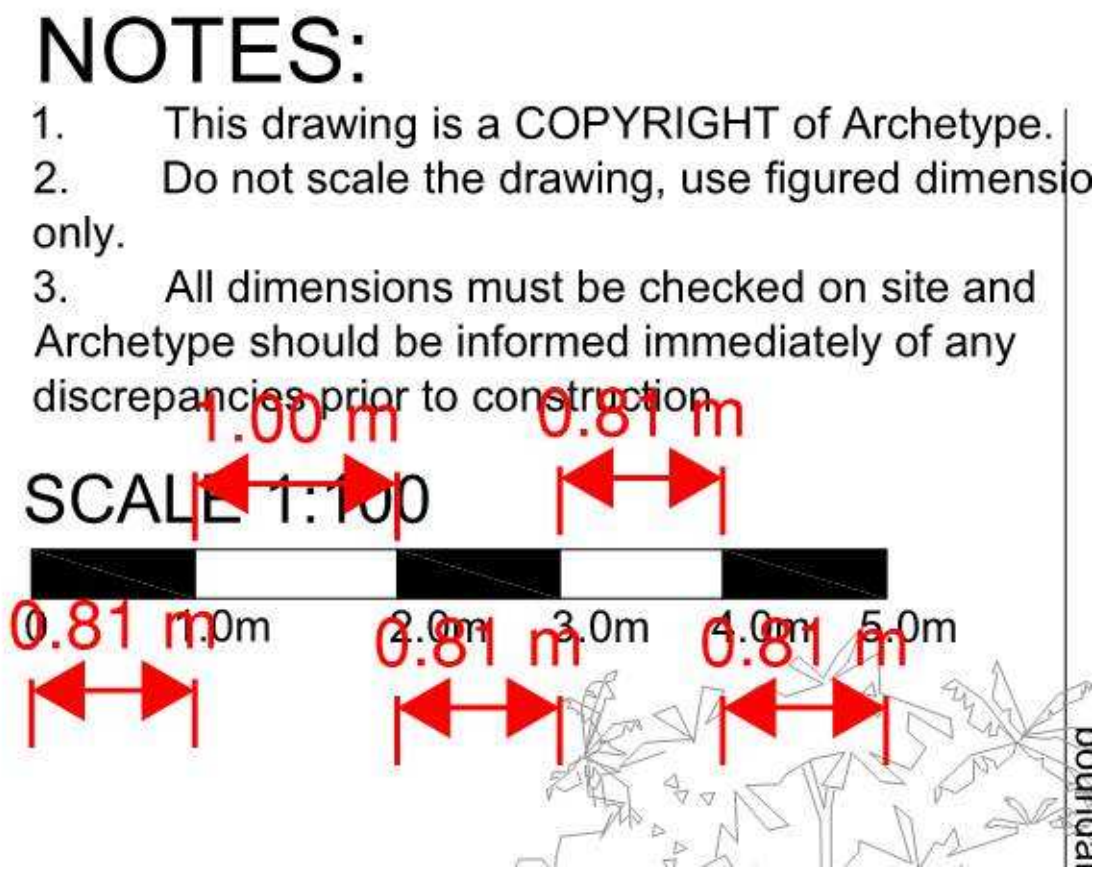
From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 08 October 2015 17:42
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

I notice the scale bar on your drawings is inaccurate. See image below.



Please provide a set of drawings with an accurate scale bar.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 07 October 2015 15:12
To: Peres Da Costa, David
Subject:
Importance: High

Dear David,

Further to our recent discussions, and under the provisions of Article 29 (2) (c) of The Town and Country Planning (Development Management Procedure) (England) Order 2010, on behalf of my client, Mr A Zolf. I confirm that we would be willing to

agree an extension of time with the Local Planning Authority for the determination of the application.

It is my understanding that our agreement to this extension will negate any obligation on the Council to repay the planning application fee after 26 Weeks as set out in Regulation 9A of The Town and Country Planning (Fees for Applications, Deemed Applications, Requests and Site Visits) (England) Regulations 2012.

I agree to extend the period for deciding our application until 30th October 2015. Our engineers have prepared their formal response and will be with you by Friday. I think it would be only reasonable to expect your independent engineer to expedite processing our submission as all the hard work is done and it is only for them to verify the response for a fee.

I would also be pleased if your design officer would comment on our proposed alteration of roof line so that we can make the necessary amendments to the rest of the drawings.

regards

Masoud Parvardin Mphil RIBA

ARCHETYPE

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121 Gloucester place
London W1U 6JY
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Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

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This e-mail may contain information which is confidential, legally privileged and/or copyright protected. This e- mail is intended for the addressee only. If you receive this in error, please contact the sender and delete the material from your computer.

RE: FW: 36 Redington Road - 2015/3004/P

Peres Da Costa , David to: LizBrown@campbellreith.com 05/11/2015 15:21

Cc: "camdenaudit@campbellreith.com", "PaulDaniels@campbellreith.com"

2 attachments


image002.png

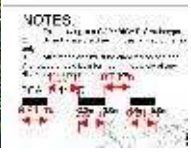

image006.jpg

Hi Liz

The agent has very reluctantly agreed to the additional fee.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

You can sign up to our new and improved planning e-alerts to let you know about new planning applications, decisions and appeals.

From: LizBrown@campbellreith.com [mailto:LizBrown@campbellreith.com]
Sent: 30 October 2015 13:36
To: Peres Da Costa, David
Cc: Sexton, Gavin; camdenaudit@campbellreith.com; PaulDaniels@campbellreith.com
Subject: Re: FW: 36 Redington Road - 2015/3004/P

David

Thank you for your email. Having re-read our audit report and looked briefly through the information presented, I would anticipate that it will take around a day and a half to review the revised information and update our report. There is also the report submitted by the neighbour to consider. Our fee will therefore be £1350.

If you can confirm that is acceptable to the applicant, we shall let you know when we can complete our review. Can I ask you to copy in my colleague Paul Daniels? His email address is above.

Regards.
Elizabeth Brown
Partner

CampbellReith
consulting engineers
Friars Bridge Court,
41-45 Blackfriars Road,
London
SE1 8NZ

Tel +44 (0)20 7340 1700
www.campbellreith.com

From: "Peres Da Costa, David" <David.PeresDaCosta@Camden.gov.uk>
To: "LizBrown@campbellreith.com" <LizBrown@campbellreith.com>
Date: 27/10/2015 15:02
Subject: FW: 36 Redington Road - 2015/3004/P

Dear Liz,

The agent has provided the engineers' formal reply to the points raised in the audit (see attached).

I herewith attach the Engineers' formal reply to the points raised by Campell Reth . They have rerun the GMA for an unpropped wall- results attached as an addendum to their stage 3 & 4 report. Our structure engineer has also added temporary propping to the head of the piles.

I should be pleased if you would forward their comments to Campell Reth so that we can expedite the process whilst we are preparing the revised proposal, as it will only concerns the roof and will not have any impact on their assessment of the report. I am conscious of the limited time left to the end of November deadline and hopefully Campell Reth can respond quickly this time round.

Kind regards

David

David Peres da Costa
Senior Planning Officer

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You can sign up to our new and improved planning e-alerts to let you know about new planning applications, decisions and appeals.

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 16:50
To: Peres Da Costa, David
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Importance: High

Dear David

Further to your E-mail and our subsequent telephone conversation, I am having another attempt at reducing the bulk of the upper part of the proposed new building and issue them before Ms Bond return to office next week.

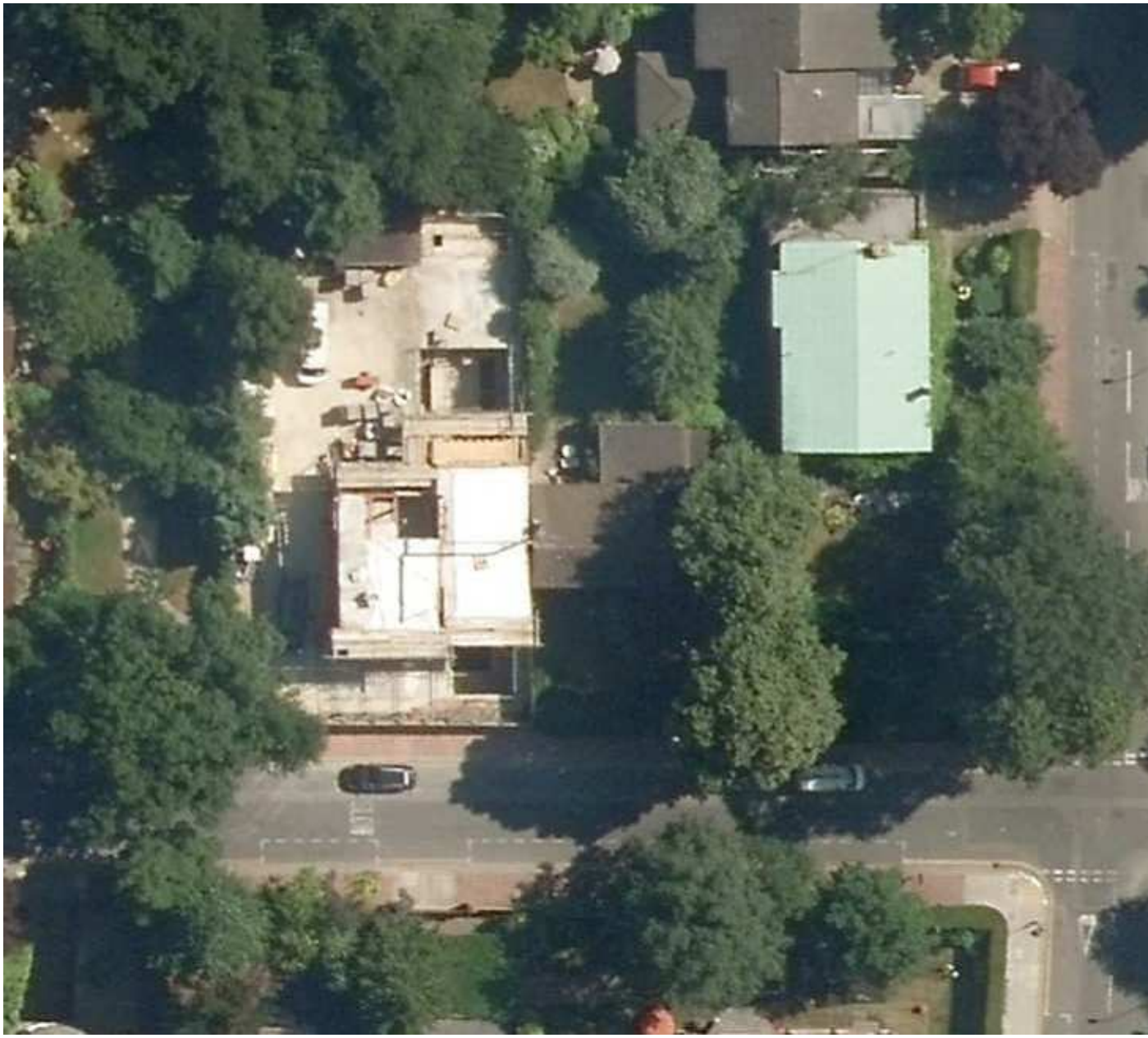
I understand that your main concern is the size of the roof and not so much the basement and ground level . Hence we will remove the mansard roof and revert back to lowered flat roof in our revised scheme. We will try not to exceed the existing building's ridge height.

In the meantime, I herewith attach the Engineers' formal reply to the points raised by Campell Reth . They have rerun the GMA for an unpropped wall- results attached as an addendum to their stage 3 & 4 report. Our structure engineer has also added temporary propping to the head of the piles.

I should be pleased if you would forward their comments to Campell Reth so that we can expedite the process whilst we are preparing the revised proposal, as it will only concerns the roof and will not have any impact on their assessment of the report. I am conscious of the limited time left to the end of November deadline and hopefully Campell Reth can respond quickly this time round.

With regards to the bulk of the building please note the extent of the existing building in relation to the adjoining building, which is longer and encroaching on the boundary line as shown on the aerial picture of the site.

I should have the revised scheme with you within the next few days.



regards

Masoud Parvardin Mphil RIBA

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121 Gloucester place

London W1U 6JY
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Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 14:43
To: Masoud Parvardin
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The conservation officer is not in the office this week. However, the revised designs do not fully respond to the points raised in my previous email. The proposed house appears excessively bulky both from the street (Redington Road) and from the rear gardens of Redington Gardens.

It is unlikely that the application can be supported without significant revisions. Please call me if you wish to discuss.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 14:22
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

Please find our amended drawings Rev B, as requested.

Masoud Parvardin Mphil RIBA

Archetype Associates Ltd
121 Gloucester place
London W1U 6JY
Tel: +44 (0)20 7486 3666
Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 13:26
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Are you able to send the revised drawings of the elevations in the meantime?

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 11:41
To: Peres Da Costa, David
Cc: Michelle Sweeney
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David,

We have redesigned the upper part of the building in line with the recommendations made by your design officer and the BIA is also amended to incorporate some of the points made by your independent engineers. I am currently waiting for our structure engineer to amend his design before forwarding you the revised package, which is expected either later today or tomorrow.

In the meantime, I have no objection to extend the period for deciding our application until 30th November 2015

Best regards

Masoud Parvardin Mphil RIBA

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From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 08:58
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

I don't think I've had a response to the my previous email. Please update me.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Peres Da Costa, David
Sent: 09 October 2015 14:59
To: 'Masoud Parvardin'
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The building appears excessively bulky especially when viewed from the side (south), both from the street (Redington Road) and from the rear gardens of Redington Gardens. According to the approved plans, the neighbouring building, 38 Redington Road is 12.4m deep (front to rear) at ground floor level, 10.75m at 2nd floor level, and 10m at roof level. Whereas your proposal would be 13m at ground, first and roof level. It is also noted that 38 Redington Road has a stepped profile and that the northern part of the property is 9.75m deep (front to rear) above ground floor level.

The neighbouring property (38 Redington Road) was originally approved as a detached property (planning ref: 2003/2685/P granted permission 29/03/2004 and ref: 2006/1733/P granted permission 02/06/2006). The approved plans for the implemented permission 2009/5829/P (dated 29/10/2010) show 36 and 38 abutting at ground floor level but the roof is set back from 36 and the roof is slightly angled away from this property. It is noted that 38 Redington Road has not been built according to the approved plans and there is an ongoing enforcement investigation in to this matter.

The impact of the sizeable depth of your building combined with excessive bulk, presents an overbearing façade as seen from 7 Redington Gardens, so a reduction in this depth is also recommended.

Although you have pulled the roof away from the neighbouring building it still has an uncomfortable relationship with 38 Redington Road. A possible option would be for more separation between the two properties above ground floor level, so that they read as two separate properties. The aim would be to achieve a less bulky appearance of 36 and 38 when they are viewed together and would result in a better relationship. The proposed 1.3m gap between 36 and 7 Redington Gardens should be maintained and the upper part of the property should be reduced in width to allow an appropriate separation between the properties.

The detailed design with pitched roofs is unconvincing and a reversion to a more contemporary approach may be appropriate provided the bulk is significantly reduced. However additional time for consultation on the revised design would be required.

I will be on annual leave next week but if you send any revisions to Catherine.bond@camden.gov.uk, they may be able to provide you with comments (if they have time). **Please copy me into a correspondence**.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 08 October 2015 18:34
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

I have the response from our soil engineer waiting for formal response from our structural engineer before submitting the full package on Monday. I will check the scale bar and send you any amendment necessary with the formal response. It would be good if your design officers comments about the roof could also be incorporated in our amended set.

In the meantime, I noticed a new development further up the road on Redington which is a mixture of old and new style. I wonder if the same design officer was also responsible for that development. Pictures attached for your attention when you meet up with the design officer.

Masoud Parvardin Mphil RIBA

ARCHETYPE

Archetype Associates Ltd
121 Gloucester place
London W1U 6JY
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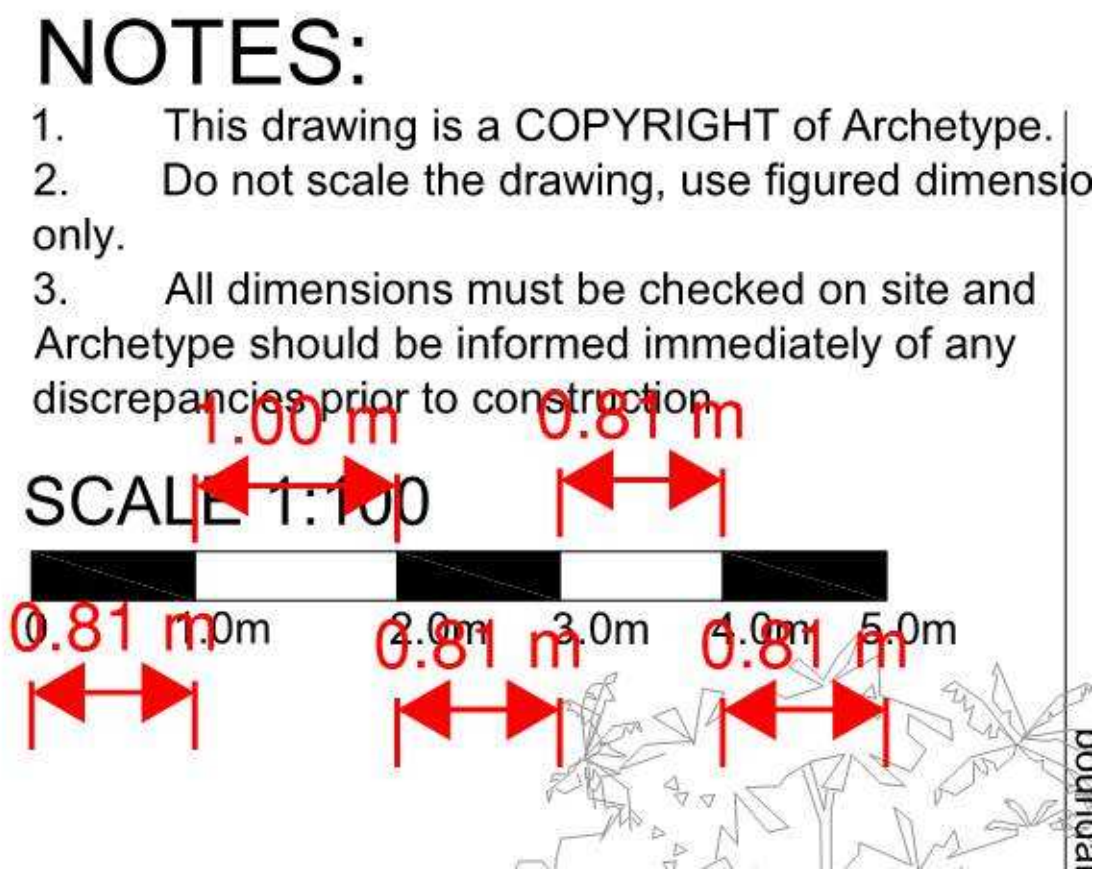
Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 08 October 2015 17:42
To: Masoud Parvardin

Subject: RE: 36 Redington Road - 2015/3004/P

I notice the scale bar on your drawings is inaccurate. See image below.



Please provide a set of drawings with an accurate scale bar.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 07 October 2015 15:12
To: Peres Da Costa, David
Subject:
Importance: High

Dear David,

Further to our recent discussions, and under the provisions of Article 29 (2) (c) of The Town and Country Planning (Development Management Procedure) (England) Order 2010, on behalf of my client, Mr A Zolf. I confirm that we would be willing to agree an extension of time with the Local Planning Authority for the determination of the application.

It is my understanding that our agreement to this extension will negate any obligation on the Council to repay the planning application fee after 26 Weeks as set out in Regulation 9A of The Town and Country Planning (Fees for Applications, Deemed Applications, Requests and Site Visits) (England) Regulations 2012.

I agree to extend the period for deciding our application until 30th October 2015. Our engineers have prepared their formal response and will be with you by Friday. I think it would be only reasonable to expect your independent engineer to expedite processing our submission as all the hard work is done and it is only for them to verify the response for a fee.

I would also be pleased if your design officer would comment on our proposed alteration of roof line so that we can make the necessary amendments to the rest of the drawings.

regards

Masoud Parvardin Mphil RIBA

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----- Message from Masoud Parvardin <Masoud@archetype.org.uk> on Tue, 3 Nov 2015 10:29:19 +0000 -----

To: "Peres Da Costa, David" <David.PeresDaCosta@Camden.gov.uk>

cc: ahmad zolf <zolf1914@googlemail.com>

Subject: RE: 36 Redington Road - 2015/3004/P

Dear David

I suppose we have no choice in the matter but I find this totally unacceptable as competitive fee in the market for preparation of such report is maximum£3,000, and we are being charge almost double the amount for someone to check it !!! - This is unreasonable and the council should regulate their consultants fee. The Planning fee for processing the application including preapplication fee is fraction of what they are charging. It is totally unfair and unjustifiable. I am puzzled as to why the applicant is not allowed to appoint their own independent engineer?

In case of another application with Camden Council, where I had to appoint an independent engineer for a BIA the total fee was only £1500.

In this case, I appreciate that you are within a time limit for determination by end of November and hence, regardless of my own objection, I am asked by the applicantt to confirm his acceptance.

I should be pleased if you would forward my comment to the head of planning.

regards

Masoud Parvardin Mphil RIBA

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London W1U 6JY
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Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 03 November 2015 09:37
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

I have attached the relevant part of the form. The fee was £4050 but the comments section expressly stated no additional fees required unless third party comments are received which require review or a site visit is required or our audit report requires documents to be revised and re-submitted.

Please note section D which states costs may include additional fees charged at the hourly rate for DCC attendance (for example). If the recommendation is for approval,

I can confirm your application will be decided at Development Control Committee.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 30 October 2015 16:48
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David

I am confused, is this on top of £900 they already received? As full and final ?

This is the problem when local authority is dealing with private sector! Our consultants total fee for preparing the report was £2000. Can you please confirm what is the total fee so that I can obtain clients approval.

Unfortunately we have to accept whatever terms they impose on us, but at least is good to know the full liability. They must be charging £500 per hour at this rate!!! This is such a big farce.

I apologise for my reaction, which is not directed at you, as you have been extremely helpful and proactive despite your heavy workload, the criticism is against the system that is set up for a close-shop allowing two firm of engineers to have the monopoly to capitalise without any liability. Their first list of queries was so presumptuous and superficial that according to our engineer pointless.

Best regards

Masoud Parvardin Mphil RIBA

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121 Gloucester place

London W1U 6JY
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Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 30 October 2015 16:20
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The auditors have advised that an additional fee (£1350) will be required to assess the information submitted.

Having re-read our audit report and looked briefly through the information presented, I would anticipate that it will take around a day and a half to review the revised information and update our report. There is also the report submitted by the neighbour to consider. Our fee will therefore be £1350.

Please confirm that the additional fee would be acceptable to your client.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

You can sign up to our new and improved planning e-alerts to let you know about new planning applications, decisions and appeals.

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 16:50
To: Peres Da Costa, David
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David

Further to your E-mail and our subsequent telephone conversation, I am having another attempt at reducing the bulk of the upper part of the proposed new building and issue them before Ms Bond return to office next week.

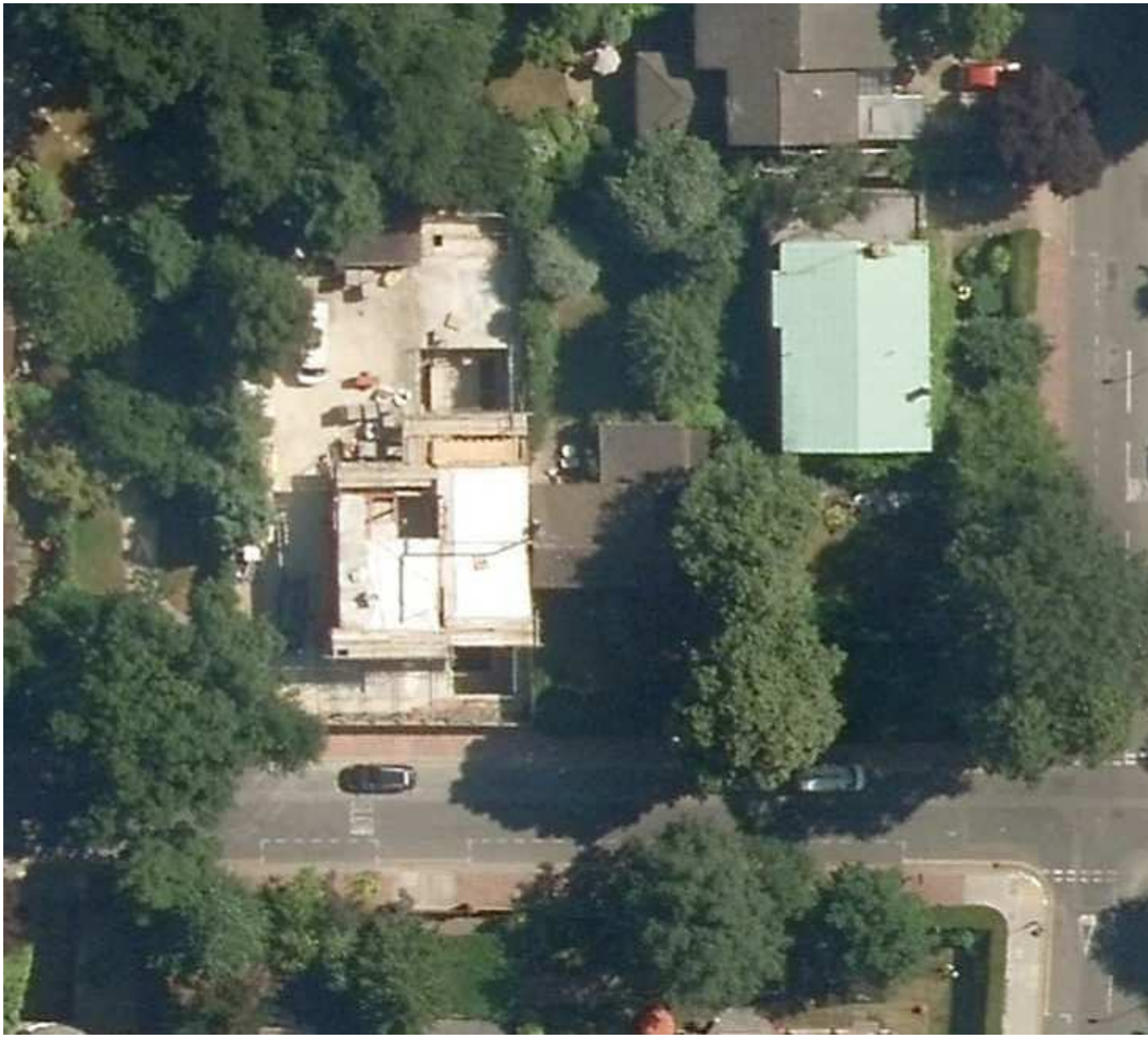
I understand that your main concern is the size of the roof and not so much the basement and ground level. Hence we will remove the mansard roof and revert back to lowered flat roof in our revised scheme. We will try not to exceed the existing building's ridge height.

In the meantime, I herewith attach the Engineers' formal reply to the points raised by Campell Reth . They have rerun the GMA for an unpropped wall- results attached as an addendum to their stage 3 & 4 report. Our structure engineer has also added temporary propping to the head of the piles.

I should be pleased if you would forward their comments to Campell Reth so that we can expedite the process whilst we are preparing the revised proposal, as it will only concerns the roof and will not have any impact on their assessment of the report. I am conscious of the limited time left to the end of November deadline and hopefully Campell Reth can respond quickly this time round.

With regards to the bulk of the building please note the extent of the existing building in relation to the adjoining building, which is longer and encroaching on the boundary line as shown on the aerial picture of the site.

I should have the revised scheme with you within the next few days.



regards

Masoud Parvardin Mphil RIBA

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From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 14:43
To: Masoud Parvardin
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The conservation officer is not in the office this week. However, the revised designs do not fully respond to the points raised in my previous email. The proposed house appears excessively bulky both from the street (Redington Road) and from the rear gardens of Redington Gardens.

It is unlikely that the application can be supported without significant revisions. Please call me if you wish to discuss.

Kind regards

David

David Peres da Costa
Senior Planning Officer

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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 14:22
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

Please find our amended drawings Rev B, as requested.

Masoud Parvardin Mphil RIBA

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Sent: 26 October 2015 13:26
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Are you able to send the revised drawings of the elevations in the meantime?

David Peres da Costa
Senior Planning Officer

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From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 26 October 2015 11:41
To: Peres Da Costa, David
Cc: Michelle Sweeney
Subject: RE: 36 Redington Road - 2015/3004/P
Importance: High

Dear David,

We have redesigned the upper part of the building in line with the recommendations made by your design officer and the BIA is also amended to incorporate some of the points made by your independent engineers. I am currently waiting for our structure engineer to amend his design before forwarding you the revised package, which is expected either later today or tomorrow.

In the meantime, I have no objection to extend the period for deciding our application until 30th November 2015

Best regards

Masoud Parvardin Mphil RIBA

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Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 26 October 2015 08:58
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

I don't think I've had a response to the my previous email. Please update me.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

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From: Peres Da Costa, David
Sent: 09 October 2015 14:59
To: 'Masoud Parvardin'
Cc: Bond, Catherine
Subject: RE: 36 Redington Road - 2015/3004/P

Dear Masoud,

The building appears excessively bulky especially when viewed from the side (south), both from the street (Redington Road) and from the rear gardens of Redington Gardens. According to the approved plans, the neighbouring building, 38 Redington Road is 12.4m deep (front to rear) at ground floor level, 10.75m at 2nd floor level, and 10m at roof level. Whereas your proposal would be 13m at ground, first and roof level. It is also noted that 38 Redington Road has a stepped profile and that the northern part of the property is 9.75m deep (front to rear) above ground floor level.

The neighbouring property (38 Redington Road) was originally approved as a detached property (planning ref: 2003/2685/P granted permission 29/03/2004 and ref: 2006/1733/P granted permission 02/06/2006). The approved plans for the implemented permission 2009/5829/P (dated 29/10/2010) show 36 and 38 abutting at ground floor level but the roof is set back from 36 and the roof is slightly angled away from this property. It is noted that 38 Redington Road has not been built according to the approved plans and there is an ongoing enforcement investigation in to this matter.

The impact of the sizeable depth of your building combined with excessive bulk, presents an overbearing façade as seen from 7 Redington Gardens, so a reduction in this depth is also recommended.

Although you have pulled the roof away from the neighbouring building it still has an uncomfortable relationship with 38 Redington Road. A possible option would be for more separation between the two properties above ground floor level, so that they read as two separate properties. The aim would be to achieve a less bulky appearance of 36 and 38 when they are viewed together and would result in a better relationship. The proposed 1.3m gap between 36 and 7 Redington Gardens should be maintained and the upper part of the property should be reduced in width to allow an appropriate separation between the properties.

The detailed design with pitched roofs is unconvincing and a reversion to a more contemporary approach may be appropriate provided the bulk is significantly reduced. However additional time for consultation on the revised design would be required.

I will be on annual leave next week but if you send any revisions to Catherine.bond@camden.gov.uk, they may be able to provide you with comments (if they have time). **Please copy me into a correspondence**.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 08 October 2015 18:34
To: Peres Da Costa, David
Subject: RE: 36 Redington Road - 2015/3004/P

Hi David

I have the response from our soil engineer waiting for formal response from our structural engineer before submitting the full package on Monday. I will check the scale bar and send you any amendment necessary with the formal response. It would be good if your design officers comments about the roof could also be incorporated in our amended set.

In the meantime, I noticed a new development further up the road on Redington which is a mixture of old and new style. I wonder if the same design officer was also responsible for that development. Pictures attached for your attention when you meet up with the design officer.

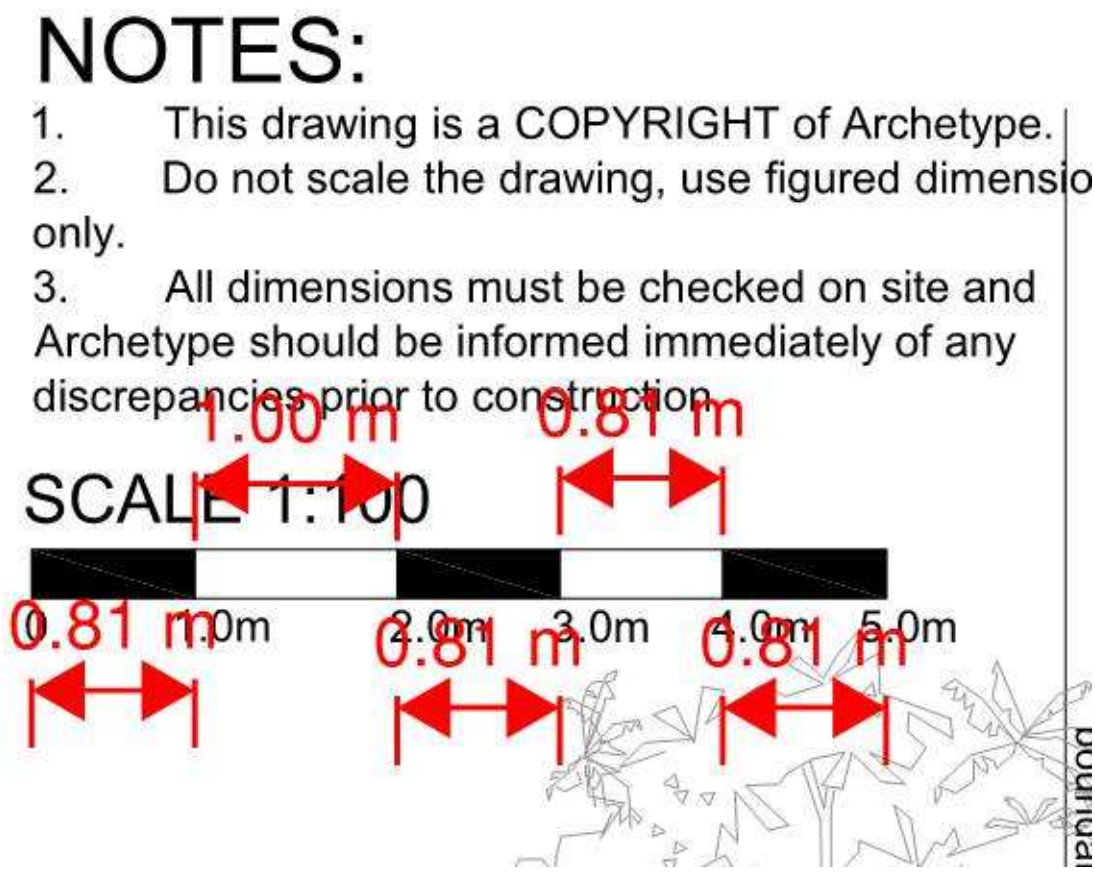
Masoud Parvardin Mphil RIBA

ARCHETYPE

Archetype Associates Ltd
121 Gloucester place
London W1U 6JY
Tel: +44 (0)20 7486 3666
Fax: +44 (0)20 7486 3888
Web: www.archetype.org.uk

From: Peres Da Costa, David [mailto:David.PeresDaCosta@Camden.gov.uk]
Sent: 08 October 2015 17:42
To: Masoud Parvardin
Subject: RE: 36 Redington Road - 2015/3004/P

I notice the scale bar on your drawings is inaccurate. See image below.



Please provide a set of drawings with an accurate scale bar.

Kind regards

David

David Peres da Costa
Senior Planning Officer

Tel.: 020 7974 5262
Visit camden.gov.uk for the latest council information and news

From: Masoud Parvardin [mailto:Masoud@archetype.org.uk]
Sent: 07 October 2015 15:12
To: Peres Da Costa, David
Subject:
Importance: High

Dear David,

Further to our recent discussions, and under the provisions of Article 29 (2) (c) of The Town and Country Planning (Development Management Procedure) (England) Order 2010, on behalf of my client, Mr A Zolf. I confirm that we would be willing to

agree an extension of time with the Local Planning Authority for the determination of the application.

It is my understanding that our agreement to this extension will negate any obligation on the Council to repay the planning application fee after 26 Weeks as set out in Regulation 9A of The Town and Country Planning (Fees for Applications, Deemed Applications, Requests and Site Visits) (England) Regulations 2012.

I agree to extend the period for deciding our application until 30th October 2015. Our engineers have prepared their formal response and will be with you by Friday. I think it would be only reasonable to expect your independent engineer to expedite processing our submission as all the hard work is done and it is only for them to verify the response for a fee.

I would also be pleased if your design officer would comment on our proposed alteration of roof line so that we can make the necessary amendments to the rest of the drawings.

regards

Masoud Parvardin Mphil RIBA

ARCHETYPE

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zussmanbear

STRUCTURAL ENGINNERING REPORT

METHOD STATEMENT

FOR SUBTERANIAN DEVELOPMENT

36 Reddington Road
London N4 2ED

May 2015

395 St Margarets Road
Richmond
TW7 7BZ
T: 0208 332 1199
T: 0208 744 3988
www.zussmanbear.com

Construction Method Statement for Proposed Subterranean Development
Planning Report

ZUSSMAN BEAR PARTNERSHIP
APRIL 2015

CONTENTS PAGE

1.00 Introduction & Location

1.1 At Present 36 Reddington Road is a two storey self-contained semi-detached house with a single storey extension and garage to the side. A planning application is being lodged to demolish the existing building and construct a larger house with a single storey basmenjt. The building is surrounded on all three sides by other properties with number 38 Reddington Road on the left, which already has been redeveloped including a double basement construction.

2.0 Structural Description

2.1 The existing building, photographed below is number 36 Reddington Road which is a traditional loadbearing brickwork and timber floor construction. This building will be demolished to allow for the construction of the new house.

2.2 The new house will be constructed as a steel frame with external brick cladding. The lower ground floor construction is as follows;

- Contiguous bored piles.
- Capping beam.
- RC retaining wall.
- Bearing piles supporting slab, lift shaft & steel columns.
- Suspended pile raft slab over compressible material.

2.3 The ground floor construction is as follows;

- Steel frame.
- Precast floor planks spanning between steel frame
- Internal non loadbearing walls.
- Framed lift shaft.

2.4 The first floor construction is as follows;

- Steel frame.
- Precast floor planks spanning between steel frame
- Internal non loadbearing walls.
- Framed lift shaft.

2.5 The loft floor construction is as follows;

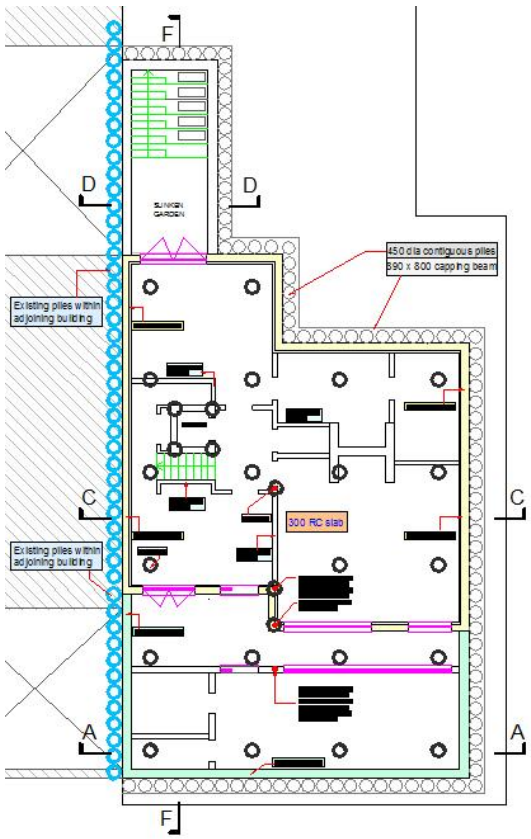
- Steel frame.
- Precast floor planks spanning between steel frame
- Internal loadbearing stud walls.
- Framed lift shaft.

2.6 The roof construction is as follows;

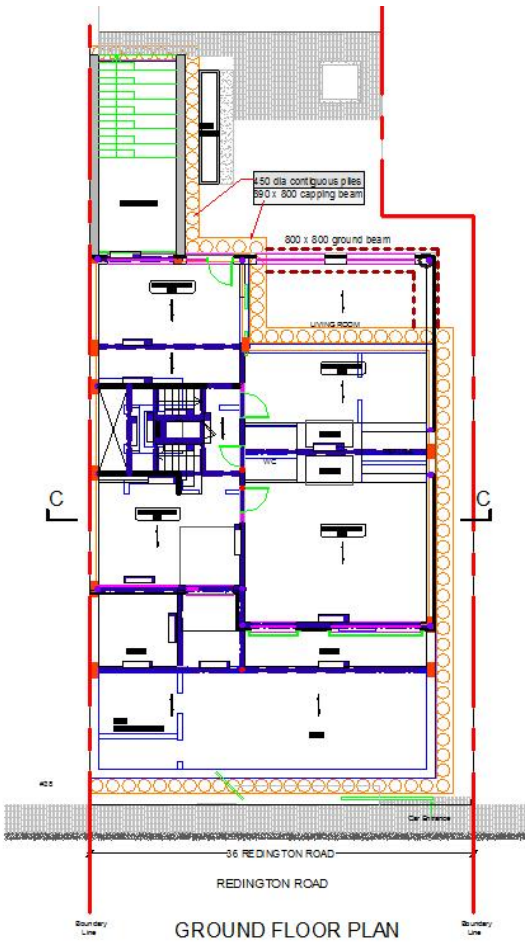
- Timber rafters.
- Loadbearing stud walls supporting rafters and purlins.
- Bracing and ply for stiffness

3.0 Proposed drawings

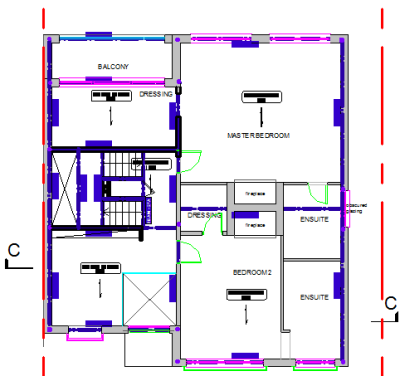
Proposed Floor Plans



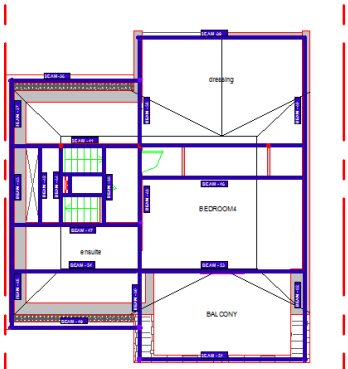
BASEMENT PLAN



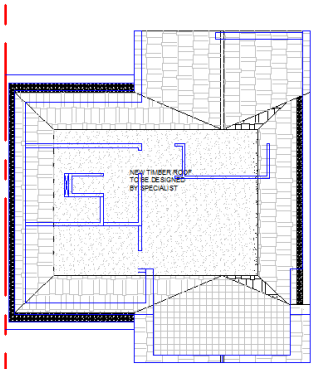
GROUND FLOOR PLAN



FIRST FLOOR PLAN



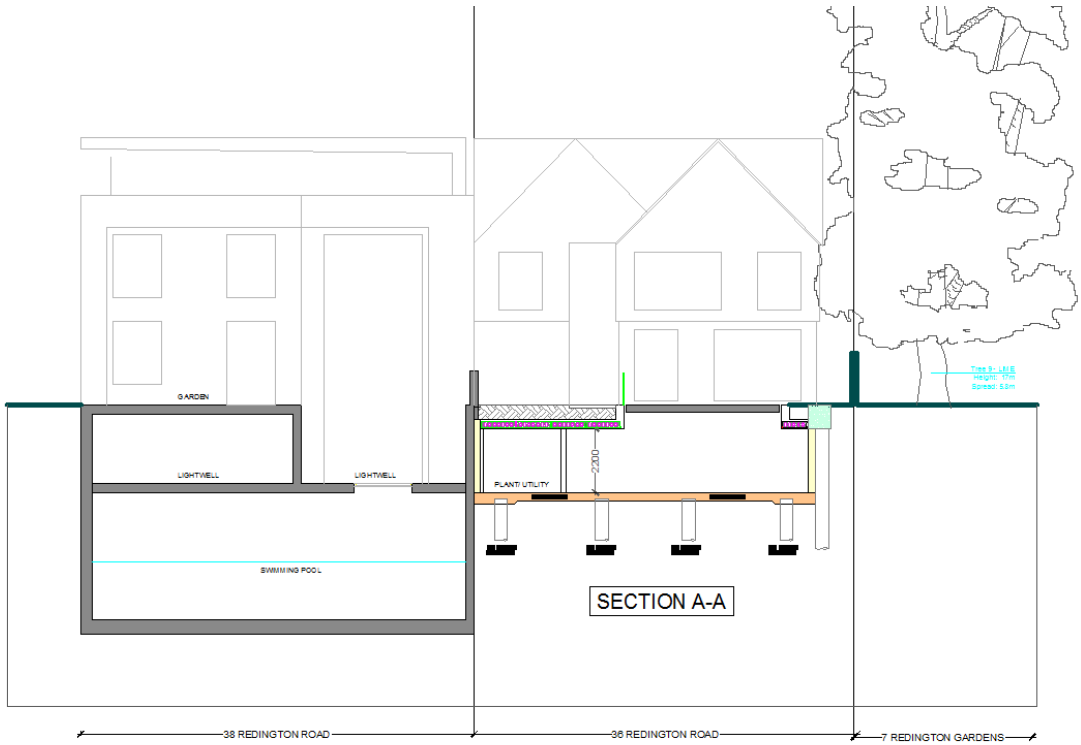
LOFT PLAN



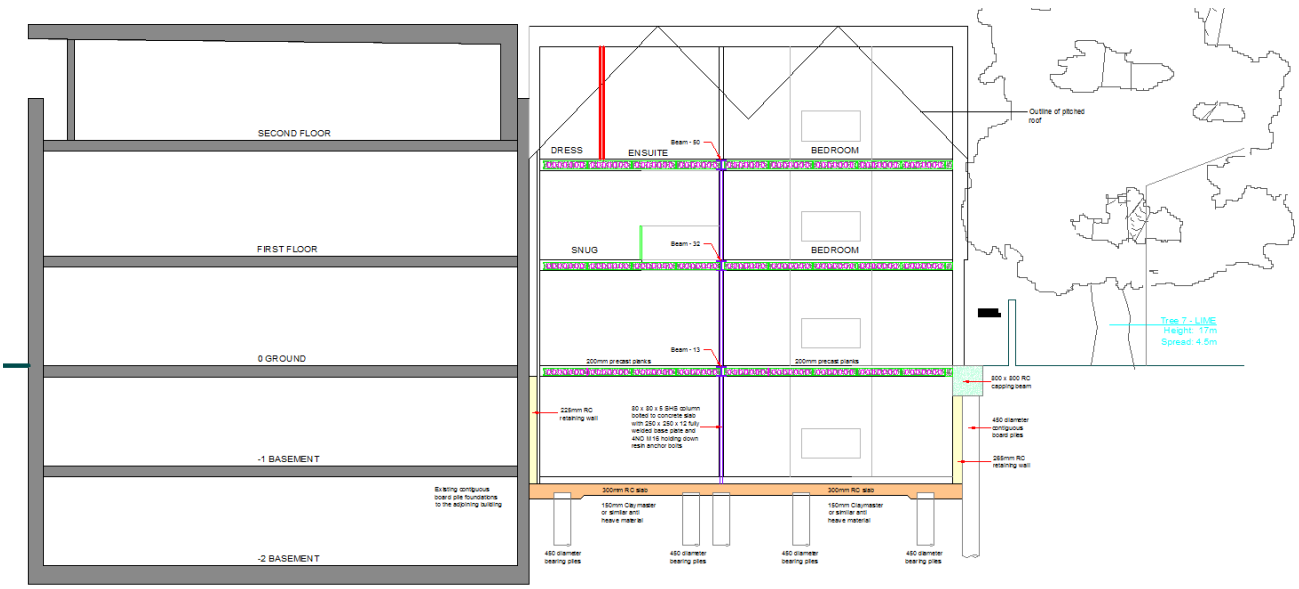
ROOF PLAN

4.0 Proposed drawings

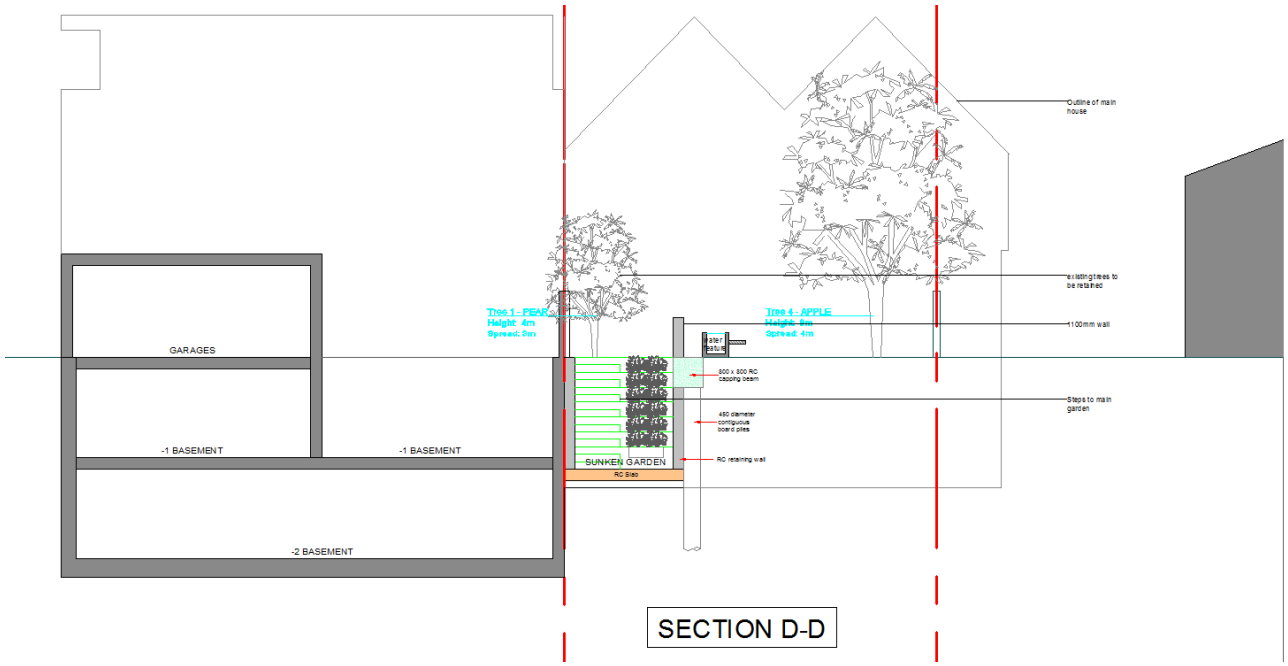
Proposed Sections



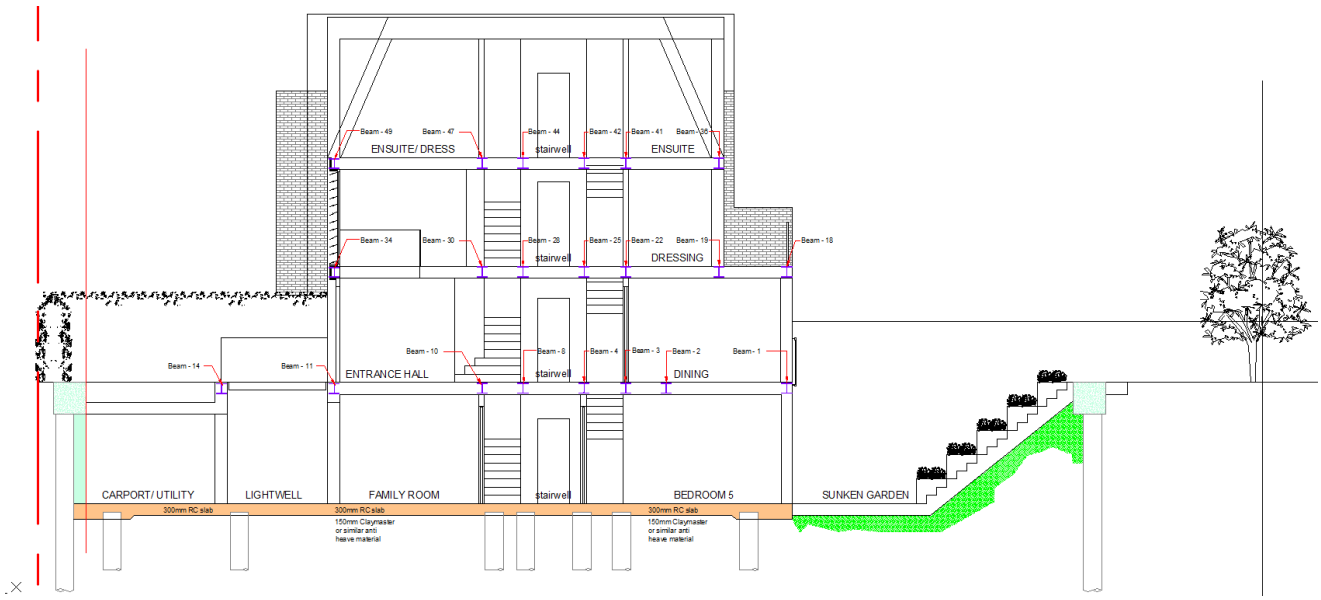
SECTION A-A



SECTION C-C


Outline of main house
existing trees to be retained
1100mm wall
Steps to main garden
Tree 1 - PEAR
Height: 4m
Spread: 3m
Tree 4 - APPLE
Height: 6m
Spread: 4m
GARAGES
-1 BASEMENT
-1 BASEMENT
-2 BASEMENT
SUNKEN GARDEN
RC Piles
800 x 800 RC capping beam
450 diameter contiguous board piles
RC retaining wall

SECTION D-D


ENSUITE/ DRESS
stairwell
ENSUITE
DRESSING
ENTRANCE HALL
DINING
CARPORT/ UTILITY
LIGHTWELL
FAMILY ROOM
BEDROOM 5
SUNKEN GARDEN
300mm RC slab
150mm Claymaster or similar anti heave material

5.0 Ground Conditions

5.1 In order to determine and evaluate the design of this construction ground investigation was carried out by Southern Testing Environmental & Geotechnical investigations and the details of this report are attached. The works were carried out between 15 – 23 2014 and the weather conditions during this period was reasonably dry.

5.2 The scope of the investigations comprised excavation of trial pits to examine the presence of tree roots as it was requested by the arboriculturalist and sinking of two 20m deep boreholes using a light percussion 150mm diameter shell and auger boring rig. The ground conditions according to the geology of the area mainly consist of Claygate overlaying London Clay as indeed much of West London.

5.3 Depth of excavation for the basement slab, underpinning and foundation will be around 4.0 m and at these depths the material encountered will consist mainly of silty and sandy clays and ground water will be present as this was struck at around 1.1 m. The results of the Atterberg Limit determination of the spoils confirm high shrink ability factor and there will be swelling of the soil after under the excavation as the overburden weight of the material has been excavated added by the close presence of mature high water demand trees.

Table from Southern testing – Page 6 (Site Investigation report)

13 Soils as Found

The soils encountered are described in detail in the attached exploratory hole logs (Appendix A), but in general comprised a thin covering of made ground over sandy clays (assumed to represent the Claygate Member) over London Clay. A summary is given below.

Depth	Thickness	Soil Type	Description
GL to 0.7m	0.7m	Made Ground	Dark brown to brown silty sandy CLAY with occasional to frequent brick, ash and concrete fragments.
0.7 to 5.1/5.2m	4.5/4.6m	Claygate Member	Variable firm pale brown to brown and bluish grey silty sometimes slightly sandy CLAY. Some more gravelly or sandy clays present.
5.1/5.2 to 20m+	Thickness unproven	London Clay	Firm to stiff/high strength dark brown to grey silty CLAY.

13.1 Visual and Olfactory Evidence of Contamination

No obvious evidence of possible contamination was recorded during the fieldwork other than the presence of superficial made ground; which can contain elevated levels of some contaminants.

14 Groundwater Strikes

Water was struck in the exploratory holes as follows:

BH	Water Strikes
BH1	Groundwater strike at 2.7m depth.
BH2	No groundwater strikes were made.

The shallow trenches were dry.

6.0 Substructure design

6.1 The ground condition seen here generally consists of London Clay with high shrink ability factor and this requires for the substructure to transfer the loads to deeper mediums and for this piling solution will be adopted. The results of the ground investigation has confirmed swelling potential of the London Clay and for this reason the foundations of this building will be designed as a pile raft that will transfer all the vertical loads to a suitable depth beyond the shrinkable zone.

6.2 The Loading from the external elevation cladding and the frame is transferred onto the capping beam which is supported by the contiguous board piles and the retaining walls. The vertical loading is shared by the two elements with the contiguous pile transferring a portion of the load to the ground with the aid of side friction plus end bearing and the retaining wall transfers the other portion of the vertical load directly to the bearing piles placed below the pile raft.

6.3 The Loading from the internal frame system is transferred onto the pile raft. Within the areas of concentrated load individual piles are positioned to minimise eccentric load transfer.

6.4 The reinforced pile raft is designed as a stiff plate sufficiently reinforced to transfer any eccentricity and midspan load directly onto the bearing piles. The underside of the raft has no contact with the ground and compressible material is placed below the raft to allow for ay heave and hydraulic pressure build up.

7.0 Superstructure design

7.1 The superstructure of the building will be a steel frame construction that will be designed to support precast floor planks and the external cladding.

7.2 Steel columns externally will be supported directly over the capping beam and the internal steel columns will be supported directly over the pile raft.

7.3 Steel beams will connect the columns to form a suitable frame and a grillage for each floor. The external beams will support the cavity wall cladding and the internal beams will support the floor structure.

7.4 The advantage of a steel frame design is that the skeleton and the support of the building is constructed with speed and is not reliant upon different trades such as brick and block subcontractors or precast floor manufacturers.

8.0 Construction sequence

The construction sequence has been illustrated in the following drawings.

8.01 Demolition of the existing building

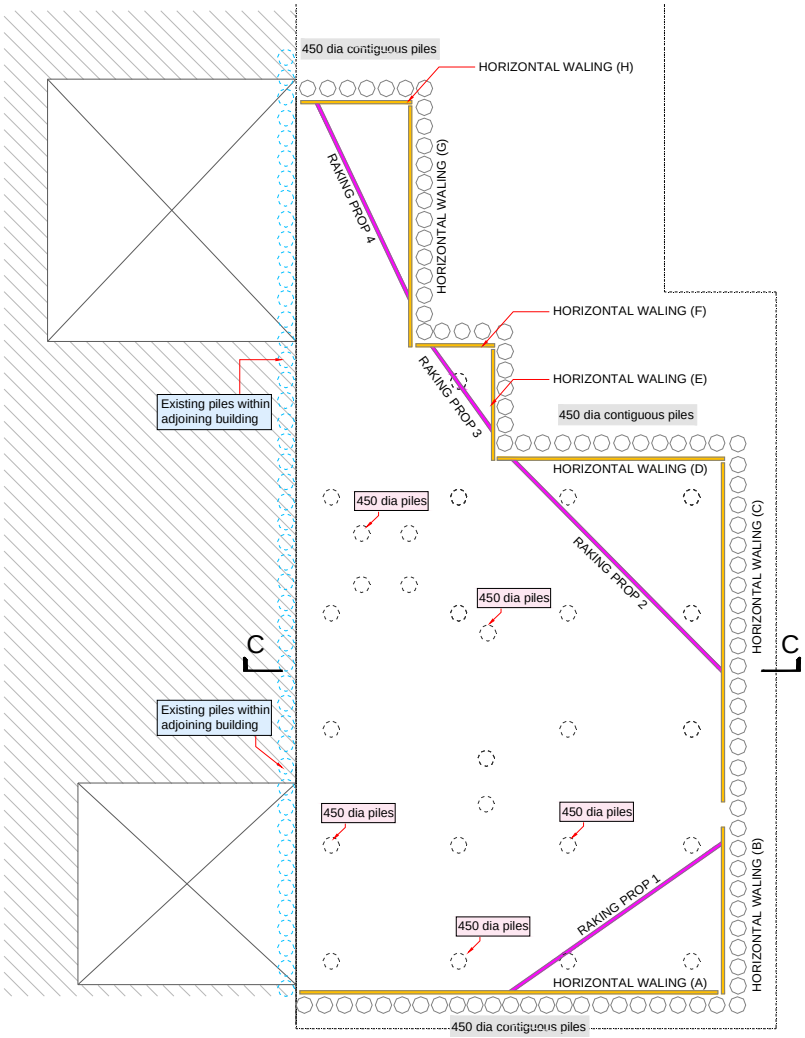
Number 38 Reddington Road was constructed recently as a totally independent structure and does not rely on number 36 for any lateral stability. Therefore with the removal of number 36 there will be no issues with having to prop or restrain number 38. However a comprehensive schedule of conditions will be prepared by the Party wall surveyors.

The demolition of number 36 will commence with careful stripping out of the roof and removal of all the fixture and fittings and any elements attached to number 38 will be removed carefully to ensure no damage is caused to any of the finishes.

After the removal of the roof, the floors will be gradually taken out followed by the internal and external walls. The contractor will ensure that the stability of he building is maintained at all times and the removal of debris is carried out in a orderly and sequential manner o minimise any noise and disturbance to the adjoining owners.

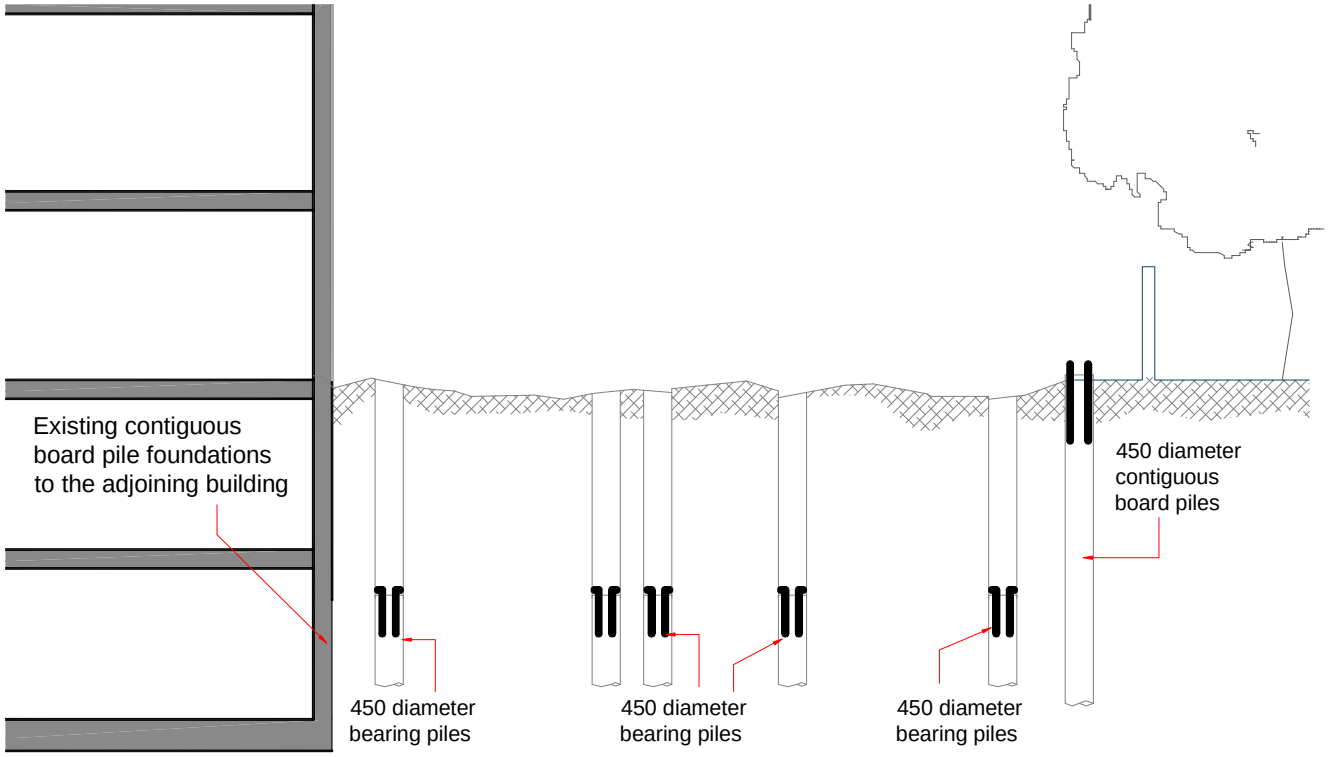
8.20 STAGE -1 PILING

After demolition of the existing building and construction of all the necessary protective elements around the perimeter of the site the piling mat will be provided and the piling contractor will commence installation of both the bearing and contiguous piles. The bearing piles will be poured down to their required cut off level which will be approximately 2.5m below the ground level. In order to reduce deflection in temporary condition at the head of the piles, temporary propping will be introduced and designed by specialist contractor as shown.



STAGE -1 PILING & PROPPING

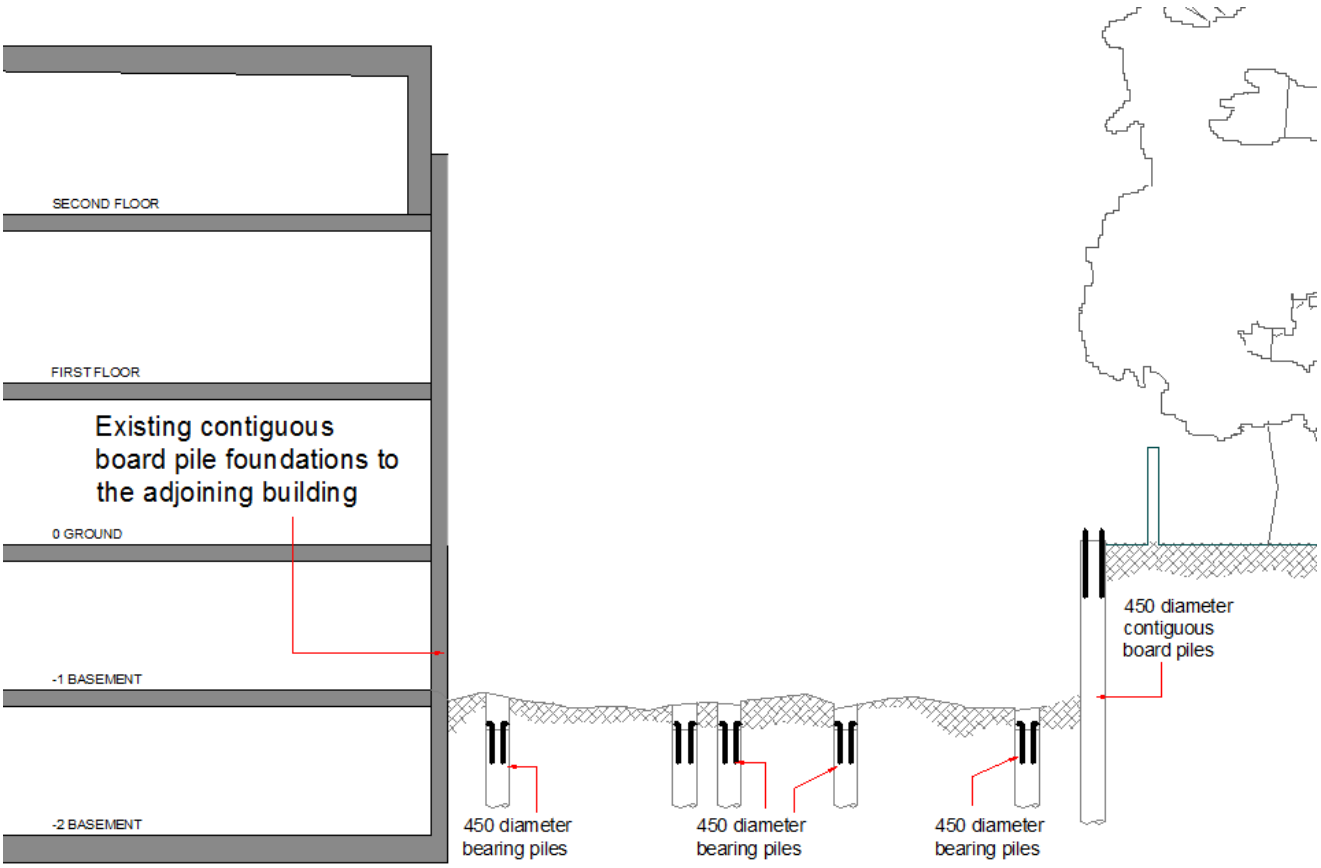
8.10 STAGE-1 Piling



STAGE 1- Piling Section C-C

8.20 STAGE -2 Excavations & Propping

After the installation of the piles has been completed, excavation of the ground can commence. The contractor will ensure all the necessary provisions for dewatering have been made and as it has been recommended in th4 site investigations report any ingress of water can be pumped from a pre-constructed sump. The site investigation also confirms that the presence of ground water will not be very significant. Raking props will be installed in accordance with recommendations made on floor plan. (Page 12)



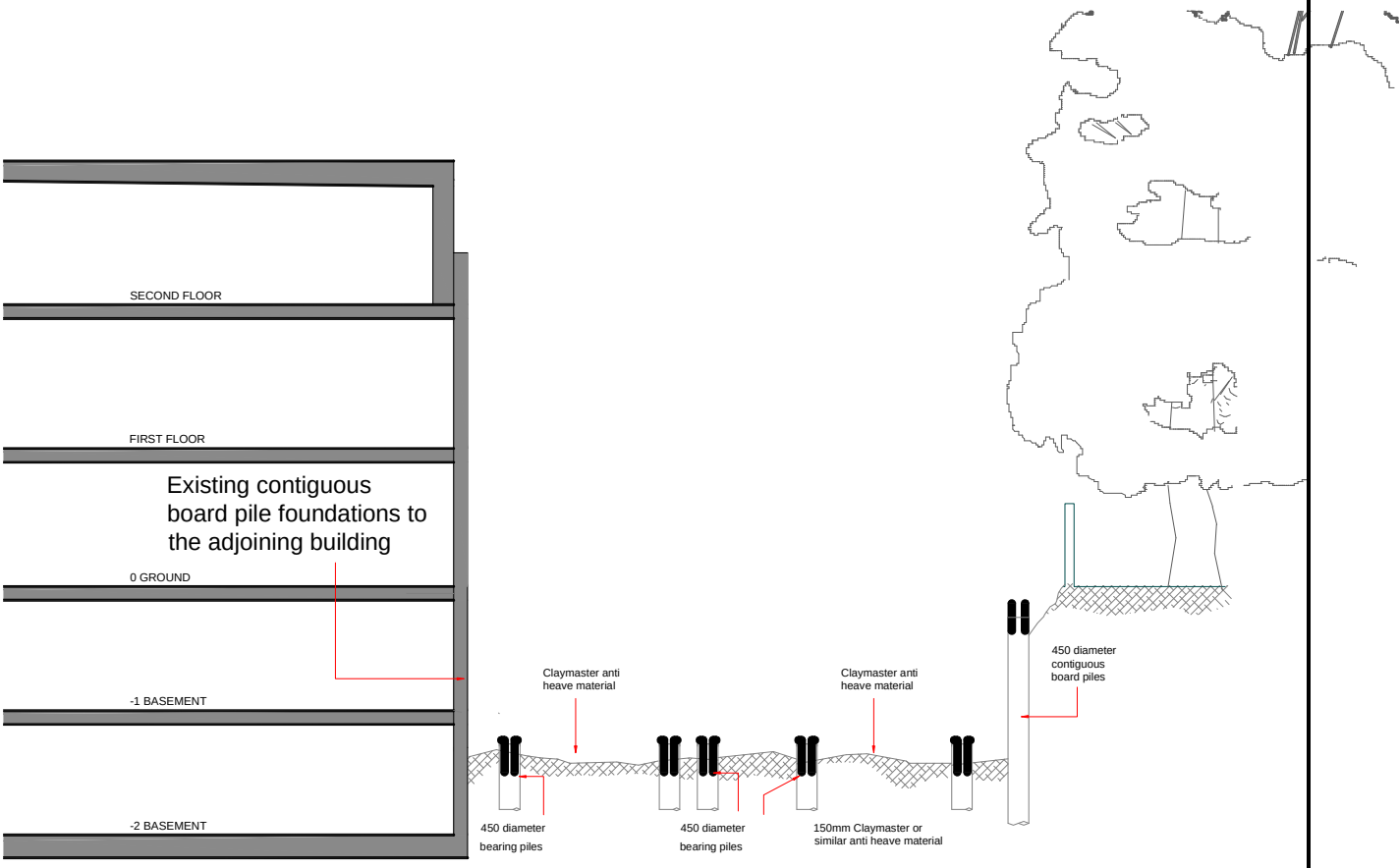
STAGE 2 - Excavation & PROPPING

8.20 STAGE -2 Excavation initial stages.

STAGE -2a Installation of Raking Props

8.30 STAGE-3 Excavation

The excavation of the ground will continue down the the required formation level of the basement pile raft. The ground will be levelled and the starter bars from the bearing piles will be prepared to be linked to the basement pile raft. The clay master compressible material will be laid and ground will be ready to receive the concrete for the pile raft slab. It should be noted that the contiguous piles will be designed as cantilever piles; therefore no internal propping or temporary works will be necessary. In addition to this the adjoining building has a double basement with already cast contiguous piles in position and this side of the excavation will also be adequately supported and therefore no internal propping will be necessary on any of the surrounding walls.

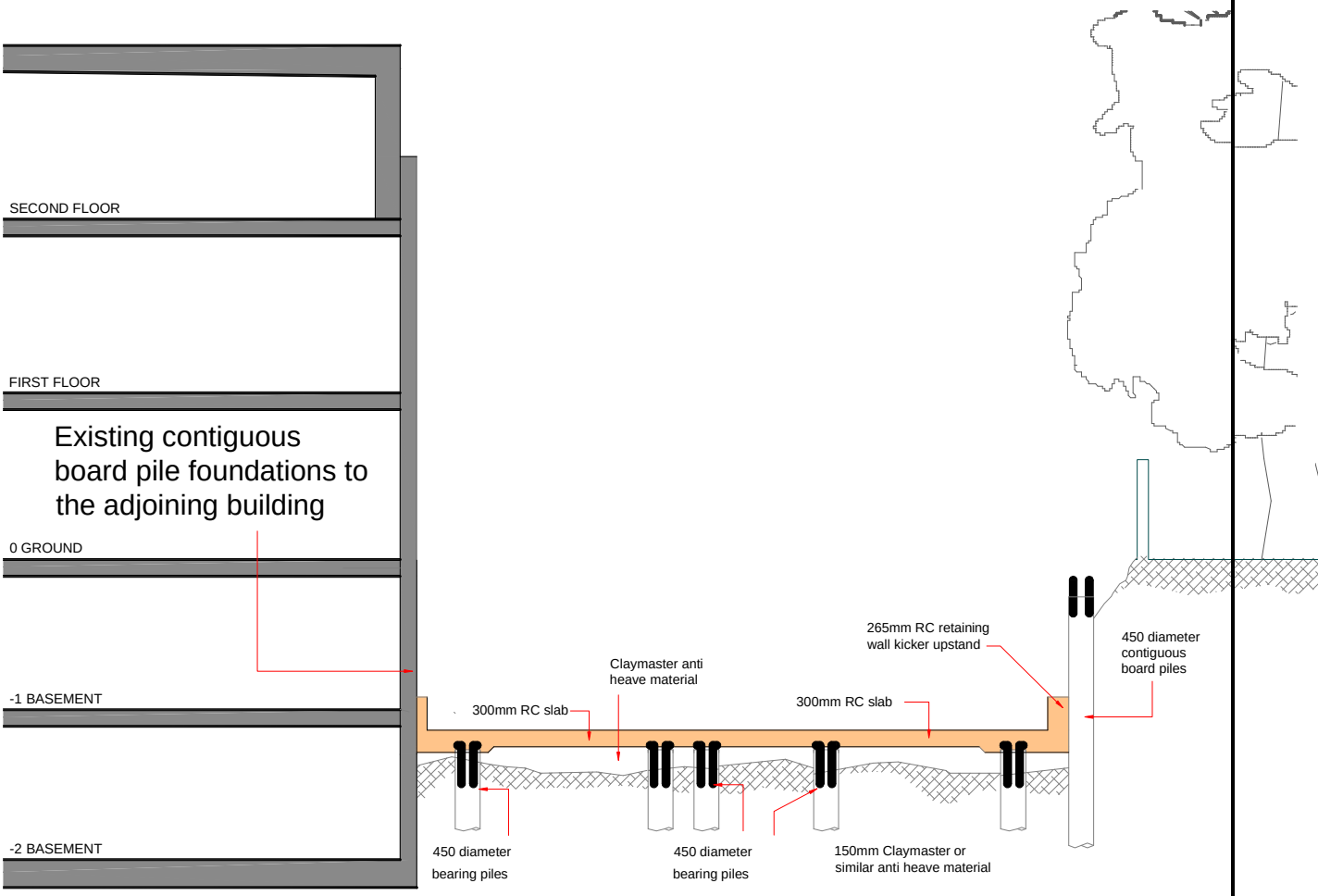


STAGE 3 - Excavation

STAGE-3 Excavation exposing bearing piles

8.40 STAGE-4 Slab construction

All necessary formwok will be cut and prepared and he reinforcing bars will be laid and tied to the bearing pile starter bars. A kicker will be formed around the perimeter of the slab for attachment of formwork for the retaining walls. Sufficient preparations and excavations will be made at ground level for the casting of the capping beam that will be constructed over the contiguous board piles.



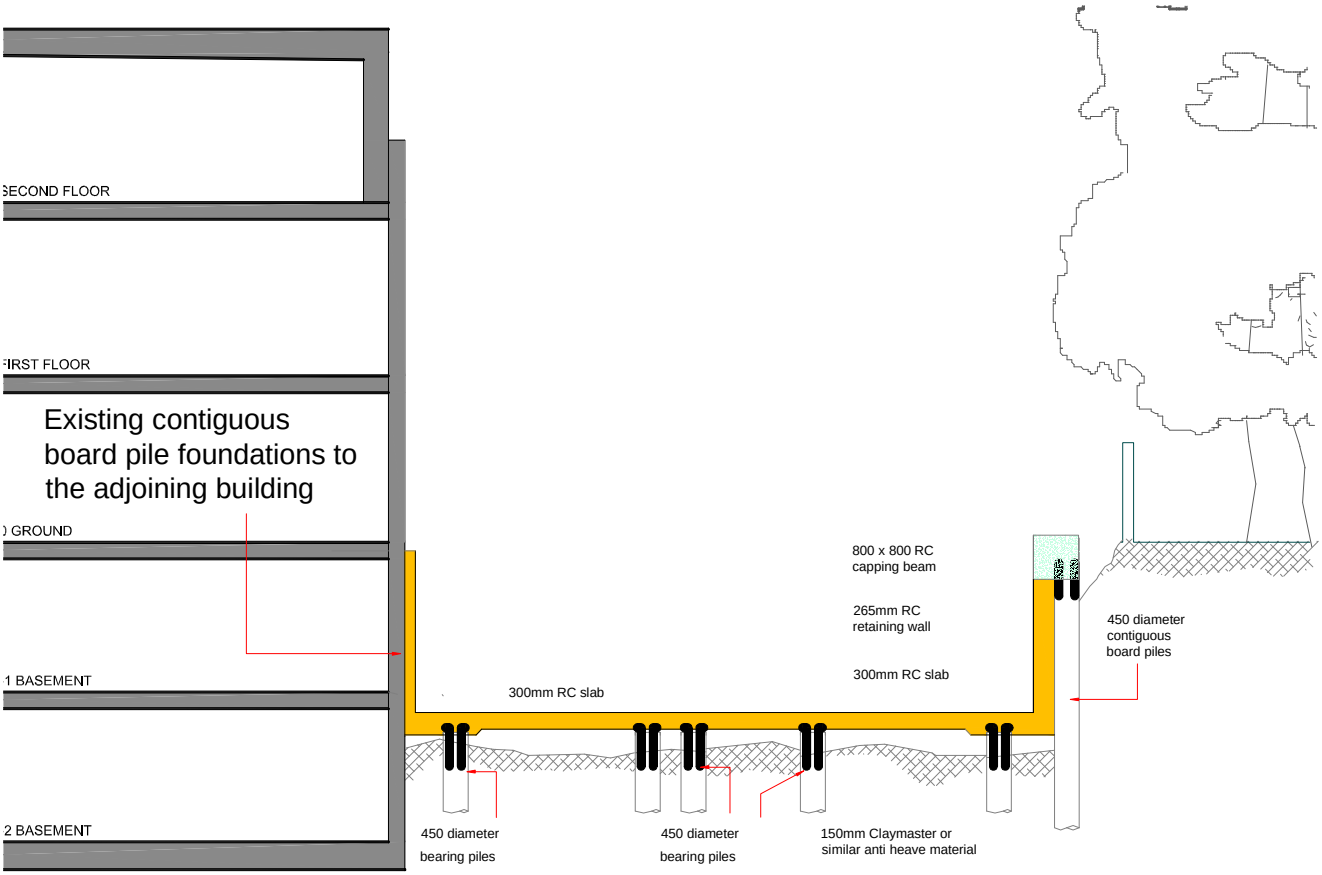
STAGE 4 - Slab construction

STAGE-4 Slab construction reinforcement fixed

STAGE-4 Slab construction concrete poured

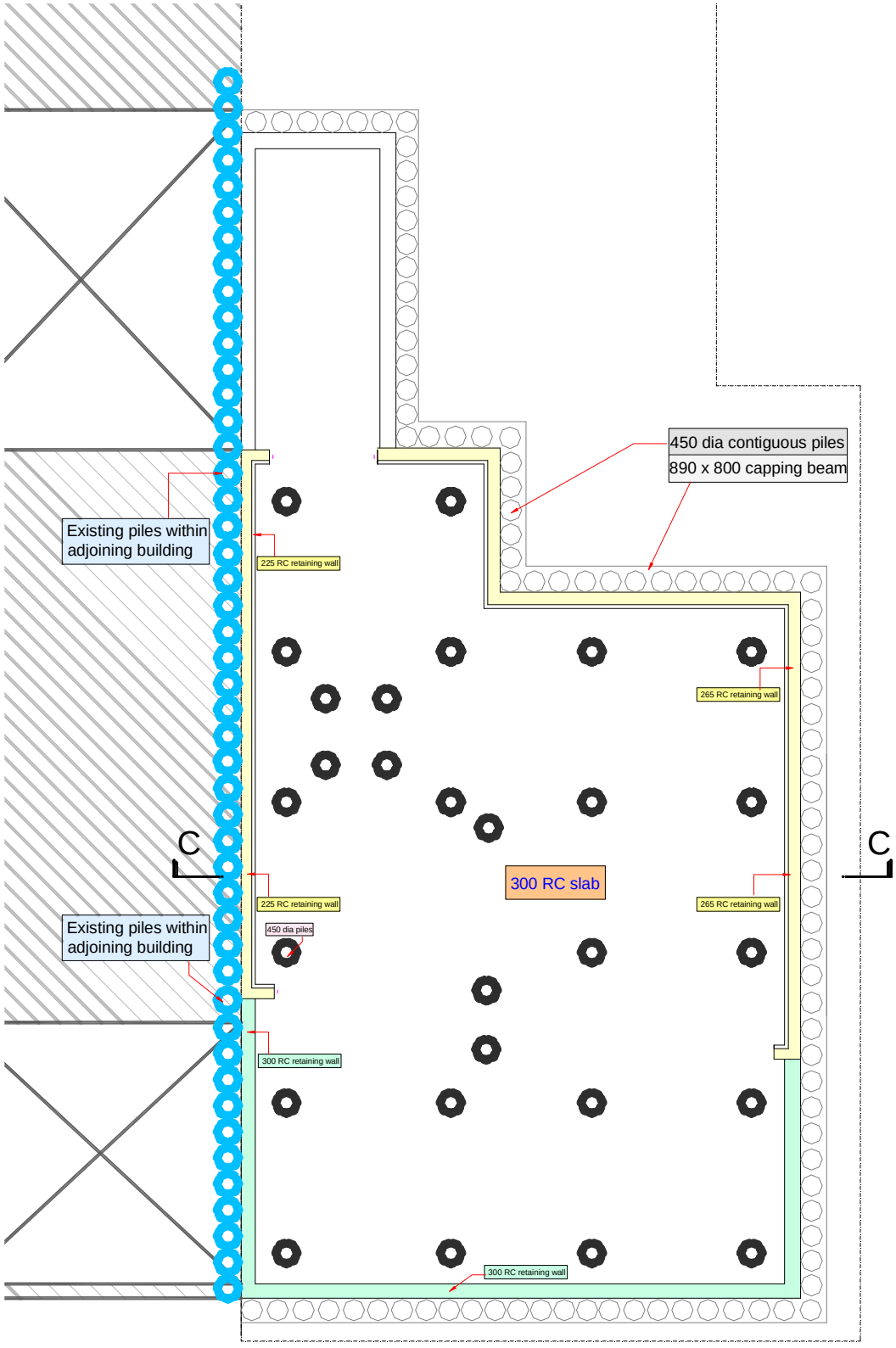
8.50 STAGE-5 Retaining wall and capping beam construction.

Reinforcement will be fixed for both the retaining wall and the capping beam and concrete will be poured to complete the substructure construction. No internal propping will be necessary because as pointed out in clause 8.30 the contiguous piles will be designed as cantilevers in order to allow free and open space within the newly formed basement.



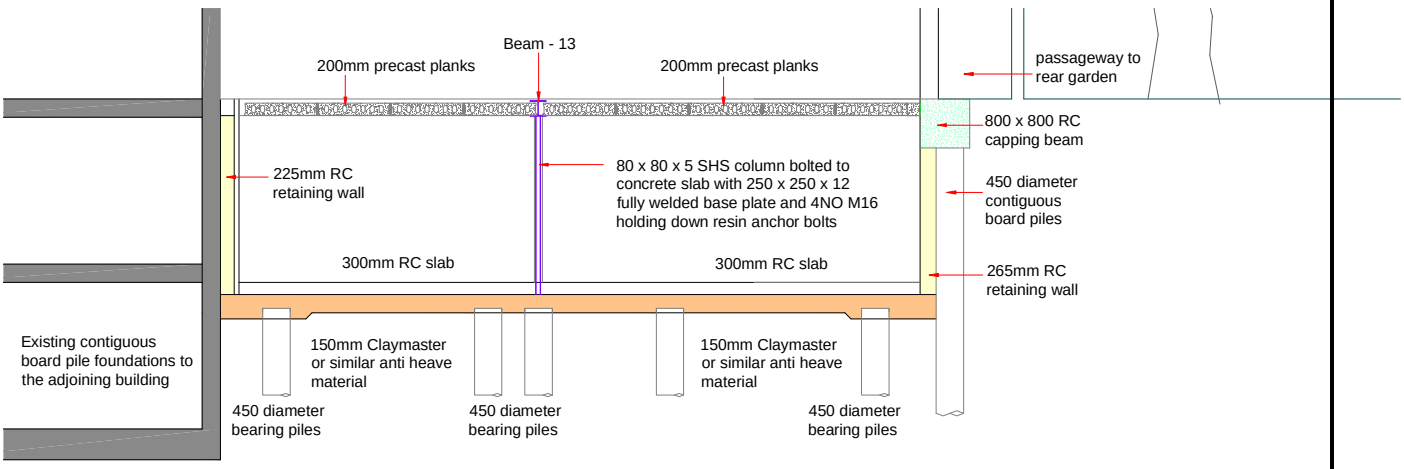
STAGE 5 - Retaining wall & capping beam

8.50 STAGE-5 Retaining wall and capping beam construction.

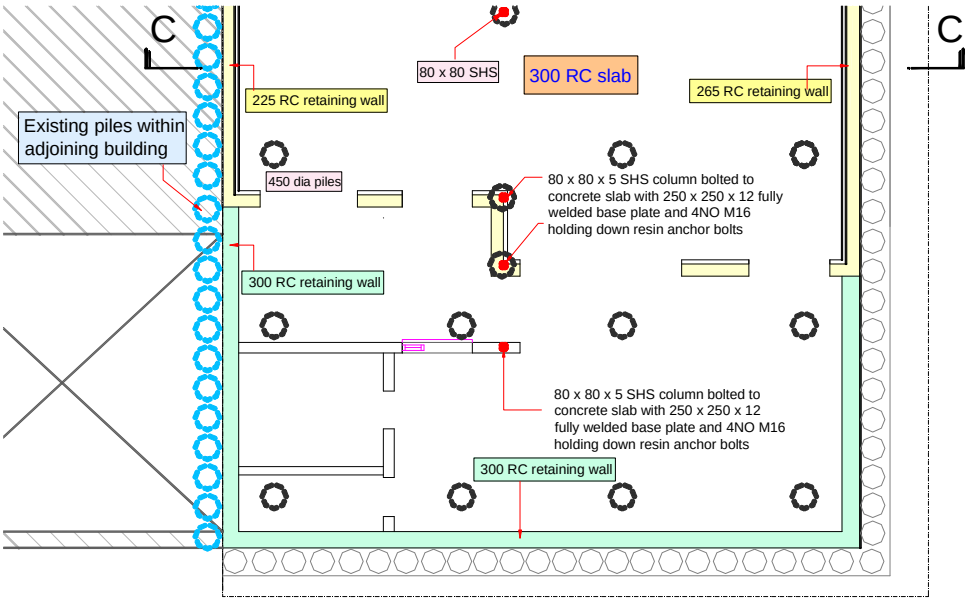


8.60 STAGE-6 Retaining wall and capping beam construction.

Reinforcement will be fixed for both the retaining wall and the capping beam and concrete will be poured to complete the substructure construction. No internal propping will be necessary because as pointed out in clause 8.30 the contiguous piles will be designed as cantilevers in order to allow free and open space within the newly formed basement.

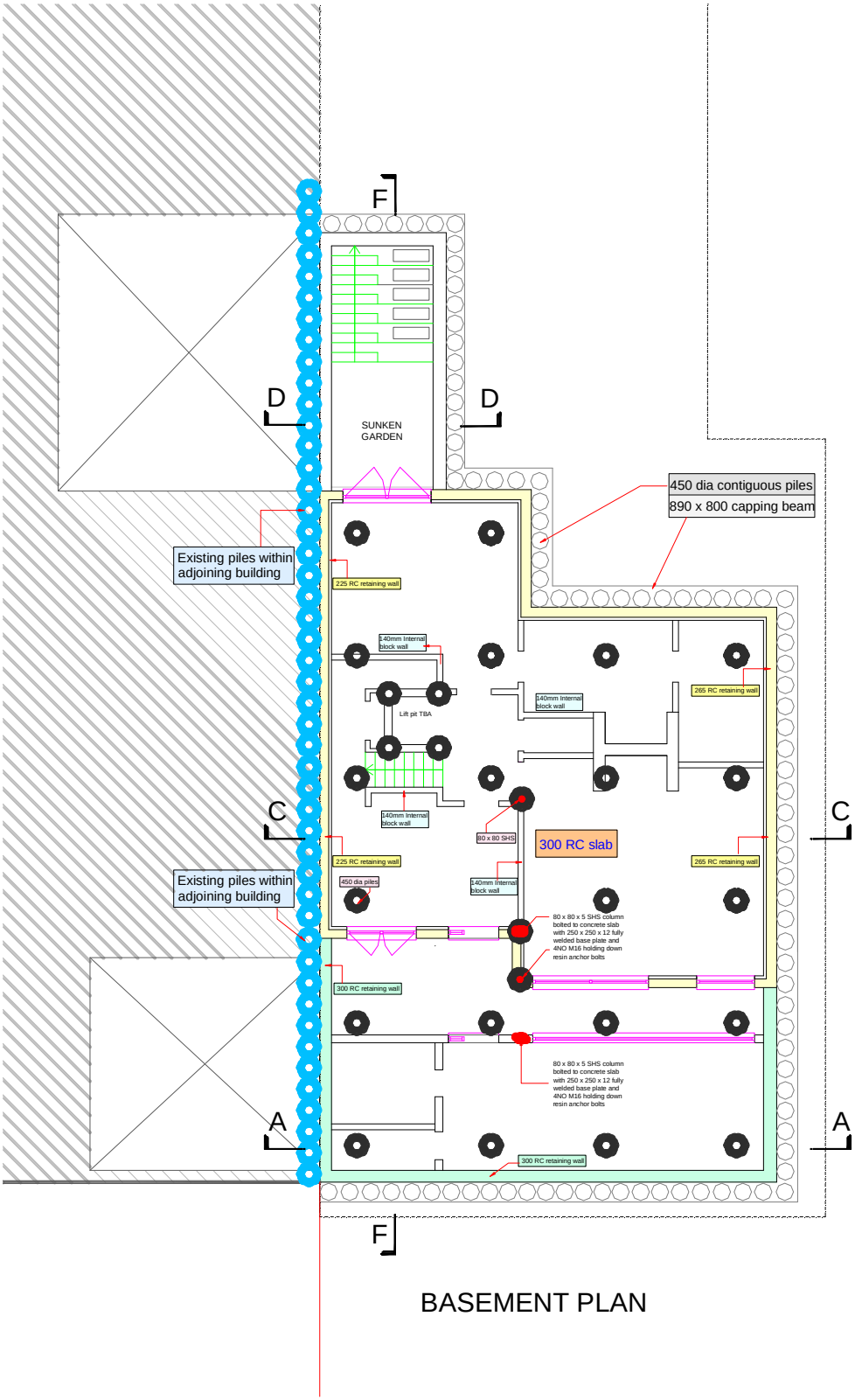


STAGE 6 - Steel
Frame & construction



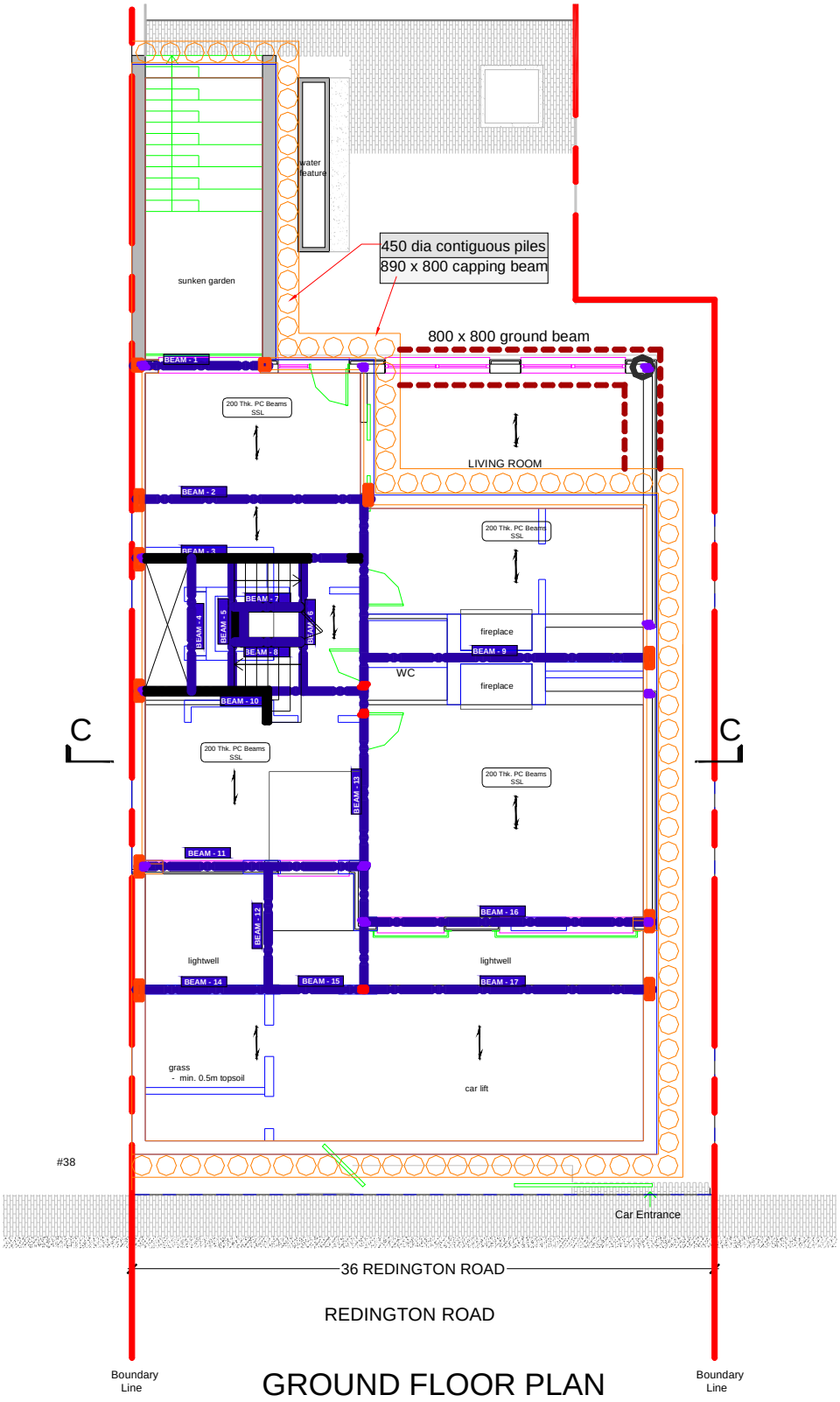
STAGE 6 - Steel
Frame & construction

8.70 STAGE-7 Basement structure completed



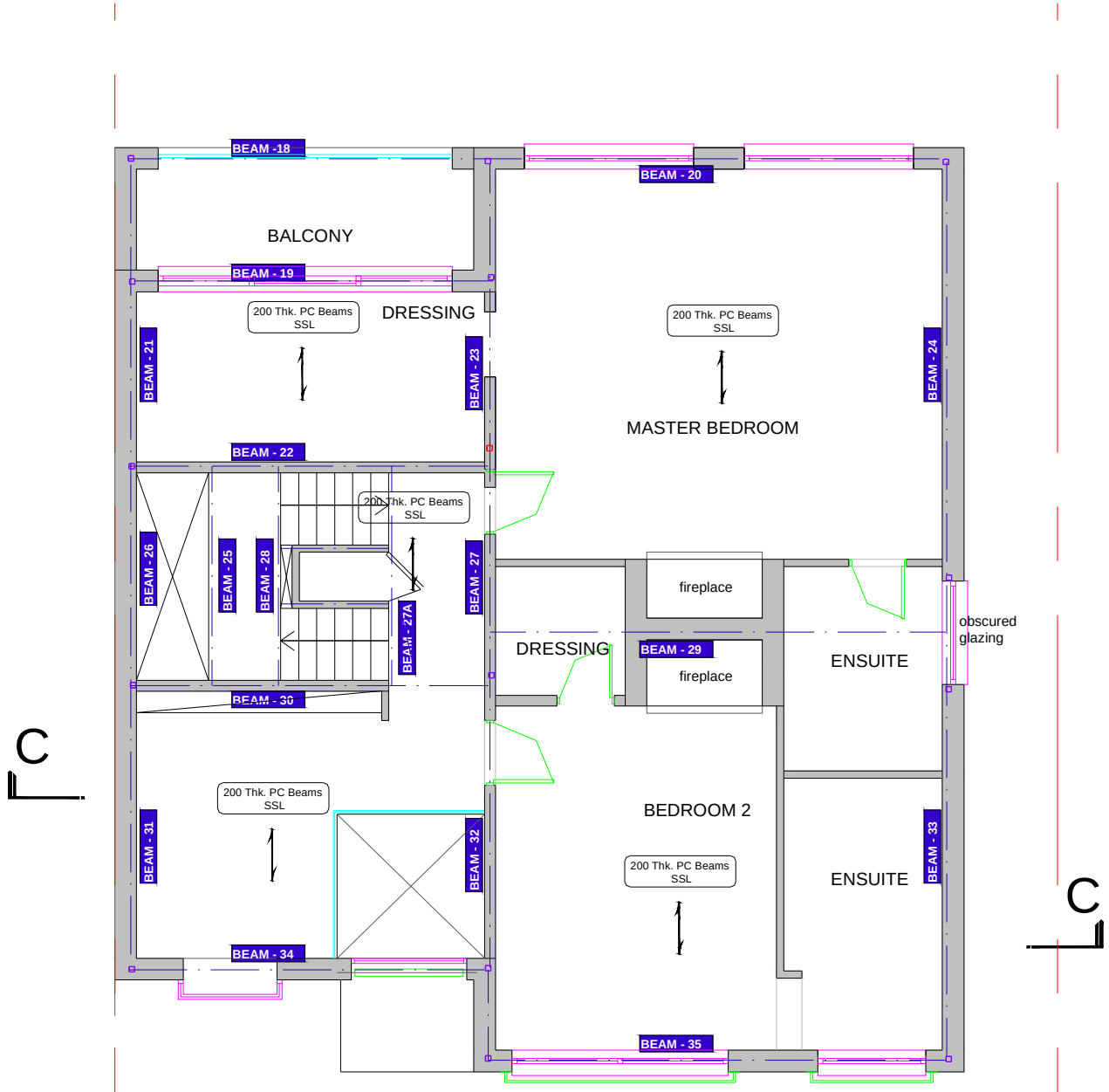
BASEMENT PLAN

8.80 STAGE -8 Ground Floor Structure Completed



8.80 STAGE-8 Ground floor precast floor on capping beam

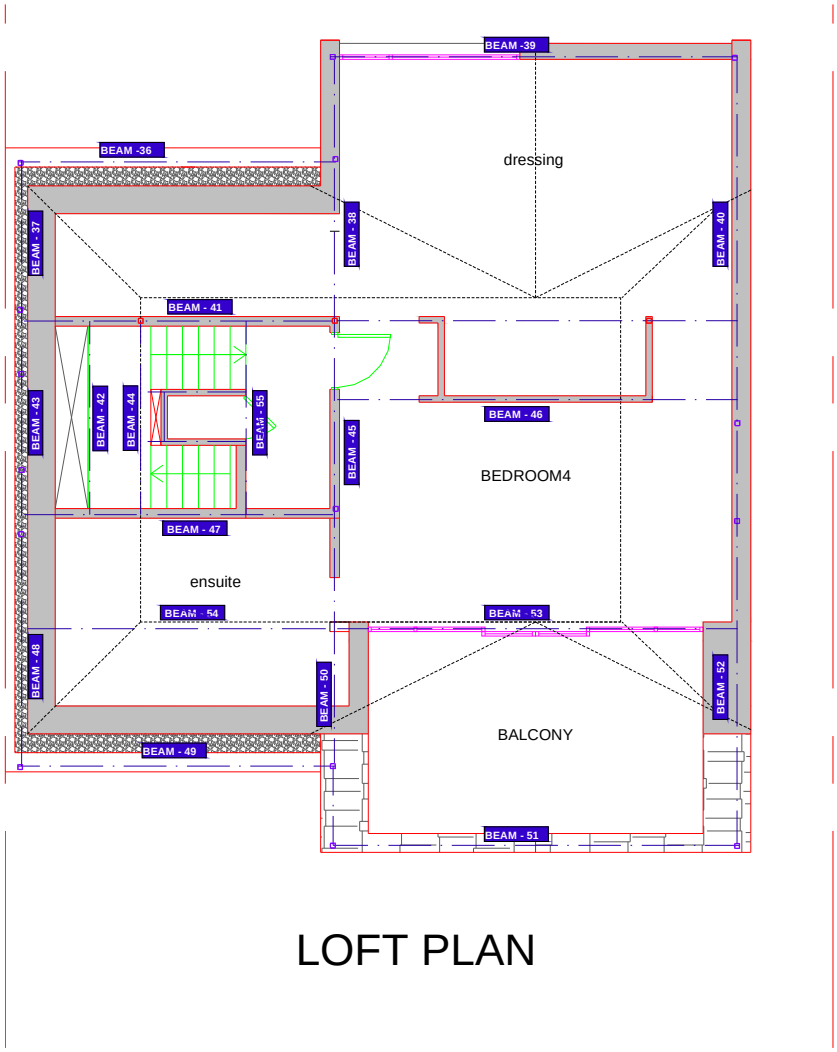
8.90 STAGE -9 First Floor Structure Completed



FIRST FLOOR PLAN

8.90 STAGE-9 First floor precast floor over steel frame

8.90 STAGE -9 Second Floor, Loft and Roof Completed



LOFT PLAN

9.00 Structural Calculations

The following design codes will be adopted for the structural design

BS8002 Earth Retaining Structures
BS8110 Structural Use of Concrete
BS648 Weight of Building Materials
BS6399 Loadings for Buildings
BS8004 Foundations

Underpinning party walls, worst case will be in temporary condition

Loading

Total area internally to be supported

12 x 12 = 144m2

DL1 = 0.86 x 144 = 120 kN
LL1 = 0.75 x 144 = 108 kN

DL = 0.25 x 24 x 144 x 3 = 2592 kN
LL = 1.5 x 144 x 3 = 684 kN

Total Load = 120+108+2592+684 = 3600kN

Number of internal piles = 22

Loading per pile = 163 kN + basement slab = 10 x 9 = 90 kN
Total per bearing pile = 253 kN

External piles Loading :

DL = 0.86 + 0.75 + 18 + 4.5 = 25 kN per/m x 4 = 100 kN/m + 4.8 x 10 = 148 kN/m

Each pile supporting 148/3 = 50 kN

Contiguous piles each support = 50 kN
Internal bearing piles = 253 kN

Design for internal bearing pile 8m deep

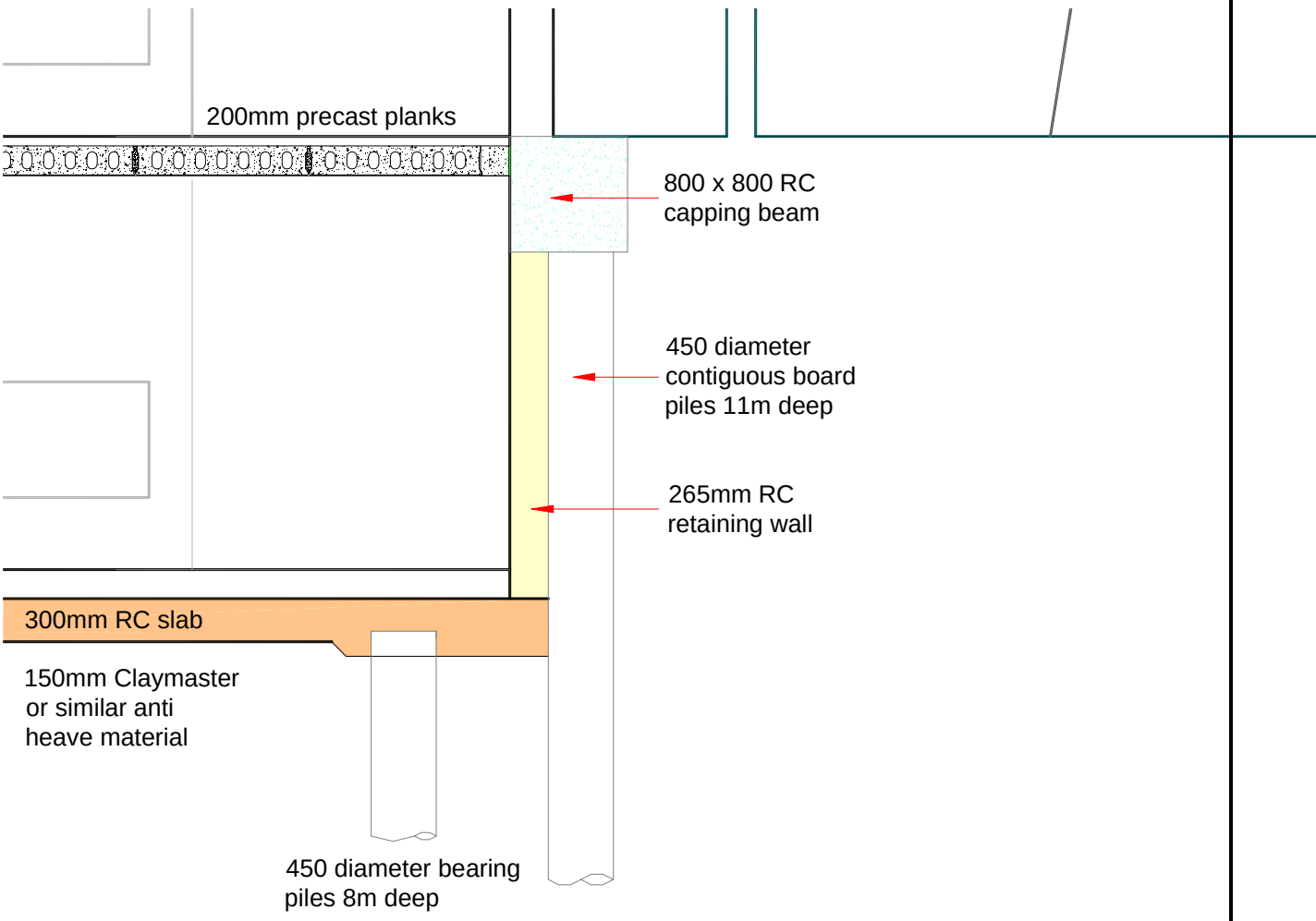
Pile capacity QS Friction = 0.45 x 80 x 11 = 396 kN
Qb end bearing = 80 x 0.15 = 12 kN

Pile resistance = 396 + 12 = 408 kN

Actual load = 140 kN

Factor of safety 408/140 = 3

Bearing pile specification will be 8m deep 450mm diameter
Contiguous pile specification will be 11m deep 450mm diameter



Suspended slab design

DL = 0.35 x 24 = 8.4 kN/m2
LL = 1.50 1.5 kN/m2

Factored bending moment

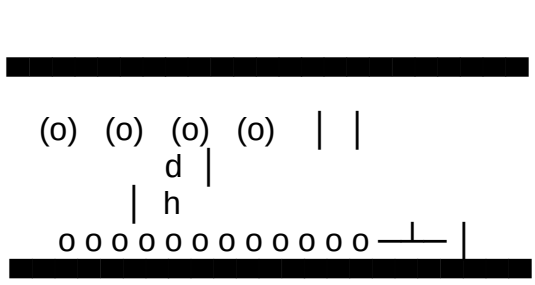
8.4 x 1.4 + 1.5 x 1.6 = 21 x 3.5 x 3.5 /8 = 32 kNm

300 slab

Location: Continuous slab

Bending in solid slabs (with comp.steel if reqd.), designed per metre width, with checks on minimum steel and span/effective-depth ratio

Calculations are based on EN1992-1 2004 Eurocode 2:Design of concrete structures and assume the use of a simplified rectangular concrete stress-block, and that the depth to the neutral axis is restricted to 0.45d



Design moment - (i.e. factored moment)

Design BM before redistribution Mbef=32 kNm
Section being analysed is considered as continuous.
Section considered has a sagging moment

Materials

Char cylinder compress strength fck=35 N/mm¬2 (concrete)
Char yield strength of reinft fyk=460 N/mm¬2
Max.aggregate size (for bar spc.) hagg=20 mm
Diameter of tension bars dia=12 mm

Diameter of distribution bars diad=10 mm

Durability and cover to reinforcement

Life of structure 50 years
Exposure class XC1
Designed concrete C 35 /45
Minimum cover covern=50 mm
Fixing tolerance tol=10 mm
Nominal cover (Cl. 4.4.1.1(2)) cover=60 mm

Section properties

Overall depth of section h=300 mm
Effective depth of section d=300 mm
Breadth of section b=1000 mm

Main reinforcement

Partial safety factor for steel gams=1.15
Char yield strength of reinft. fyk=fy=460 N/mm¬2
Partial safety factor for conc. gamc=1.5
Char cylinder compress strength fck=35 N/mm¬2 (concrete)
Design yield strength of reinft. fyd=fyk/gams=460/1.15=400 N/mm¬2
It is usual practice in the UK to restrict x/d to 0.45
Limit on factor delta=0.85
Factor K'=0.597*delta-0.18*delta^2-0.209
=0.597*0.85-0.18*0.85^2-0.209
=0.1684
Factor K=M*1E6/(b*d^2*fck)
=32*1E6/(1000*300^2*35)
=0.0102
No compression reinforcement required.
Lever arm z=d/2*(1+SQR(1-3.529*K))
=300/2*(1+SQR(1-3.529*0.0102))
=297.3 mm
Reduce lever arm to z=0.95*d=0.95*300=285 mm
Depth to neutral axis x=2.5*(d-z)=2.5*(300-285)
=37.5 mm
Tension reinforcement required As=M*1E6/(fyd*z)=32*1E6/(400*285)
=280.7 mm¬2
Mean width of the tension zone bt=bw=1000 mm
Mean value axial tensile strength fctm=0.3*fck^(2/3)=0.3*35^(2/3)
=3.21 N/mm¬2
Minimum reinforcement required Asmin=0.26*fctm*bt*d/fyk
=0.26*3.21*1000*300/460
=544.3 mm¬2
Area of tension reinforcement As=Asmin=544.3 mm¬2
Breadth of section bw=1000 mm

Maximum reinforcement permitted Asmax=0.04*bw*h=0.04*1000*300
=12000 mm¬2
Percentage area steel required rho=100*As/(bw*d)
=100*544.3/(1000*300)
=0.1814 %
Distribution steel Asmpr=Asmin=544.3 mm¬2

DESIGN SUMMARY FLEXURE

Overall depth 300 mm
Effective depth 300 mm
Parameter K 0.0102
Parameter K' 0.1684
Lever arm ratio z/d 0.95
Steel area (tension) 544.3 mm2/m
Steel percentage req. 0.1814 %
Minimum area of steel 544.3 mm2/m
Maximum area of steel 12000 mm2/m
Distribution steel 544.3 mm2/m

Use B1131 Mesh

British Standard reference	Longitudinal wires size mm	pitch mm	area mm² /m	Cross wires size mm	pitch mm	area mm² /m
Square Mesh Fabric						
A 393	10	200	393	10	200	393
A 252	8	200	252	8	200	252
A 193	7	200	193	7	200	193
A 142	6	200	142	6	200	142
A 98	5	200	98	5	200	98
Structural Fabric						
B1131	12	100	1131	8	200	252
B 785	10	100	785	8	200	252
B 503	8	100	503	8	200	252
B 385	7	100	385	7	200	193
B 283	6	100	283	7	200	193
B 196	5	100	196	7	200	193

Spacing of bars - Tension reinforcement

Minimum pitch (sagging moment) pchmn=50 mm
Maximum pitch of bars (<3h) pchmx=400 mm
Calculated pitch of bars pitch=1000*PI*dia^2/(4*As)
=1000*3.142*12^2/(4*544.3)
=207.8 mm
Round spacing (c.to c.of bars) to 200 mm (rounded).
Chosen spacing of tension bars pch=100 mm
Area of tension steel provided Aspr=1000/pch*PI*dia^2/4
=1000/100*3.142*12^2/4
=1131 mm2/m

TENSION (AND DISTRIBUTION) Diameter of bars 12 mm
REINFORCEMENT Spacing of bars 100 mm
Area of steel required 544.3 mm2/m
Area of steel provided 1130 mm2/m

Deflection

Effective span of slab L=3.5 m
Actual span to depth ratio l'd=L*1000/d=3.5*1000/300
=11.67
Reference reinforcement ratio rho0=(fck^0.5)/10=(35^0.5)/10
=0.5916 %
Basic span effective depth ratio terms (Clause 7.4.2)
N1=1.5*(fck^0.5)*rho0/rho
=1.5*(35^0.5)*0.5916/0.1814
=28.94
N2=3.2*(fck^0.5)*(rho0/rho-1)^1.5
=3.2*(35^0.5)*(0.5916/0.1814-1)^1.5
=64.35
N=11+N1+N2=11+28.94+64.35
=104.3
Factor for simply supported spans k=1.0
Flange beam factor F1=1
Factor for long spans F2=1.0
Tensile steel stress factor F3=500/(fyk*As/Aspr)
=500/(460*544.3/1130)
=2.257 (conservative)
Long spans factor F2 1
Steel stress factor F3 1.5
Allowable l/d ratio 40

10.00 Impact on Roadway and adjoining Buildings

10.10 The construction of this relatively small basement is confined within the boundaries of the main footprint of the house. The depth of excavation and the works is relatively low-level.

10.20 The works will have no effect to any roadway with the exception of skips and hoardings. The works will be carried out in accordance with an approved construction traffic management plan.

10.30 The surrounding buildings are classified as standard residential and there are no listed or historic buildings in the area that requires any special or particular attention. There will be minimal vibration as a result of installation of the piles and these are very unlikely to be felt within the surrounding area.

10.40 The new construction will not be deeper than the adjoining building at number 38 Reddington Road which has a double basement . The next neighbouring property at 7 Reddington Gardens will 5m away from the line of the excavation and with a single basement not being deeper than 3.8m the foundations of this building will not be undermined and no additional surcharge will be required to be taken for the design of the contiguous piles other than ground plus hydraulic pressure from standing water at a depth of 1m.

10.50 The ground which consists of London Clay will provide ample bearing and friction resistance to the piles and settlements expected from this relatively light weight construction will be minimal.

11.00 Conclusion

11.10 This construction is considered to be a simple and standard way of achieving a basement without affecting the surrounding areas.

11.20 A significant amount of data has been gathered including ground investigations borehole results and details of the adjoining building. Standard construction methods and techniques will be used together with traditional materials.

11.30 The construction techniques together with the presence of the contiguous board piles reduce the amount of temporary works and the nature of the underlying geology minimises the risk of ground slip and movement.

11.40 The new construction will be beneath the prevailing groundwater level and a suitable dewatering system will be designed involving sumps and pumps to discharge the water from the excavations. The construction method is controlled and will be undertaken in pre-determined sequences and without the need for large open excavations that could potentially be unstable.

12.50 On the basis of the above we can conclude that the construction of the proposed subterranean works will not affect the structural stability of the surrounding buildings and infrastructure.

12.60 There will be no disturbance to the geology and flow of natural water and there will be no disturbance to any critical utilities.

12.70 The works will not significantly increase the flow of storm water and the existing system will not be placed under any strain as a result of this work.

Peter Zussman BSc CEng MIStructE

Chartered Structural engineer

Our Ref: J11894

Southern Testing
Environmental & Geotechnical

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Co. Secretary A L Gurney FCIS ACIB
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D Illingworth BSc FGS

08 October 2015

Archetype Associates Ltd
121 Gloucester place
London - W1U 6JY

For the attention of Masoud Parvardin

Dear Sirs,

Re: 36 Redington Road, London NW3

Further to the audit report produced by Campbell Reith dated September 2015 (ref 12066-41 Rev D1), in relation to the BIA submitted as part of the planning application for the above address.

Campbell Reith raised a number of items in that audit report where they required further clarification, and these are answered in turn below and within the attached addendum. We have, for clarity, used the same referencing numbers for these points as adopted by Campbell Reith within their Appendix 2.

Query No 1: both of our BIA reports (stages1&2) and (stages 3&4) had the involvement of a chartered civil engineer M W Stevenson, who is a signatory to both reports. Morris is also a chartered geologist so does fall into the category of a chartered civil engineer having experience in engineering geology.

Query No 2: confirmation of the exact nature of the foundations of No 38 Redington Road is outside the scope of our works. Whilst we also used the documentation on the London Borough of Camden's planning website to understand what was proposed at the neighbouring site, we obviously have no knowledge of the 'as built' nature of the building's foundations, or realistically have any way of determining them without intrusive works in agreement with the neighbour.

Query No 3: as discussed in our stage 3&4 report we had assumed that the basement excavation would be propped both in the temporary condition and in the final works. We had therefore undertaken our ground movement analysis assuming a high stiffness (propped) wall conditions. Given the Structural Engineering Report had proposed a cantilevered design, there was obviously a mismatch in our technical submissions. As suggested by Campbell Reith we have re-run the Ground Movement Analysis assuming a low stiffness (unpropped) wall approach and this is reported as an addendum to our BIA (Stages 3&4) report; and a copy is attached.

As can be seen within this addendum, the predicted movements in relation to 7 Redington Gardens and the adjacent highway using a cantilever wall approach are significantly greater than for the propped situation. As outlined within CPG4, planning permission will only be given where it is demonstrated that the proposals will not cause any harm to the built environment. With this in mind we would suggest forwarding our addendum to the structural engineer for them to assess whether the proposed methodology is still appropriate or whether propping and ground movement monitoring may need to be adopted; which would be our favoured option and may be required to satisfy the requirements of Camden and Campbell Reith.

Query No 4: this is outside the scope of our works and will need to be confirmed by the structural engineer.

Query No 5: we made recommendations regarding this subject within our BIA (stages 3&4) report, however the proposals will need to be confirmed by the structural engineer.

Query No 6: we made recommendations regarding this subject within our BIA (stages 3&4) report, however the proposals will need to be confirmed by the structural engineer.

Query No 7: flood risk assessment is outside the scope of our works.

Query No 8: assessment of the increased volumes of surface water and capacity of the existing sewer is outside the scope of our works.

We trust we have clarified the points raised by Campbell Reith as far as we are able and that the above points are clear. However should further information or clarifications be required please do not hesitate to contact the undersigned.

Yours faithfully,

J N Race MSc CGeol
For and on behalf of
Southern Testing Laboratories Limited
encs

ADDENDUM

SITE; 36 REDINGTON ROAD, ADDENDUM TO REPORT J11894

A GROUND MOVEMENT ANALYSIS BASED ON PROPOSED UNPROPPED WALL.

1 Impact of the Proposed Basement in terms of Ground Movement

Following an audit carried out by Campbell Reith of the Basement Impact Assessment the original Ground Movement Analysis has been revised. In the original Ground Movement Analysis (GMA) it was assumed that the walls would be fully propped and would therefore act as high stiffness (propped) walls. However it is now understood that the walls will not be propped and will therefore act as low stiffness (cantilevered) retaining walls. The Audit also required that in addition to the effects of the proposed construction on No 7 Redington Gardens that the ground movement assessment should be revised to reflect the proposed construction methodology and any impact on the highway considered.

The original GMA also assumed that, given the adjacent property No. 38 Redington Road was formed using piled foundations with bored pile retaining walls, that the effects of the proposed works will be negligible. The construction details relating to No 38 Redington Road should be confirmed by the Structural Engineer/Architect to substantiate this assumption.

1.1 Assumptions and model used for the analysis of ground movements

Allowing for thickness of the slab, etc, the formation level of the proposed basement will be about 3.5m below existing site levels. It is proposed to construct the basement by installing contiguous bored piles. The length of the piles is to be determined by the piling contractor, but given a retained height of approximately 3.5m, a length of 11m has been assumed for the purpose of this analysis (as outlined within the structural engineer's 'Method Statement for Subterranean Development').

The effect of demolition of the building and excavation of the soil to form the basement will cause a reduction in stress at the new formation level, due to the weight of the building and soil removed. This unloading of the ground is normally modelled as producing a short-term (undrained) response followed by a longer term (drained) response. The predicted ground response was modelled using the OASYS program PDISP. This program assumes a linear elastic behaviour of the soil and a flexible structure. In reality, the finite stiffness of the structure(s) will tend to redistribute or smooth out the movements, when compared to those predicted by PDISP. The settlement calculations therefore represent free field movements unaffected by the stiffness of the structure(s) and are likely to be conservative (i.e. the distortions of the structure would be less than those obtained from the predicted movements).

For PDISP modelling purposes London Clay was assumed to extend from ground surface to depth. The rigid base for the analysis was taken as 40m BGL. The soil parameters used are presented in section 20 of this report. Site ground level was taken as an arbitrary value of 100m OD, the rigid base for the analysis was taken as 60m OD.

1.2 Movements from demolition & excavation

The current structure has been estimated to apply a loading of approximately 25kPa over its footprint. Demolition and excavation of 3.5m of soil to form the basement will therefore produce an unload at the new formation level of about 90kPa.

A short-term (undrained) analysis was undertaken to determine the heave movements likely to arise as a result of the demolition and excavation. This indicated a maximum undrained heave of about 15mm occurring within the central area of the basement (see Figure U1 included in Appendix F). For the purpose of illustrating the likely heave displacements occurring beneath the neighbouring property, No. 7 Redington Gardens and the adjacent highway, displacement lines were extended from the nearest corner of the basement excavation towards No. 7 Redington Gardens (Figure LU1) and also from the mid-point of the basement wall nearest to the highway (Figure LU2).

The neighbouring property is located approximately 5m from the corner of the excavation and an undrained heave movement of 1mm is indicated at the nearest corner of No. 7 Redington Gardens reducing to zero at the furthest side.

In the case of the highway (Figure LU2) which is approximately 1.0m from the basement wall, the predicted undrained heave movement is 4.5mm reducing to 1mm approximately 6metres from the wall i.e. 5metres from the site boundary.

The movements of the ground following construction were also analysed for the long-term (drained) case. The analysis was again undertaken for the combination of the unloading due to demolition and excavation of the basement. The PDISP assessment indicates a maximum long-term drained heave of about 23mm occurring within the central area of the basement area (Figure V1). Referring to displacement line plot (Figure LV1) a heave movement of 2.25mm is indicated at the nearest corner of No. 7 Redington Gardens reducing to near zero on the furthest side of the property.

In the case of the highway (Figure LV2) which is approximately 1.0m from the basement wall, the predicted long-term drained heave movement at the site boundary is 8mm reducing to <1mm approximately 10metres from the wall i.e. 9metres from the site boundary.

It should be noted that the above values of heave given take no account of the effect of the proposed piled retaining wall to restrain vertical movements of the soil. It should also be noted that in practice, the heave movements that develop from unloading the soil do not occur in isolation from other ground movements associated with basement construction and excavation (as discussed below).

1.3 Movements due to pile installation and basement excavation

In addition to the changes in vertical stress caused by demolition of the property and the excavation of the soil to form the basement, the installation of a piled wall, and then the removal of soil from in front of the new walls will also generate both horizontal and vertical movement in the ground. Assessment of the ground movements resulting from the pile installation and the excavation to form the basement has been undertaken with reference to CIRIA guide C580 "Embedded retaining walls – guidance for economic design". This provides guidance on the horizontal and vertical movements of the soil adjacent to an embedded retaining wall as a result of pile installation and of excavation in front of the wall based on numerous case histories, for the

cases of a high stiffness (propped) retaining wall and a low stiffness (cantilevered) retaining wall. In this case a low stiffness (cantilevered) wall has been assumed.

Estimates of movements due to pile installation and basement excavation using CIRIA guide C580, are based on empirical data. Since such data is likely collected during and soon after construction, it is assumed to include any short term heave element. However, long-term ground movements from changes in vertical stress would likely not have occurred when the measurements of ground movement were made.

1.3.1 Movements due to Pile Installation

Ground movement guidance in C580 is divided into movements resulting from pile installation and from the mass excavation in front of the wall. However, the empirically derived relationship for ground movements resulting from pile installation given in the CIRIA guide is now considered to be overly conservative, since more recent projects have demonstrated that significantly smaller movements can be achieved with good quality workmanship, with negligible horizontal movements caused by pile installation, and vertical movements limited to 0.025% of pile length, and extending no more than 1.5 times the pile length from the pile wall. The length of the proposed contiguous piles has yet to be determined, but a pile length of 11m and has been assumed as the basis to calculate ground movements.

Referring to the displacement line plot (Figure CL1), the effect of the pile installation of an 11m long piled wall on No. 7 Redington Gardens would be expected to generate about 2.7mm of vertical movement (settlement) at the pile wall, with vertical movements reducing linearly with distance from the wall, becoming negligible at a distance of about 16.5m from the face of the wall. Taking the corner of No. 7 Redington Gardens to be 5 metres from the nearest corner of the basement, a settlement of approximately 1.9mm is predicted at the nearest corner of that property reducing to 0.3mm on the furthest side of the property.

In the case of the adjacent highway (Figure CL2), it is predicted that about 2.7mm of vertical movement (settlement) at the pile wall will occur, with vertical movements again reducing linearly with distance from the wall, reducing to zero at a distance of about 16.5m from the face of the wall. Given that the wall is some 1m from the highway, the predicted movement at this distance is approximately 2.6mm.

1.3.2 Movements due to Excavation in Front of the Piled Wall

The methodology within C580 indicates that the excavation to create the basement will, for a low stiffness (cantilevered) wall, produce horizontal movements of 0.4% of the excavation depth at the wall, with movements extending to four times the depth of the excavation, while vertical movements will be about 0.35% of the excavation depth at the wall, with such movements becoming zero at four times the depth of the excavation.

Referring to the displacement line plot (Figure EL1), the resultant horizontal movement of No. 7 Redington Gardens in towards the corner of the excavation are likely to be about 9mm reducing to zero on the furthest side. The predicted vertical settlement of No. 7 Redington Gardens is 5.5mm reducing to zero on the furthest side of the property.

In the case of the adjacent highway (Figure EL2) horizontal movements at the boundary of the site i.e. 1m from the wall are predicted to be 13mm reducing to zero 14m from the wall (13m from the

site boundary). The predicted vertical movements range between approximately 10mm at the boundary of the site reducing to zero 13m from the site boundary.

The movements derived from the CIRIA guidance are based on the empirical data within C580. As such, it is assumed that they include any short term element of ground movement due to vertical stress change. However, it is unlikely that the C580 data includes the long-term movements resulting from vertical stress changes. Total ground movements resulting from the proposed development are therefore taken as the sum of the predicted ground movements using C580, plus the difference in estimated PDISP movements between short and long-term conditions.

1.4 Summary of Ground Movements

In summary the cumulative short term effects of the pile installation and bulk excavation indicate that the No. 7 Redington Gardens will experience about 7.4mm of settlement and 9mm of horizontal movement on the nearest corner of the property with zero horizontal movements and 0.3mm vertical movement on the furthest side of the property.

As noted previously, it is unlikely that the C580 data includes the long-term movements resulting from vertical stress changes. Therefore total vertical ground movements resulting from the proposed development are taken as the sum of the predicted ground movements using C580, plus the difference in movement between short and long-term, as predicted from the PDISP analysis.

For the long-term drained condition, predicted movements of No. 7 Redington Gardens will be 6.2mm of settlement and 9mm horizontal movement on the nearest corner of the property with zero horizontal movements and 0.3mm settlement on the furthest side of the property.

On the basis of the above, the horizontal strain across No. 7 Redington Gardens is estimated to be around 0.09% with deflection ratios of between 0.08% (short term) and 0.06% (long term).

The combination of horizontal and vertical strains for the short-term and long-term conditions therefore suggests a damage category 3 and 2 respectively (slight to moderate) as classified within C580 for No. 7 Redington Gardens. The above assumes good quality working practice during pile construction is employed. Given the above categories of damage noted the Engineer may wish to consider the use of propping measures.

In the case of the nearby highway, a combined plot of horizontal and vertical movements associated with pile installation and bulk excavation are given in Figure CU1 and for the long-term drained condition Figure CU2. The Highway Department should be consulted in relation to the predicted movements. Again if the movements are considered unacceptable the use of propping measures may need to be considered. Given the magnitude of these predictions at the very least remedial works to the footway would be anticipated.

Finally a formal monitoring system should be employed during construction in order to observe and monitor ground movements, especially in critical areas such as boundaries and with neighbouring properties. Monitoring data should be checked against predefined trigger limits to give early indications if any deviating ground movements are occurring.

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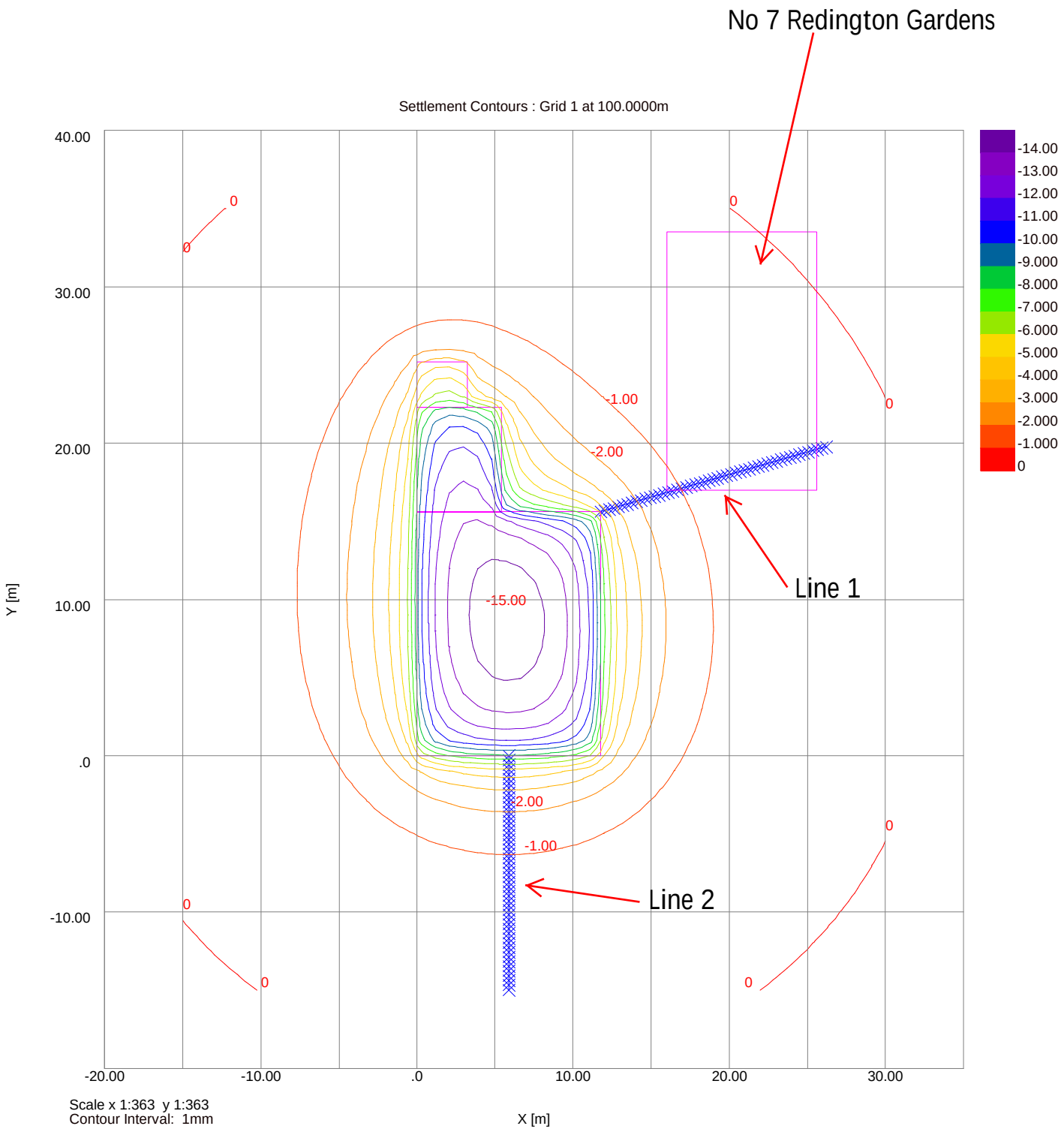
36 Redington Road
Undrained Analysis
Figure U1



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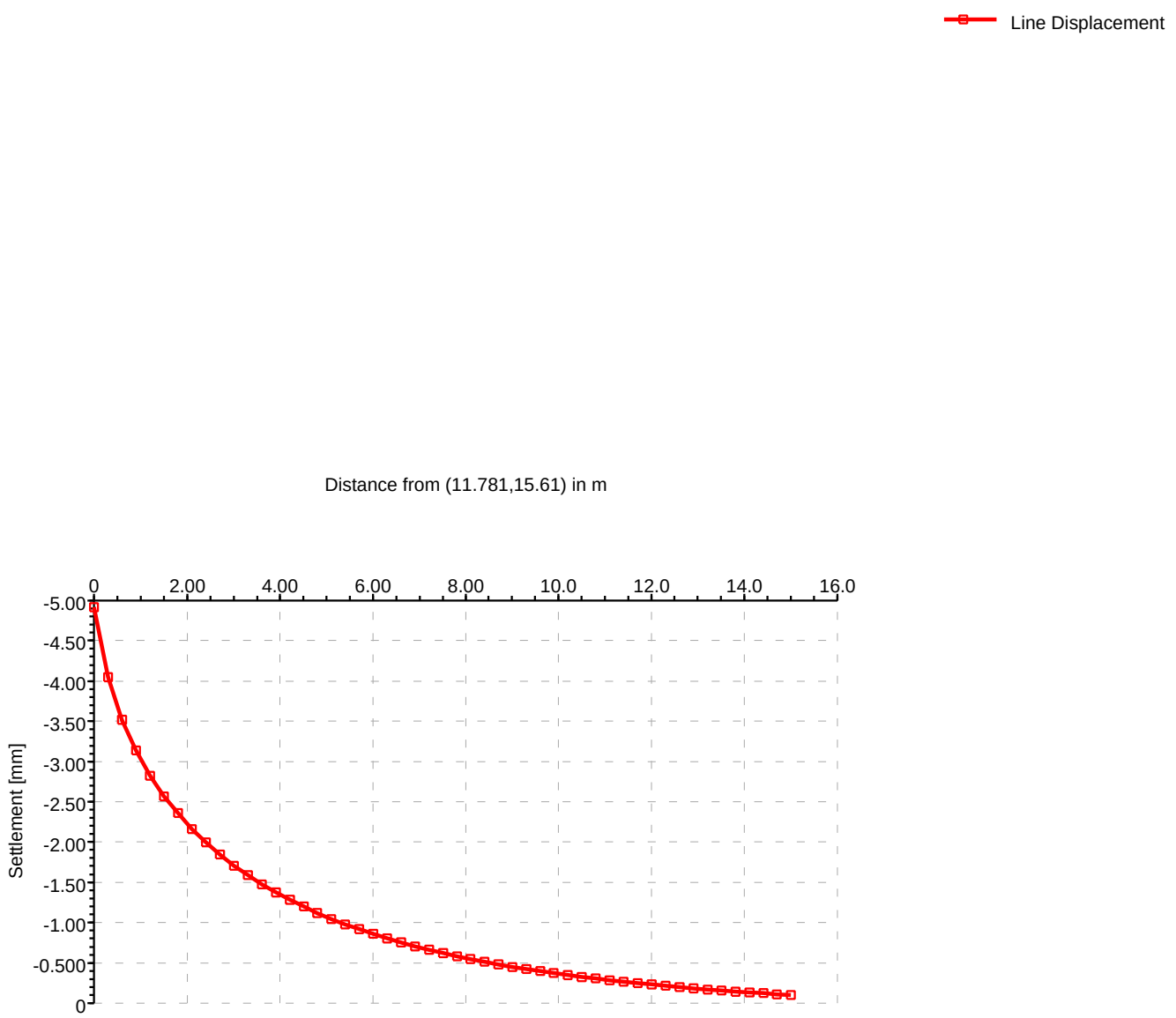

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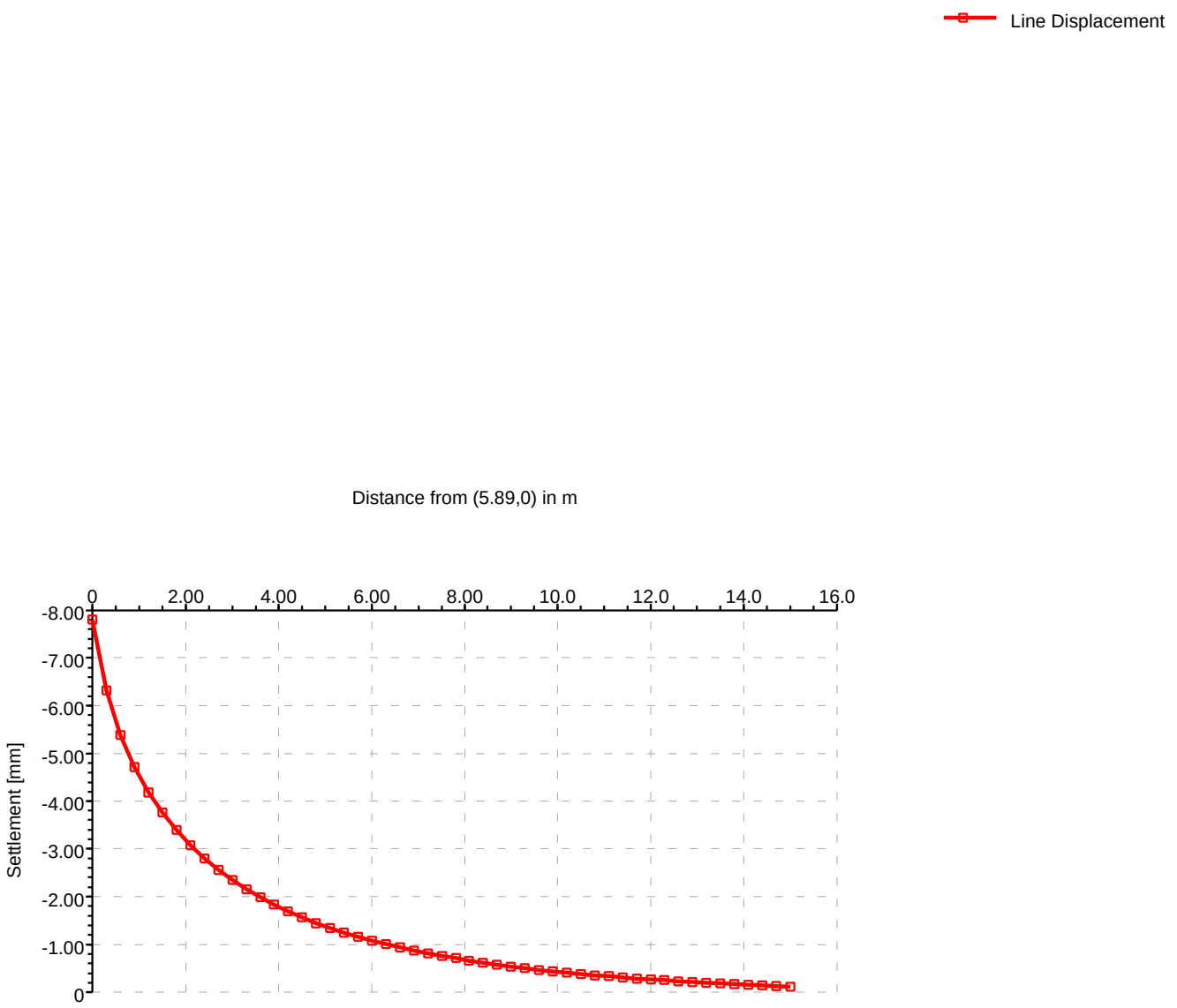

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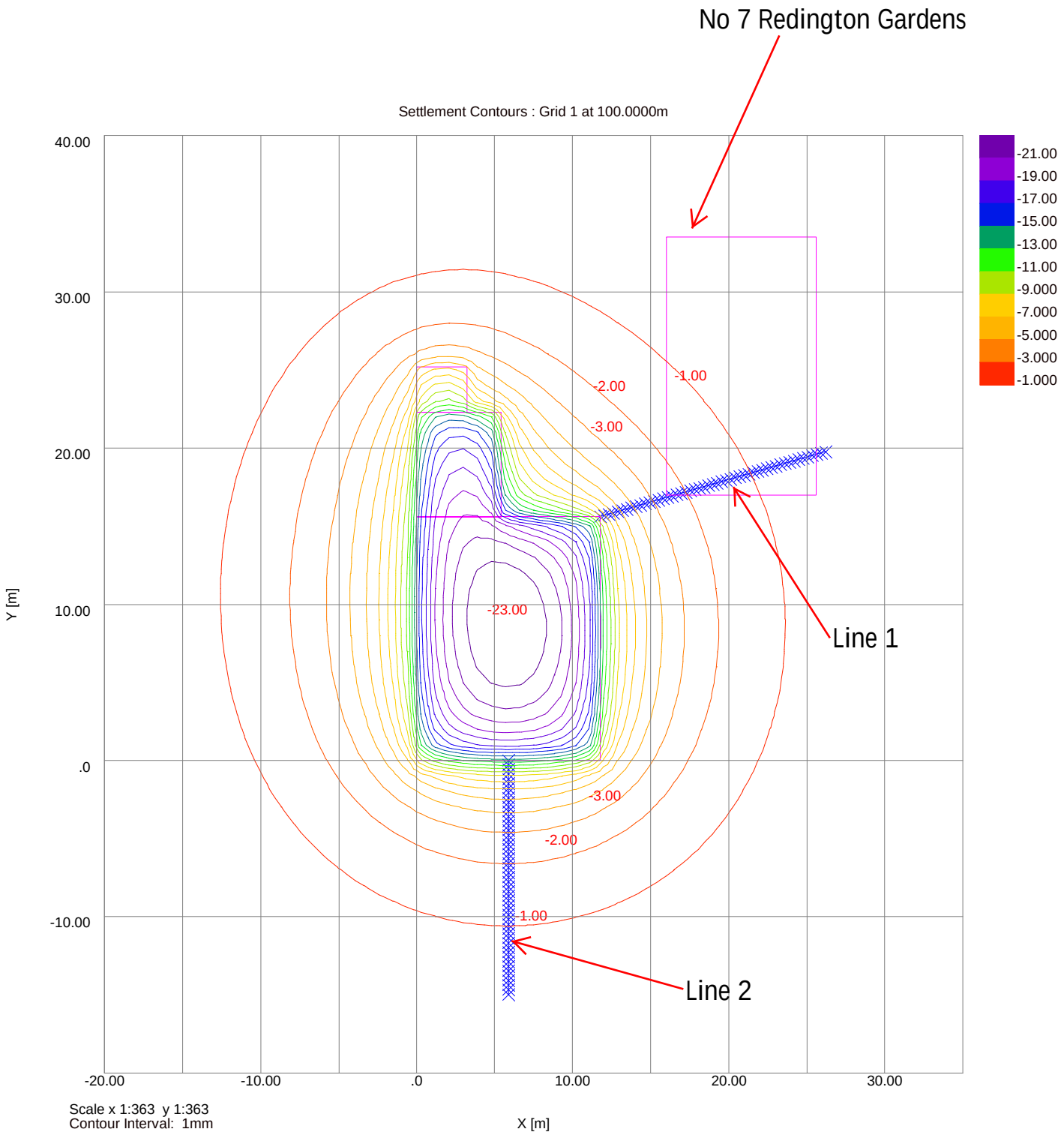
36 Redington Road
Drained Analysis
Figure V1



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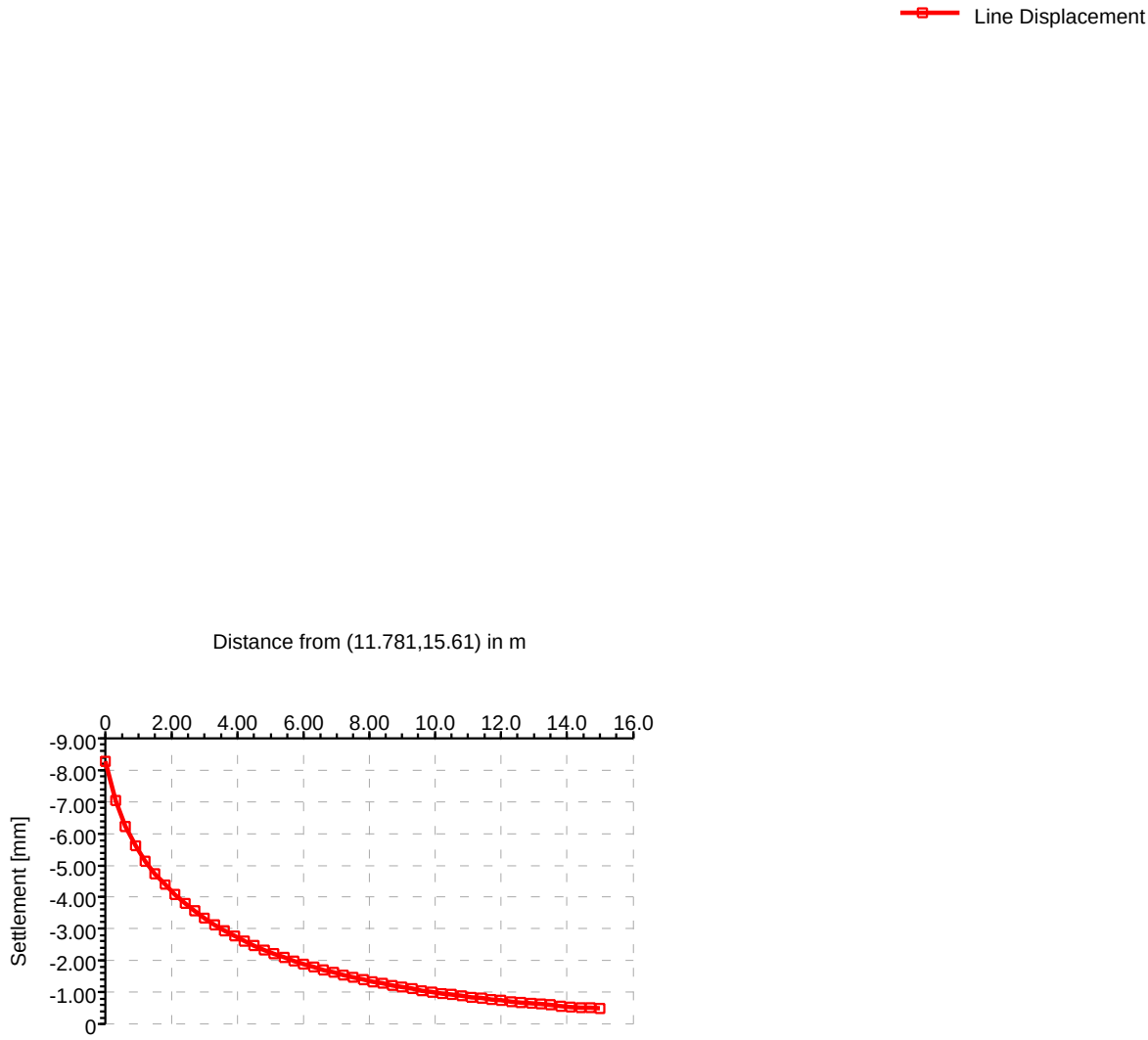

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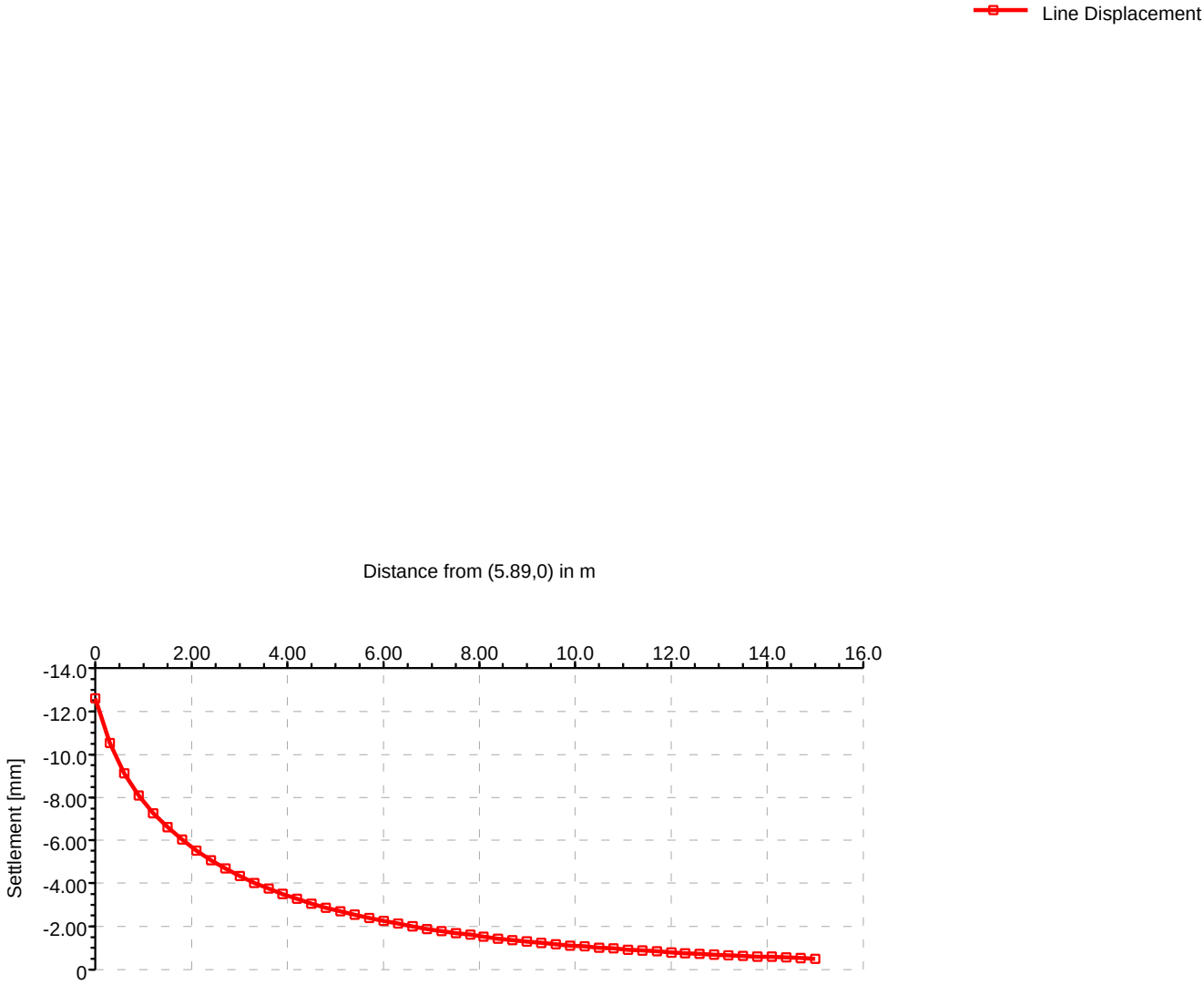
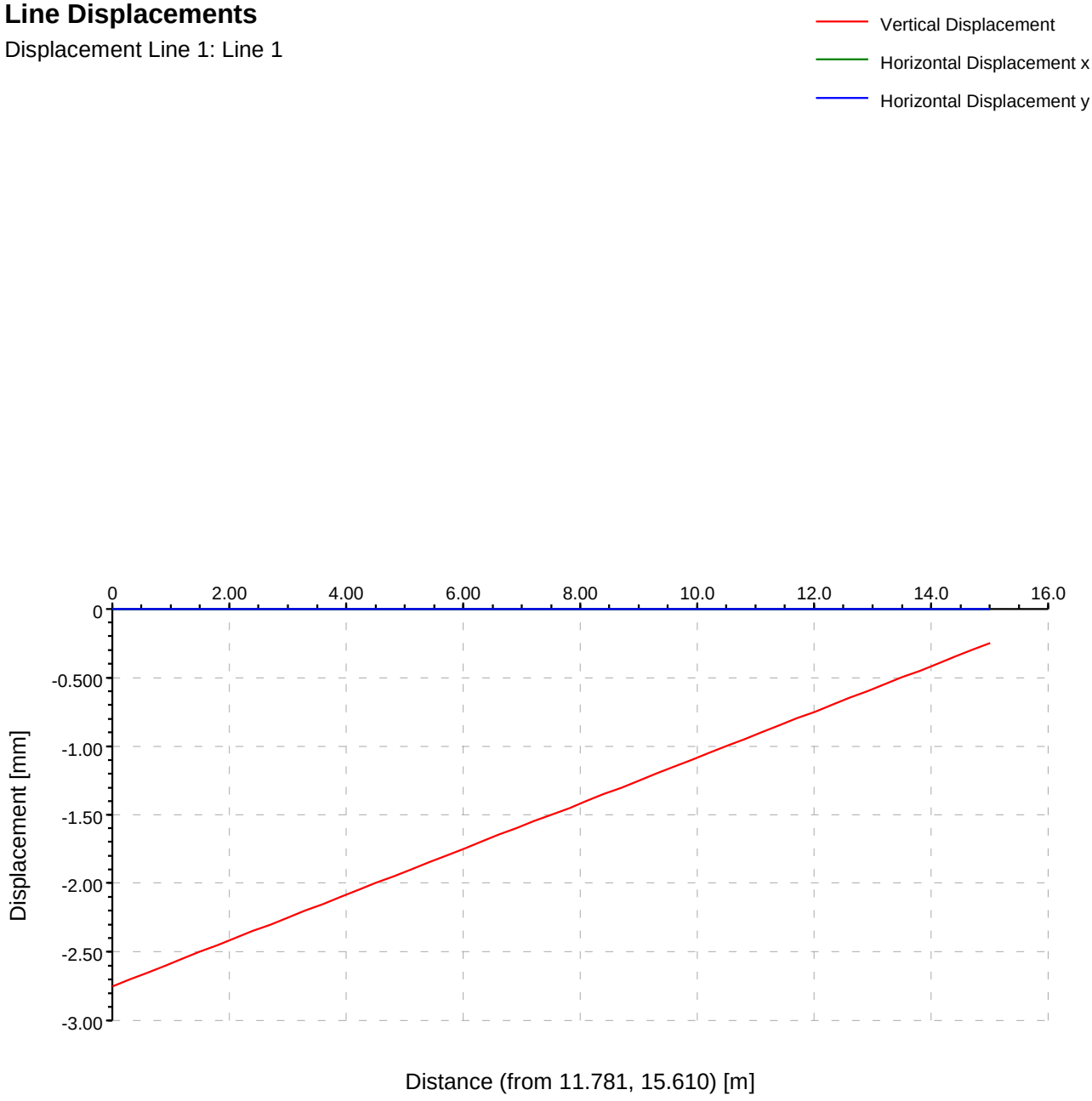


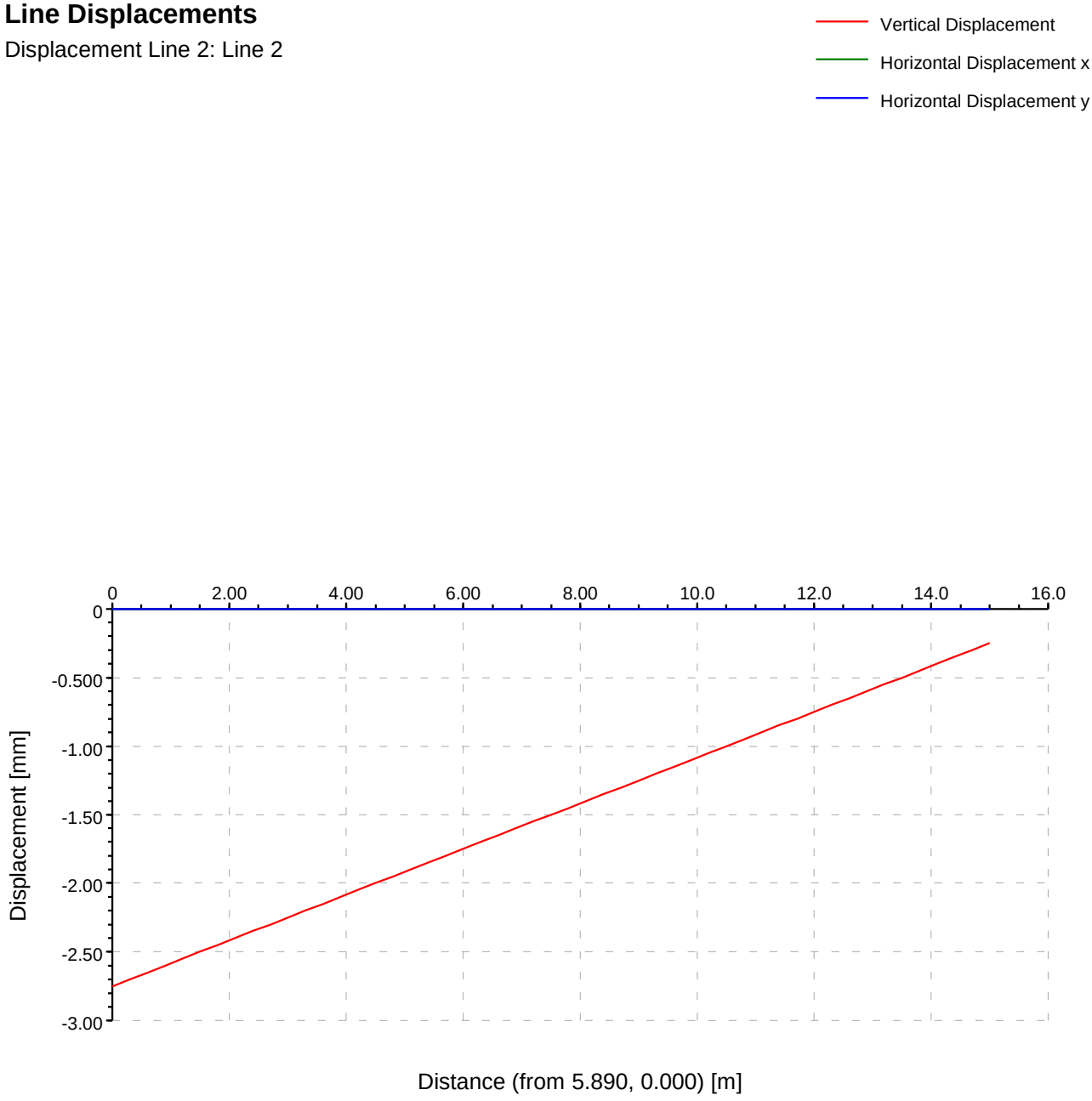
Line Displacements

Displacement Line 1: Line 1



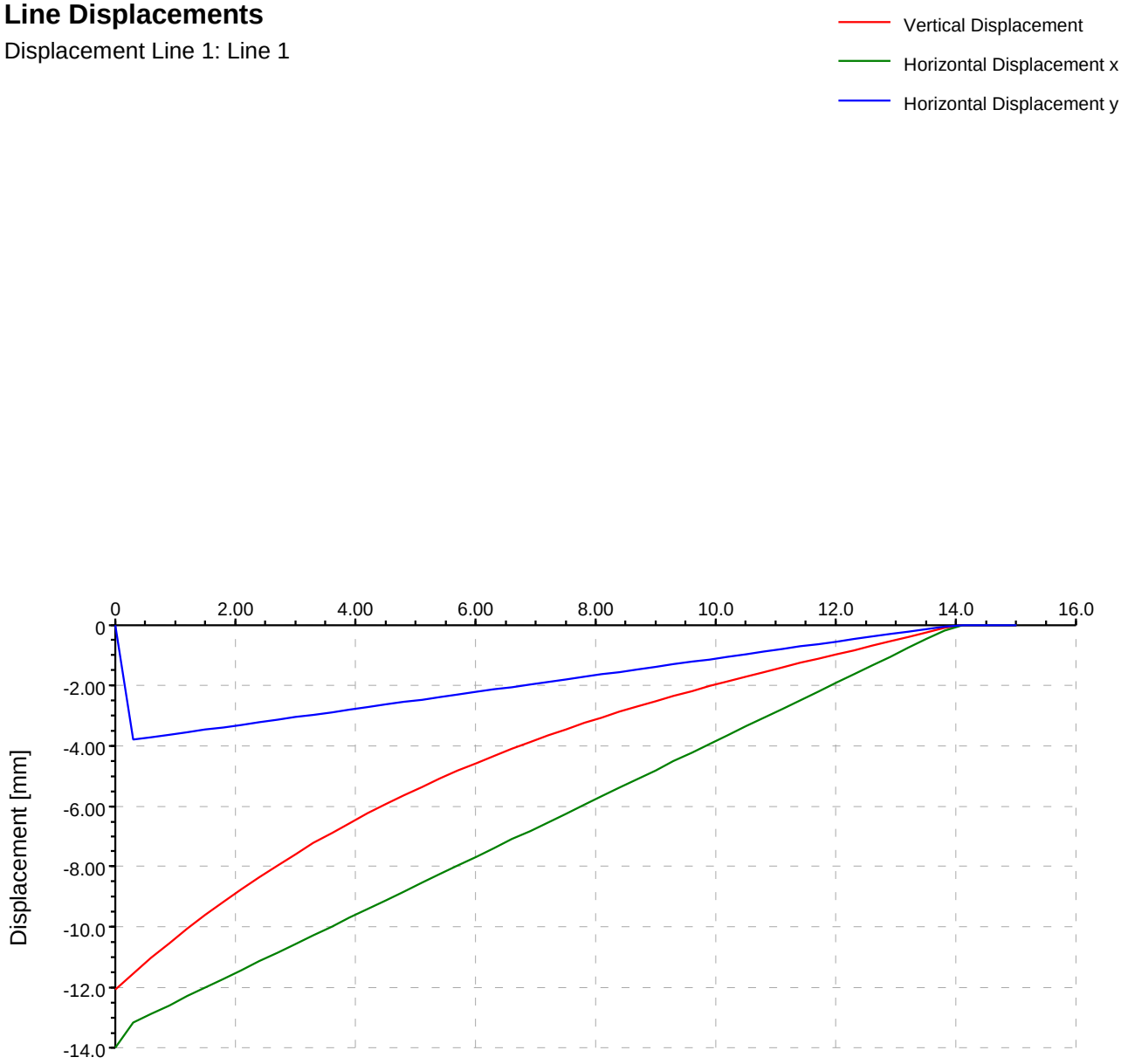
Line Displacements

Displacement Line 2: Line 2



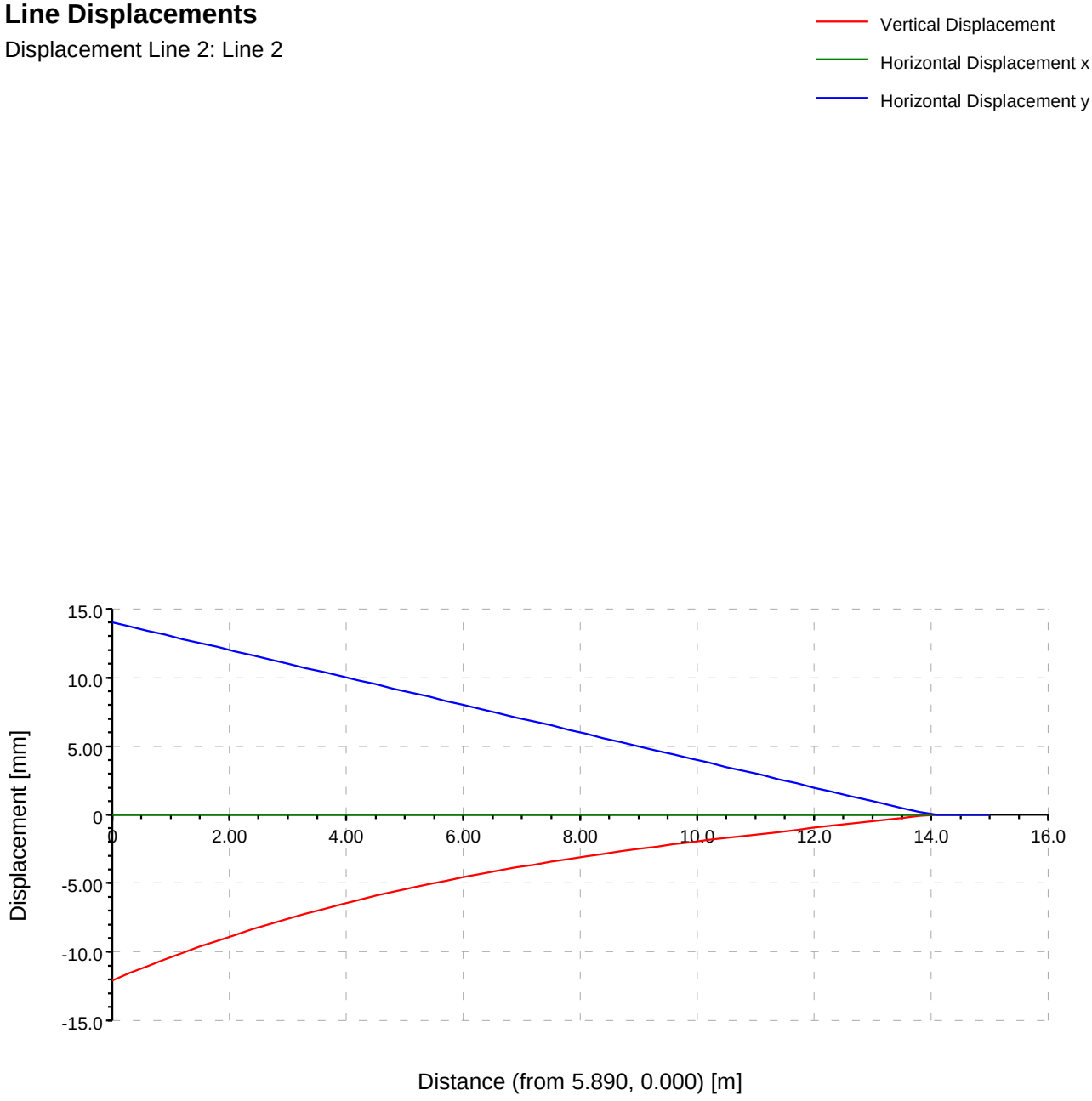
Line Displacements

Displacement Line 1: Line 1



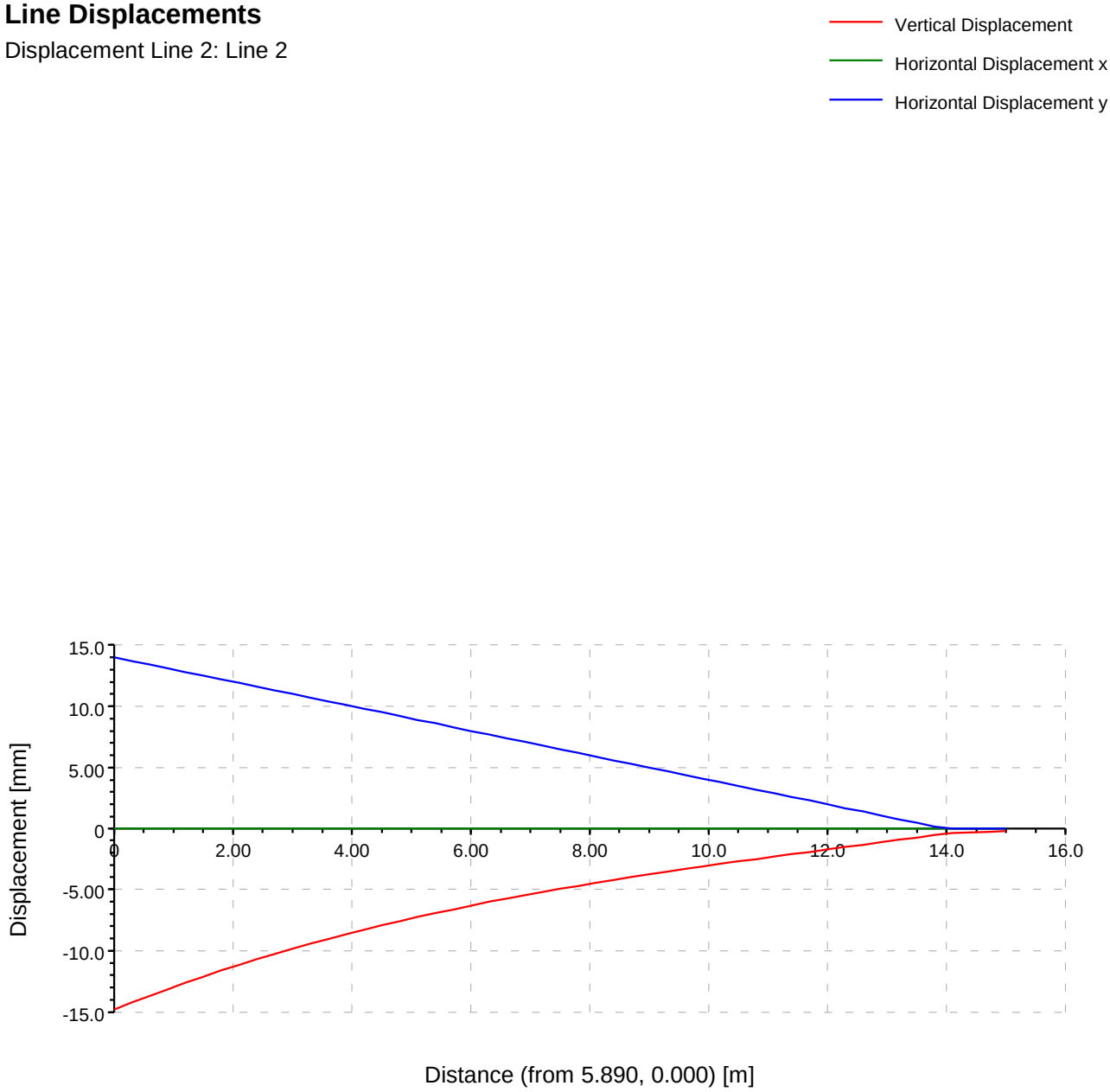
Line Displacements

Displacement Line 2: Line 2



Line Displacements

Displacement Line 2: Line 2



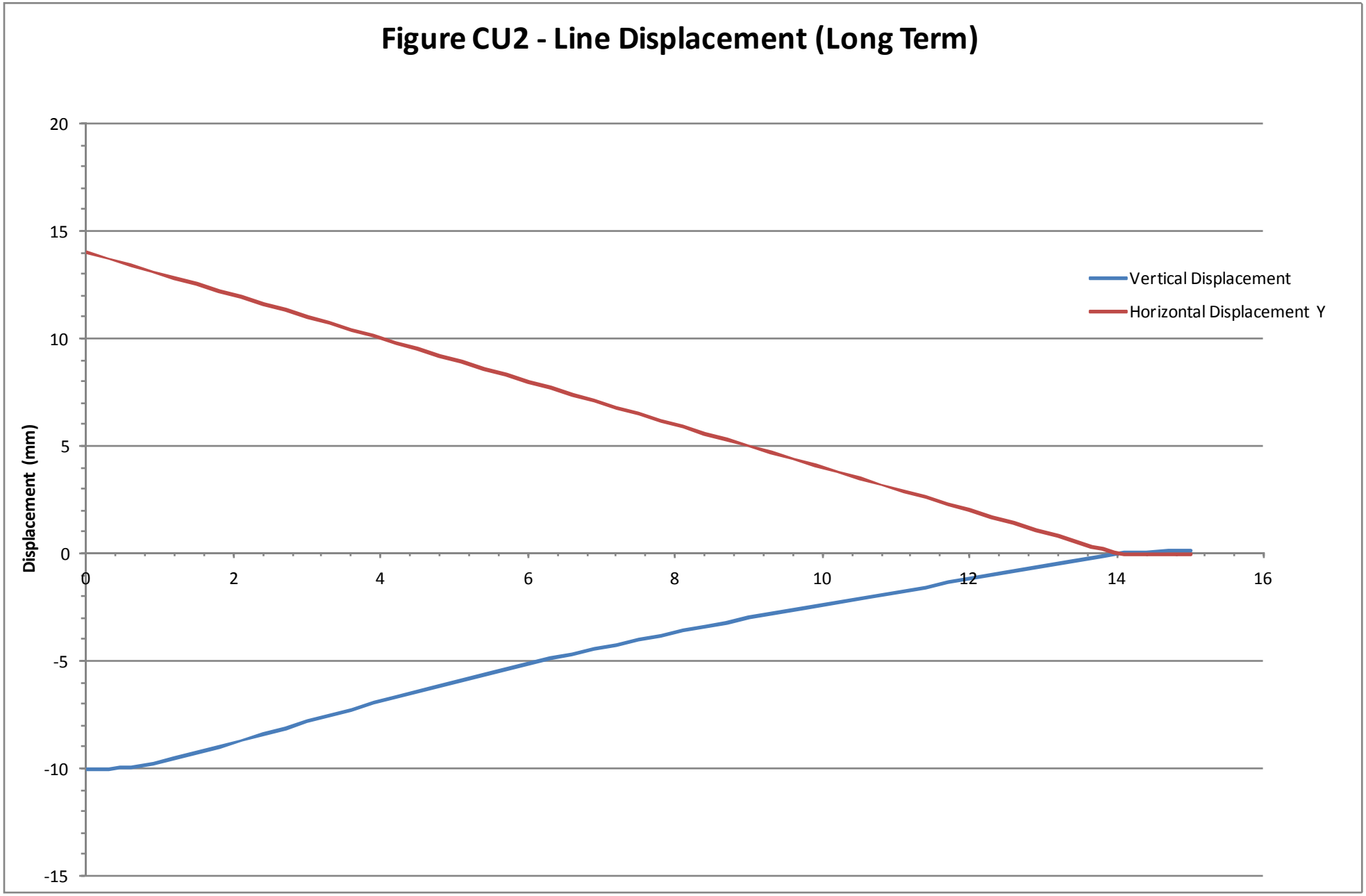


Figure CU2 - Line Displacement (Long Term)
Displacement (mm)
20
15
10
5
0
-5
-10
-15
0
2
4
6
8
10
12
14
16
Vertical Displacement
Horizontal Displacement Y

Appendix 3b:

Supplementary information provided by others

Re: Fw: 36 Redington Road, London NW3 7RT

Liz Brown to: Beckman, Philip DWFM Beckman 22/10/2015 16:00
Cc: "Peres Da Costa, David", "Sexton, Gavin", camdenaudit

Dear Mr Beckman

Thank you for your email providing the groundwater assessment and additional information with respect to surrounding basements.

As you are aware, we raised a number of queries on this BIA and are currently waiting to hear whether the applicants are intending to submit revised and updated information in order to satisfy the requirements of the planning guidance.

If we are instructed to update our audit report in due course, we shall consider the information provided within your email.

Regards,
Elizabeth Brown
Partner

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London Reception ----- Forwarded by Aimee Valentine/CRH on 21/1... 21/10/2015 11:03:00

From: London Reception/CRH
To: Liz Brown/CRH@Campbellreith
Date: 21/10/2015 11:03
Subject: Fw: 36 Redington Road, London NW3 7RT
Sent by: Aimee Valentine

----- Forwarded by Aimee Valentine/CRH on 21/10/2015 11:06 -----

From: "Beckman, Philip DWFM Beckman" <Philip.Beckman@dwfmbeckman.com>
To: "london@campbellreith.com" <london@campbellreith.com>
Date: 21/10/2015 10:13
Subject: 36 Redington Road, London NW3 7RT
Sent by: "Kelly, Faye DWFM Beckman" <Faye.Kelly@dwfmbeckman.com>

Dear Sirs
Please find enclosed letter and attachment.
Yours faithfully
Philip Beckman

Philip Beckman *Consultant*
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DWFM
DWFM Beckman Solicitors
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Campbell Reith Hill LLP.pdf


Application.pdf

ELIZABETH AND PHILIP BECKMAN

7 REDINGTON GARDENS NW3 7RU

0207 435 6785

e-mail:elizabeth.beckman@icloud.com

London Borough of Camden
Regeneration and Planning Development Management
Town Hall Judd Street
WC1H 8ND

Objection to planning application 2015/3004/P (By e-mail) 3rd[nd] August 2015

No. 36 Redington Road NW3 7RT

We live at 7 Redington Gardens London NW3 7RU which is on the corner of Redington Road and is immediately next to 36 Redington Road and we object to the proposed development for the following reasons:

The Unsuitability of the proposal for a Conservation Area

Clause 3.2.4 of the Developer's Design Statement acknowledges that mature trees and dense vegetation with gardens characterise this conservation area. There will be very little of this on the site when the development is completed.

The two modest semi-detached houses on the site of 36 and 38 (38 has already been replaced) which had good sized front and rear gardens are being replaced by two massive buildings squeezed together on to a small site.

The architectural features of the proposed building may have fitted into the conservation area if it was a detached house on a larger plot with plenty of open space but looks incongruous as one of a pair of semi-detached. It is too large for the site and leaves little room for greenery and taken together with the even larger building on 38 will give the appearance from the street of one rather odd oversized building virtually unrelieved by greenery.

Whatever the architectural merits of the original buildings on the site the proposed development does not preserve or enhance the contribution of the site to the conservation area.

The proposed development would together with 38 alter the character of this part of Redington Road to its detriment

Risk of Damage to our Property

We attach comments on the BIA from two consultants, one on the Groundwater and Surface water aspects and one on Ground Stability.

With regard to the Ground Stability report the consultants have identified five areas where further information is required.

On point No. 1 the site could clearly be described as being in a hillside setting and we would ask that further investigation of the topography of the area should be provided.

The Report on Surface and Ground Water points out various unanswered or incomplete answers to enquiries. It also recommends a Flood Risk Assessment and an assessment of surface water disposal off site as well as monitoring of groundwater

levels during construction. From personal knowledge the drains on the corner of Redington Gardens and Redington Road are already often blocked and overflowing. The additional hardstanding will exacerbate the situation even more.

The report also highlights the necessity to ascertain the course of the River Westbourne. The BIA states that a tributary of this river is located within 50m of the property based onFigure 6 in the Camden "Guidance for subterranean development (ARUP 2010) However Figure 2 in the same guidance document is more detailed than Figure 6 and indicates that the tributary actually runs through the property. We are sending a copy of Figure 2.

The possible impact on Surface Water, Drainage and Groundwater levels and flow is a source of serious concern.

It is clearly essential that before any decision is taken this question as well as the other points raised should be answered and an independent BIA produced to check the findings and the conclusions of the reports provided and to fill in any gaps.

Camden's Planning Guidance state that the Council will only permit basement and underground development that does not cause harm to the built and natural environment or that results in flooding or leads to ground instability. We submit that this test has not been passed.

The application should be rejected if there is any chance of there being harm to our property or a radical change in water flow or water table.

Protection of Trees

We are particularly concerned as to the trees on our property on or near the boundary with No. 36, in particular the three lime trees numbers 5, 7 and 9 on the plan attached to the tree report . No.9 is a category A tree and has a TPO. 5 and 7 are category C and at least one of these we believe also has a TPO. We do know that we cannot touch any of the trees in our garden without consulting a Camden Tree Officer.

We note the comments and recommendations in the tree report. We believe the developer's proposals have been modified and the basement reduced partly to take into account the likely effect on the trees of the proposed works in particular the basement but we are concerned that the modifications have not gone far enough.

The trees are vey near to the area to be excavated and the root protection areas go even closer. The developers intend to cut branches and even roots which intrude into no. 36. and want to prune tree no.9 .

The passage between our boundary and the new development down which, once the basement is excavated, all the plant and materials will pass to the open area at the rear, is only 1.3 metres wide. The tree protection barrier would make it even narrower. In this scenario there must be a real risk of damage to the trees. The tree most exposed is the A tree

It is essential that one of the Council's tree officers is asked at this stage, before any decision is taken on the application to look into the acceptability of the proposals and the adequacy of the recommendations and their likely impact on the trees.

Should permission nevertheless be granted it is of course vital that suitable conditions are inserted in the permission so that the developers have an obligation to put in place the recommendations for protecting the trees and ensure that they are properly supervised.

We remain to be convinced that sufficient steps can be taken to safeguard the trees and this is a further reason why the application should be refused.

Site Works

As is acknowledged by the Construction Method Statement, the site will be a very difficult one to manage but little thought seems to have been given to the particular problems that this site presents. This is a small site and construction work will be carried out on a good part of it, especially at the front. There will be little room to manoeuvre vehicles and plant in and out. The only passage to the rear, as stated above is very narrow. It is likely that this will result in lorries being parked on the street and materials stored there. A large amount of earth and rubble from the demolition and excavation will have to be removed from the site. The works are likely to result in substantial nuisance being caused to the neighbouring houses and the general public.

Noise

The nature of the car lift has not been specified. This may cause a noise nuisance. If this is approved it should be subject to suitable conditions.

Please reject this application.

Philip & Elizabeth Beckman
7 Redington Gardens
London
NW3 7RU

31 July 2015

Our Ref: 64035R1.docx

Dear Mr and Mrs Beckman,

Re: Review of Basement Impact Assessment (surface water & groundwater) for 36 Redington Road London NW3

Thank you for inviting ESI to review the current Basement Impact Assessment (BIA) for 36 Redington Road ("The property") compiled by Southern Testing, reference J11894, dated May 2015. The BIA report is divided into Stages 1 & 2 (Screening and Scoping) (referred to as "Report A") and Stages 3 & 4 (Site Investigation / Impact Assessment) (referred to as Report "B").

This letter considers the surface water and groundwater elements of Report A and B of the BIA. The land stability elements are considered in the letter from Key Geosolutions.

Camden Council uses an audit form (Table 1 below) to track the items required for submission as part of a BIA and we have used this as a template for assessing the BIA for 36 Redington Road. We have also considered the information provided in the Camden geological, hydrogeological and hydrological study (ARUP, Nov 2010).

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Table 1 BIA components for Audit (Camden Council 2015)

Item provided for Camden audit		ESI Comment
1	Description of proposed development.	The proposed development is described as "three-storey including a single level basement", however the referenced plan shows a three-storey above-ground development, with a single-level basement below.
2	Plan showing boundary of development including any land required temporarily during construction.	Figure 1 in Report A
3	Plans, maps and or photographs to show location of basement relative to surrounding structures.	Figure 4 in Report B
4	Plans, maps and or photographs to show topography of surrounding area with any nearby watercourses/waterbodies including consideration of the relevant maps in the Strategic FRA by URS (2014)	The property appears to be located directly above a tributary of the historical River Westbourne according to Figure 2 of ARUP (2010). Report A describes the tributary as within 50m of the property. There is no consideration of the relevant maps in the Strategic FRA by URS (2014).
5	Plans and sections to show foundation details of adjacent structures.	NA – see Key Geosolutions Letter
6	Plans and sections to show layout and dimensions of proposed basement.	These do not appear to be included in either Report A or B. There is no figure with the depth or area of the proposed basement within the BIA; however there are plans and sections submitted separately on the Camden Council planning portal, which show these parameters.
7	Programme for enabling works, construction and restoration.	NA – see Key Geosolutions Letter
8	Identification of potential risks to land stability (including surrounding structures and infrastructure), and surface and groundwater flooding.	NA – see Key Geosolutions Letter
9	Assessment of impact of potential risks on neighbouring properties and surface and groundwater.	The assessment for surface water at Stage 1 (Report A) determines that 3 issues should be taken forward to Stage 2. These are a) Changes to surface water flows as part of site drainage b) Change in proportion of paved areas c) Risk from surface water flooding Only (a) and (c) are listed in Stage 2 in Report A, however none are assessed after Stage 1 to

		determine the scale of the potential risk. A site specific Flood Risk Assessment (FRA) is recommended in Section 6 of Report B but does not appear to have been completed. A site drainage assessment is also recommended in Section 6 of Report B but does not appear to have been completed. The assessment for groundwater at Stage 1 (Report A) determines that 4 issues should be taken forward to Stage 2. These are a) The site is above an aquifer b) The proposed basement extends below the water table c) The site is within 100m of a watercourse d) Change in proportion of paved areas Only (a) and (b) are listed in Stage 2 in Report A, and only these two are assessed further in Stage 4 (Report B); a computer model is used to assess the potential impacts on groundwater flows and levels. This concludes that the potential impact on 7 Redington Gardens would be a rise of less than 2cm in the groundwater level. This is likely to be within any seasonal variation in local groundwater levels.
10	Identification of significant adverse impacts.	In Section 6 of Stage 3 (Report B) the site is described as being situated in an area considered at low to high risk of surface water flooding. No other significant adverse impacts are identified for surface water or groundwater.
11	Evidence of consultation with neighbours.	None in BIA
12	Ground Investigation Report and Conceptual Site Model including - Desktop study - exploratory hole records - results from monitoring the local groundwater regime - confirmation of baseline conditions - factual site investigation report	Included in Report B
13	Ground Movement Assessment (GMA).	NA – see Key Geosolutions Letter
14	Plans, drawings, reports to show extent of affected area.	Potential affected area by surface water flooding not identified Computer model output indicates area of impacts to groundwater levels

15	Specific mitigation measures to reduce, avoid or offset significant adverse impacts.	A Flood Risk Assessment is required to identify mitigation measures to offset potential surface water flooding.
16	Construction Sequence Methodology (CSM) referring to site investigation and containing basement, floor and roof plans, sections (all views), sequence of construction and temporary works.	NA – see Key Geosolutions Letter
17	Proposals for monitoring during construction.	None in BIA; groundwater levels should be monitored during construction and if the impacts are different from those predicted in the BIA then the conclusions of the BIA should be reassessed.
18	Confirmatory and reasoned statement identifying likely damage to nearby properties according to Burland Scale	NA – see Key Geosolutions Letter
19	Confirmatory and reasoned statement with supporting evidence that the structural stability of the building and neighbouring properties will be maintained (by reference to BIA, Ground Movement Assessment and Construction Sequence Methodology), including consideration of cumulative effects.	NA – see Key Geosolutions Letter
20	Confirmatory and reasoned statement with supporting evidence that there will be no adverse effects on drainage or run-off and no damage to the water environment (by reference to ground investigation, BIA and CSM), including consideration of cumulative effects.	None provided in BIA
21	Identification of areas that require further investigation.	A Flood Risk Assessment is recommended, no other areas in respect of surface water or groundwater are identified as requiring further assessment. See response to item 9 for items that have not been resolved after Stage 1
22	Non-technical summary for each stage of BIA.	An overall summary is provided at the start of Report B

Summary

We can confirm that the questions from the Camden Planning Guidance (CPG4) relating to subterranean (groundwater) flow and surface water have been adequately addressed and answered correctly at Stage 1 Screening. Not all the potential issues identified appear to have been taken forward to Stage 2 Scoping, or further.

Surface Water Issues

An FRA is recommended to consider the potential risks from surface water flooding. This should be completed and include consideration of the Strategic FRA by URS (2014); it should be submitted to Camden Council before any decision is made on the proposed development.

An assessment of surface water disposal off-site is required as identified in Stage 2 Scoping of Report A.

The location of the historical course of the River Westbourne should be confirmed as it may impact on surface water drainage as well as groundwater levels and flows.

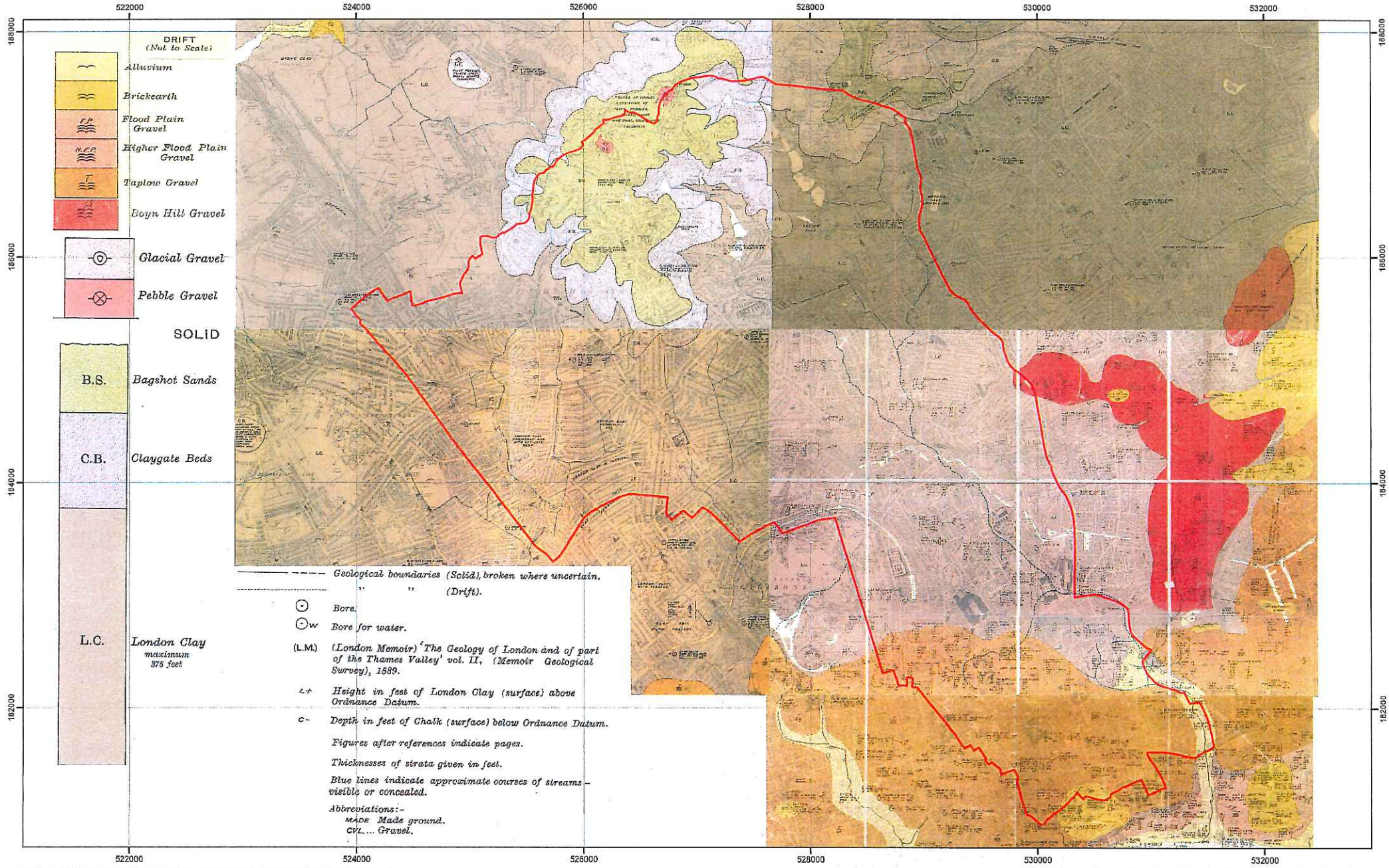
Groundwater Issues

The proposed basement will extend through the water table into the underlying London Clay. Impacts to groundwater flows and levels are assessed as being negligible. As assessed the changes are within typical seasonal variations in groundwater levels. Additional monitoring should take place during the construction phase to ensure the on-site conditions are within the ranges predicted in the BIA. There should also be consideration of the changes in paved areas with regard to local groundwater levels and flows.

Joe Gomme (CGeol)
PRINCIPAL CONSULTANT

THE GEOLOGICAL SOCIETY
CGeol
CHARTERED GEOLOGIST
Fellow No.1004126

Helen Vonka (C.WEM)
SENIOR CONSULTANT



BGS 1:10,560 Map Sheets 1SE, 2SW, 4NE, 5SW, 5NW 1920 Edition)

N

Scale at A3: 1:30,000

Coordinate System:
British National Grid
GCS_OSGB_1936

0 0.4 0.8 1.6 2.4
Kilometers

Legend

London Borough of Camden

Camden Geological, Hydrogeological and Hydrological Study

Camden 1:10,560 Geological Map (1920)

213923 FIGURE **2**

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Fax: 01952 822961

email: info@keygs.com
web: www.keygs.com

July 31, 2015

Ref: 15-261-L-001

Mr & Mrs Beckman
7 Redington Gardens
London
NW3 7RU.

Dear Mr and Mrs Beckman

re: Planning Application 2015/3004/P – 36 Redlington Road NW3

A review of the documents related to this planning application, which are available on the Camden Borough Council website as at July 30th 2015, has been undertaken in relation to the issue of ground stability. In order to document the review Section B of the Camden Borough Council **Basement Impact Assessment Audit Instruction Form** has been employed, the completed form is attached.

Following review of the documents it is our considered opinion that the BIA is a comprehensive submission and generally complies with the requirements of the planning guidance, however we make the following additional comments;

1. The ST Consult report suggests that the site is not within a hillside setting, whilst we have not undertaken a site visit as part of this review the contours shown on the Ordnance Survey 1:25,000 mapping of the area could suggest otherwise. If this is confirmed by your own knowledge of the area we would recommend that you request that further justification of their interpretation of the topography of the area be provided by the applicant.

2. The results for the movement analysis seem reasonable for the ground conditions that have been determined for the site, however the parameters employed for the analysis are not provided in the report. We would expect so see these parameters given in the ST Consult report (J11894 Rev01), along with justification of how the parameters were selected.

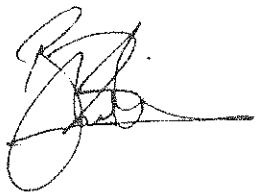
3. As would be expected the movement analysis has been undertaken based on assumptions with regard to the basement design in lieu of a full structural design of the basement having been prepared. Further movement analysis should be undertaken once the actual structural design for the basement is available. It would not be unreasonable to expect that any planning permission would include a condition that requires the developer to submit this information to the planning authority for approval prior to any work commencing.

4. Whilst the ST Consult reports mention both secant and contiguous piled wall options for the construction of the basement the report by Zussmanbear, which shows the proposed construction methodology indicates that a contiguous piled wall will be employed to form the basement. The difference between the two techniques is that a secant piled wall forms a continuous wall whereas the contiguous piled wall will have a gap of the order of 100-150mm between adjacent piles. The conceptual ground model, Figure No. 4 of the ST Consult report reference J11894 Rev01, indicates that the basement will predominantly be constructed within the Sandy Claygate Member and that the groundwater level is at c. 1m below the existing ground level. The combination of the sandy nature of the ground and the high water level will give the potential for loss of ground if a contiguous piled wall is used, with groundwater and fine particles flowing into the excavation through the gaps between adjacent piles. We would recommend that a secant pile wall be constructed in order to prevent or limit ground loss due to groundwater movement into the basement excavation. It would not be unreasonable to expect that any planning permission would include a condition that requires the developer to submit a detailed method for the construction to the planning authority for approval prior to any work commencing.

5. The ST Consult report indicates that monitoring of the adjacent properties will be required, however no detail of what form this monitoring will take is given. In addition, there is no indication of what would happen if the monitoring results were in excess of those predicted. It would not be unreasonable to expect that any planning permission would include a condition that requires the developer to submit a scheme of monitoring, which should include proposals for limits to acceptable movement, to the planning authority for approval prior to any work commencing.

If you have any queries or wish to discuss our findings further please do not hesitate to contact me.

Yours faithfully



Brian Duthie
BEng CGeol FGS FIQ
Key GeoSolutions Limited

Section B: BIA components for Audit

Items provided for Basement Impact Assessment (BIA)[1]			
Item provided		**Yes/ No/N A[2]**	**Name of BIA document/appendix in which information is contained.**
1	Description of proposed development.	Yes	Basement Impact Assessment Report (Stages 1 & 2 Screening/Scoping Exercise) ST Consult Ref. J11894 Rev02
2	Plan showing boundary of development including any land required temporarily during construction.	Yes	Archetype drawing no. 1048 (10) 01
3	Plans, maps and or photographs to show location of basement relative to surrounding structures.	Yes	Photographic document 36 Reddington Road
4	Plans, maps and or photographs to show topography of surrounding area with any nearby watercourses/waterbodies including consideration of the relevant maps in the Strategic FRA by URS (2014)	NA	
5	Plans and sections to show foundation details of adjacent structures.	Yes	Zussmanbear drawing no. L/2415-05
6	Plans and sections to show layout and dimensions of proposed basement.	Yes	Archetype drawing nos. 1048 (10) 03, 09
7	Programme for enabling works, construction and restoration.	No	
8	Identification of potential risks to land stability (including surrounding structures and infrastructure), and surface and groundwater flooding.	Yes	Basement Impact Assessment Report Stages 1 & 2 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev02 Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
9	Assessment of impact of potential risks on neighbouring properties and surface and groundwater.	Yes	Basement Impact Assessment Report Stages 1 & 2 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev02 Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
10	Identification of significant adverse impacts.	NA	
11	Evidence of consultation with neighbours.	No	
12	Ground Investigation Report and Conceptual Site Model including - Desktop study - exploratory hole records - results from monitoring the local groundwater regime - confirmation of baseline conditions - factual site investigation report	Yes	Basement Impact Assessment Report Stages 1 & 2 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev02 Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
13	Ground Movement Assessment (GMA).	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
14	Plans, drawings, reports to show extent of affected area.	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01

15	Specific mitigation measures to reduce, avoid or offset significant adverse impacts.	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
16	Construction Sequence Methodology (CSM) referring to site investigation and containing basement, floor and roof plans, sections (all views), sequence of construction and temporary works.	Yes	Structural Engineering Report, May 2015, Zussmanbear.
17	Proposals for monitoring during construction.	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
18	Confirmatory and reasoned statement identifying likely damage to nearby properties according to Burland Scale	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
19	Confirmatory and reasoned statement with supporting evidence that the structural stability of the building and neighbouring properties will be maintained (by reference to BIA, Ground Movement Assessment and Construction Sequence Methodology), including consideration of cumulative effects.	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
20	Confirmatory and reasoned statement with supporting evidence that there will be no adverse effects on drainage or run-off and no damage to the water environment (by reference to ground investigation, BIA and CSM), including consideration of cumulative effects.	Yes	Basement Impact Assessment Report Stages 3 & 4 (Screening/Scoping Exercise) ST Consult Ref. J11894 Rev01
21	Identification of areas that require further investigation.	NA	
22	Non-technical summary for each stage of BIA.	NA	

7 Redington Gardens
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Campbell Reith Hill LLP
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London SE1 8NZ
By E-mail to london@campbellreith.com

Dear Sirs

Re: 36 Redington Road London NW3 7RT – Basement Impact Assessment Audit for London Borough of Camden Project number 12066-41 Revision D1 September 2015

I live at 7 Redington Gardens London NW3 7RU next to 36 Redington Road and my wife Elizabeth and I lodged an objection to planning application 2015/3004 P.

We have seen the basement impact assessment audit which you prepared. In the audit, point 1.14, and 5.11, you say you have not seen the report on surface and ground water referred to in an objection raised "by a neighbour" presumably ourselves. Our objection which you refer to in appendix 1 appears in the list of documents on Camden's website under date 6/8 2015 and is divided into two parts comments part 1 which included the report from ESI and part 2 which includes the report of Key Geo Solutions.

For ease of reference we attach a full copy of our objection and would be grateful if you would consider the report you do not have. We note your comments in the BIA – Audit and would be glad to hear what replies you receive to the points you raise, in particular those relating to 7 Redington Gardens.

For the sake of good order, in relation to your point 4.3, 7 Redington Gardens has a small basement area which houses the boiler room.

Yours faithfully

Philip Beckman